

CRITERIA NO :1

CURRICULAR ASPECTS

METRIC NO. 1.2.1

PERCENTAGE OF PROGRAMMES IN WHICH CHOICE BASED CREDIT SYSTEM (CBCS)/ ELECTIVE COURSE

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Metric No. 1.2.1

Programs in which Choice Based Credit System (CBCS)/elective course system has been implemented Institutional Data

INSTITUTIONAL DATA

Programme Code	Programme name	Year of Introduction	Year of implementation of CBCS / elective course system
103	B.E. Civil Engineering	2009	2012
104	B.E. Computer Science and Engineering	2009	2012
105	B.E. Electrical and Electronics Engineering	2009	2012
106	B.E. Electronics and Communication Engineering	2009	2012
114	BE. Mechanical Engineering	2009	2012
115	B.E. Mechatronics Engineering	2013	2016
405	M.E. Computer Science and Engineering	2011	2011
413	M.E. Structural Engineering	2012	2012
441	M.E. VLSI Design	2012	2012


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B.E. CIVIL ENGINEERING

ANNA UNIVERSITY, CHENNAI

AFFILIATED INSTITUTIONS

EXHIBIT No. 1.2.1 - B1

R - 2008

B.E. CIVIL ENGINEERING

II - VIII SEMESTERS CURRICULA AND SYLLABI

SEMESTER II

(Common to all B.E. / B.Tech. Degree Programmes
except B.E. – Marine Engineering)

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	HS2161	Technical English – II*	3	1	0	4
2.	MA2161	Mathematics – II*	3	1	0	4
3.	PH2161	Engineering Physics – II*	3	0	0	3
4.	CY2161	Engineering Chemistry – II*	3	0	0	3
5. a	ME2151	Engineering Mechanics (For non-circuit branches)	3	1	0	4
5. b	EE2151	Circuit Theory (For branches under Electrical Faculty)	3	1	0	4
5. c	EC2151	Electric Circuits and Electron Devices (For branches under I & C Faculty)	3	1	0	4
6. a	GE2151	Basic Electrical & Electronics Engineering (For non-circuit branches)	4	0	0	4
6. b	GE2152	Basic Civil & Mechanical Engineering (For circuit branches)	4	0	0	4
PRACTICAL						
7.	GE2155	Computer Practice Laboratory-II*	0	1	2	2
8.	GS2165	Physics & Chemistry Laboratory - II*	0	0	3	2
9. a	ME2155	Computer Aided Drafting and Modeling Laboratory (For non-circuits branches)	0	1	2	2
9. b	EE2155	Electrical Circuits Laboratory (For branches under Electrical Faculty)	0	0	3	2
9. c	EC2155	Circuits and Devices Laboratory (For branches under I & C Faculty)	0	0	3	2
TOTAL : 28 CREDITS						
10.	-	English Language Laboratory *	0	0	0	-

* Common to all B.E. / B.Tech. Programmes

+ Offering English Language Laboratory as an additional subject (with no marks) during 2nd semester may be decided by the respective Colleges affiliated to Anna University Chennai.

A. CIRCUIT BRANCHES

I Faculty of Electrical Engineering

1. B.E. Electrical and Electronics Engineering
2. B.E. Electronics and Instrumentation Engineering
3. B.E. Instrumentation and Control Engineering

II Faculty of Information and Communication Engineering

1. B.E. Computer Science and Engineering
2. B.E. Electronics and Communication Engineering
3. B.E. Bio Medical Engineering
4. B.Tech. Information Technology

B. NON – CIRCUIT BRANCHES

I Faculty of Civil Engineering

1. B.E. Civil Engineering

II Faculty of Mechanical Engineering

1. B.E. Aeronautical Engineering
2. B.E. Automobile Engineering
3. B.E. Marine Engineering
4. B.E. Mechanical Engineering
5. B.E. Production Engineering

III Faculty of Technology

1. B.Tech. Chemical Engineering
2. B.Tech. Biotechnology
3. B.Tech. Polymer Technology
4. B.Tech. Textile Technology
5. B.Tech. Textile Technology (Fashion Technology)
6. B.Tech. Petroleum Engineering
7. B.Tech. Plastics Technology

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SEMESTER III

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

COURSE CODE	COURSE TITLE	L	T	P	C
THEORY					
MA 2211	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
GE 2021	<u>Environmental Science and Engineering</u>	3	0	0	3
AG 2211	<u>Applied Geology</u>	3	0	0	3
CE 2201	<u>Mechanics of Solids</u>	3	1	0	4
CE 2202	<u>Mechanics of Fluids</u>	3	1	0	4
CE 2203	<u>Construction Techniques, Equipment and Practice</u>	4	0	0	4
CE 2204	<u>Surveying– I</u>	3	0	0	3
PRACTICAL					
CE 2207	<u>Survey Practical – I</u>	0	0	4	2
CE 2208	<u>Computer Aided Building Drawing</u>	0	0	4	2
TOTAL		22	3	8	29

SEMESTER IV

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

COURSE CODE	COURSE TITLE	L	T	P	C
THEORY					
MA 2264	<u>Numerical Methods</u>	3	1	0	4
CE 2251	<u>Soil Mechanics</u>	3	0	0	3
CE 2252	<u>Strength of Materials</u>	3	1	0	4
CE 2253	<u>Applied Hydraulic Engineering</u>	3	1	0	4
CE 2254	<u>Surveying – II</u>	3	0	0	3
CE 2255	<u>Highway Engineering</u>	3	0	0	3
PRACTICAL					
CE 2257	<u>Strength of Materials Lab</u>	0	0	3	2
CE 2258	<u>Hydraulic Engineering Laboratory</u>	0	0	3	2
CE 2259	<u>Survey Practical – II</u>	0	0	4	2
TOTAL		18	3	10	27

SEMESTER V

Code No.	Course Title	L	T	P	C
THEORY					
CE2301	<u>Irrigation Engineering</u>	3	0	0	3
CE2302	<u>Structural Analysis I</u>	3	1	0	4
CE2303	<u>Railways, Airports and Harbour Engineering</u>	4	0	0	4
CE2304	<u>Environmental Engineering I</u>	3	0	0	3
CE2305	<u>Foundation Engineering</u>	3	0	0	3
CE2306	<u>Design of RC Elements</u>	3	0	0	3
PRACTICAL					
GE2321	<u>Communication Skills Laboratory**</u>	0	0	4	2
CE2307	<u>Concrete and Highway Engineering Lab</u>	0	0	3	2
CE2308	<u>Soil Mechanics Laboratory</u>	0	0	3	2
TOTAL		19	2	10	27

SEMESTER VI

Code No.	Course Title	L	T	P	C
THEORY					
MG2351	Principles of Management	3	0	0	3
CE2351	Structural Analysis – II	3	1	0	4
CE2352	Design of Steel Structures	3	1	0	4
CE2353	Construction Planning & Scheduling	3	0	0	3
CE2354	Environmental Engineering II	3	0	0	3
E1***	Elective – I	3	0	0	3
PRACTICAL					
CE2355	Environmental and Irrigation Engineering Drawing	0	0	4	2
CE2356	Environmental Engineering Laboratory	0	0	3	2
CE2357	Survey Camp	-	-	-	3
TOTAL		18	2	7	27

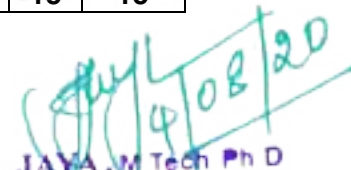
SEMESTER VII

Code No.	Course Title	L	T	P	C
THEORY					
CE2401	Design of Reinforced Concrete & Brick Masonry Structures	3	1	0	4
CE2402	Estimation and Quantity Surveying	3	0	0	3
CE2403	Basics of Dynamics and Aseismic Design	3	0	0	3
CE2404	Prestressed Concrete Structures	3	0	0	3
E2***	Elective – II	3	0	0	3
E3***	Elective – III	3	0	0	3
PRACTICAL					
CE2405	Computer Aided Design and Drafting Laboratory	0	0	4	2
CE2406	Design Project	0	0	4	2
TOTAL		18	1	8	23

SEMESTER VIII

Code No.	Course Title	L	T	P	C
THEORY					
CE2451	Engineering Economics and Cost Analysis	3	0	0	3
E4***	Elective – IV	3	0	0	3
E5***	Elective – V	3	0	0	3
PRACTICAL					
CE2453	Project Work	0	0	12	6
TOTAL		9	0	12	15

** No Examination


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LIST OF ELECTIVES

SEMESTER – VI

ELECTIVE - I

Code No.	Course Title	L	T	P	C
CE2021	<u>Hydrology</u>	3	0	0	3
CE2022	<u>Cartography</u>	3	0	0	3
CE2023	<u>Electronic Surveying</u>	3	0	0	3
CE2024	<u>Remote Sensing Techniques and GIS</u>	3	0	0	3
CE2025	<u>Architecture</u>	3	0	0	3
GE2022	<u>Total Quality Management</u>	3	0	0	3
GE2023	<u>Fundamentals of Nanoscience</u>	3	0	0	3
GE2025	<u>Professional Ethics in Engineering</u>	3	0	0	3
GE2071	<u>Intellectual Property Rights (IPR)</u>	3	0	0	3
GE2072	<u>Indian Constitution and Society</u>	3	0	0	3

SEMESTER – VII

ELECTIVE - II

Code No.	Course Title	L	T	P	C
CE2026	<u>Traffic Engineering and Management</u>	3	0	0	3
CE2027	<u>Housing Planning and Management</u>	3	0	0	3
CE2028	<u>Ground Water Engineering</u>	3	0	0	3
CE2029	<u>Management of Irrigation Systems</u>	3	0	0	3
CE2030	<u>Coastal Zone Management</u>	3	0	0	3
CE2031	<u>Water Resources Engineering</u>	3	0	0	3
CE2032	<u>Pavement Engineering</u>	3	0	0	3
CE2033	<u>Ground Improvement Techniques</u>	3	0	0	3
GE2073	<u>Contract Laws and Regulations</u>	3	0	0	3

ELECTIVE – III

Code No.	Course Title	L	T	P	C
CE2034	<u>Introduction to Soil Dynamics and Machine Foundations</u>	3	0	0	3
CE2035	<u>Rock Engineering</u>	3	0	0	3
CE2036	<u>Environmental Impact Assessment of Civil Engineering Projects</u>	3	0	0	3
CE2037	<u>Industrial Waste Management</u>	3	0	0	3
CE2038	<u>Air Pollution Management</u>	3	0	0	3
CE2039	<u>Municipal Solid Waste Management</u>	3	0	0	3
CE2040	<u>Ecological Engineering</u>	3	0	0	3

SEMESTER - VIII

ELECTIVE – IV


Code No.	Course Title	L	T	P	C
CE2041	<u>Bridge Structures</u>	3	0	0	3
CE2042	<u>Storage Structures</u>	3	0	0	3
CE2043	<u>Design of Plate and Shell Structures</u>	3	0	0	3
CE2044	<u>Tall Buildings</u>	3	0	0	3
CE2045	<u>Prefabricated structures</u>	3	0	0	3
CE2046	<u>Wind Engineering</u>	3	0	0	3

ELECTIVE – V

Code No.	Course Title	L	T	P	C
CE2047	<u>Computer Aided Design of Structures</u>	3	0	0	3
CE2048	<u>Industrial Structures</u>	3	0	0	3
CE2049	<u>Smart Structures and smart Materials</u>	3	0	0	3
CE2050	<u>Finite Element Techniques</u>	3	0	0	3
CE2071	<u>Repair and Rehabilitation of Structures</u>	3	0	0	3

- The lab examinations will be held only in the second semester.

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EXHIBIT No. 1.2.1 - B2

R - 2013

B. E. CIVIL ENGINEERING

I TO VIII SEMESTERS CURRICULUM & SYLLABUS

SEMESTER I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			17	2	11	26

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	GE6261	Computer Aided Drafting and Modeling Laboratory	0	1	2	2
8.	GE6262	Physics and Chemistry Laboratory - II	0	0	2	1
TOTAL			19	4	4	25

SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	CE6311	Survey Practical I	0	0	4	2
8.	CE6312	Computer Aided Building Drawing	0	0	4	2
TOTAL			18	2	8	24

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SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	3	10	27

SEMESTER V

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	1	8	24

* Survey Camp to be conducted for a period of 2 weeks during 4th Semester Summer Vacation

SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	CE6611	Environmental Engineering Laboratory	0	0	3	2
8.	CE6612	Concrete and Highway Engineering Laboratory	0	0	3	2
TOTAL			18	2	6	24

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SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	CE6711	Computer Aided Design and Drafting Laboratory	0	0	4	2
8.	CE6712	Design Project	0	0	4	2
TOTAL			18	0	8	22

SEMESTER VIII

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

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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B.E. CIVIL ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
I TO VIII SEMESTERS CURRICULA & SYLLABI
SEMESTER I

EXHIBIT No. 1.2.1 - B3

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

SEMESTER II

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics – II	BS	4	4	0	0	4
3.	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
PRACTICALS								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	CE8211	Computer Aided Building Drawing	PC	4	0	0	4	2
TOTAL				30	20	2	8	25

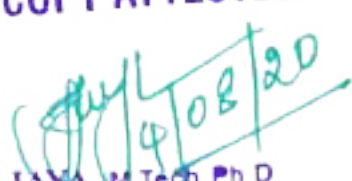
SEMESTER III

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	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
PRACTICALS								
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
TOTAL				29	19	0	10	24

SEMESTER IV

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				29	19	0	10	24

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SEMESTER V

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				28	18	2	8	25

SEMESTER VI

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				30	18	2	10	24

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SEMESTER VII

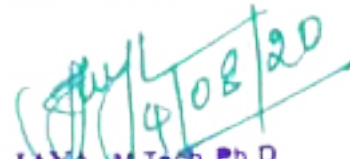
S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	CE8701	Estimation, Costing and Valuation Engineering	PC	3	3	0	0	3
2.	CE8702	Railways, Airports, Docks and Harbour Engineering	PC	3	3	0	0	3
3.	CE8703	Structural Design and Drawing	PC	5	3	0	2	4
4.		Professional Elective III	PE	3	3	0	0	3
5.		Open Elective II*	OE	3	3	0	0	3
PRACTICALS								
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
TOTAL				21	15	0	6	20

SEMESTER VIII

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

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

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

**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

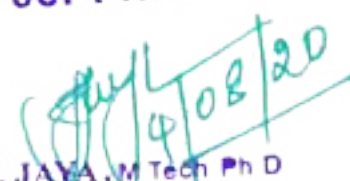
**SEMESTER VIII
ELECTIVE – V**

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
	Total	25	25	24	24	25	24	20	16	183
8	Non-Credit/Mandatory									

SUMMARY

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B.E.
COMPUTER SCIENCE AND
ENGINEERING

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS

EXHIBIT No. 1.2.1 - C1

R-2008

B.E. COMPUTER SCIENCE AND ENGINEERING
II - VIII SEMESTERS CURRICULA AND SYLLABI

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	HS2161	<u>Technical English – II*</u>	3	1	0	4
2.	MA2161	<u>Mathematics – II*</u>	3	1	0	4
3.	PH2161	<u>Engineering Physics – II*</u>	3	0	0	3
4.	CY2161	<u>Engineering Chemistry – II*</u>	3	0	0	3
5. a	ME2151	<u>Engineering Mechanics</u> (For non-circuit branches)	3	1	0	4
5. b	EE2151	<u>Circuit Theory</u> (For branches under Electrical Faculty)	3	1	0	4
5. c	EC2151	<u>Electric Circuits and Electron Devices</u> (For branches under I & C Faculty)	3	1	0	4
6. a	GE2151	<u>Basic Electrical & Electronics Engineering</u> (For non-circuit branches)	4	0	0	4
6. b	GE2152	<u>Basic Civil & Mechanical Engineering</u> (For circuit branches)	4	0	0	4
PRACTICAL						
7.	GE2155	<u>Computer Practice Laboratory-II*</u>	0	1	2	2
8.	GS2165	<u>Physics & Chemistry Laboratory - II*</u>	0	0	3	2

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9. a	ME2155	<u>Computer Aided Drafting and Modeling Laboratory</u> (For non-circuits branches)	0	1	2	2
9. b	EE2155	<u>Electrical Circuits Laboratory</u> (For branches under Electrical Faculty)	0	0	3	2
9. c	EC2155	<u>Circuits and Devices Laboratory</u> (For branches under I & C Faculty)	0	0	3	2
TOTAL : 28 CREDITS						
10.	-	<u>English Language Laboratory</u> ⁺	0	0	2	-

* Common to all B.E. / B.Tech. Programmes

+ Offering English Language Laboratory as an additional subject (with no marks) during 2nd semester may be decided by the respective Colleges affiliated to Anna University Chennai.

A. CIRCUIT BRANCHES

I Faculty of Electrical Engineering

1. B.E. Electrical and Electronics Engineering
2. B.E. Electronics and Instrumentation Engineering
3. B.E. Instrumentation and Control Engineering

II Faculty of Information and Communication Engineering

1. B.E. Computer Science and Engineering
2. B.E. Electronics and Communication Engineering
3. B.E. Bio Medical Engineering
4. B.Tech. Information Technology

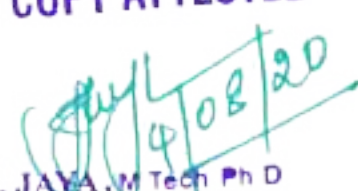
B. NON – CIRCUIT BRANCHES

I Faculty of Civil Engineering

1. B.E. Civil Engineering

II Faculty of Mechanical Engineering

1. B.E. Aeronautical Engineering
2. B.E. Automobile Engineering
3. B.E. Marine Engineering
4. B.E. Mechanical Engineering
5. B.E. Production Engineering

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III Faculty of Technology

1. B.Tech. Chemical Engineering
2. B.Tech. Biotechnology
3. B.Tech. Polymer Technology
4. B.Tech. Textile Technology
5. B.Tech. Textile Technology (Fashion Technology)
6. B.Tech. Petroleum Engineering
7. B.Tech. Plastics Technology

SEMESTER III

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

Code No.	Course Title	L	T	P	C
THEORY					
MA 2211	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
CS 2201	<u>Data Structures</u>	3	0	0	3
CS 2202	<u>Digital Principles and Systems Design</u>	3	1	0	4
CS 2203	<u>Object Oriented Programming</u>	3	0	0	3
CS 2204	<u>Analog and Digital Communication</u>	3	1	0	4
GE 2021	<u>Environmental Science and Engineering</u>	3	0	0	3
PRACTICAL					
CS 2207	<u>Digital Lab</u>	0	0	3	2
CS 2208	<u>Data Structures Lab</u>	0	0	3	2
CS 2209	<u>Object Oriented Programming Lab</u>	0	0	3	2
Total		18	3	9	27

SEMESTER IV

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

Code No.	Course Title	L	T	P	C
THEORY					
MA 2262	<u>Probability and Queueing Theory</u>	3	1	0	4
CS 2251	<u>Design and Analysis of Algorithms</u>	3	1	0	4
CS 2252	<u>Microprocessors and Microcontrollers</u>	3	0	0	3
CS 2253	<u>Computer Organization and Architecture</u>	3	0	0	3
CS 2254	<u>Operating Systems</u>	3	0	0	3
CS 2255	<u>Database Management Systems</u>	3	0	0	3
PRACTICAL					
CS 2257	<u>Operating Systems Lab</u>	0	0	3	2
CS 2258	<u>Data Base Management Systems Lab</u>	0	0	3	2
CS 2259	<u>Microprocessors Lab</u>	0	0	3	2
Total		18	2	9	25

SEMESTER V

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

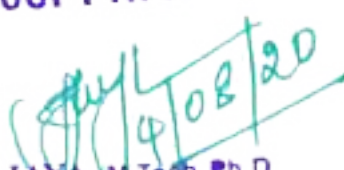
CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
CS2301	<u>Software Engineering</u>	3	0	0	3
MA2265	<u>Discrete Mathematics</u>	3	1	0	4
CS2302	<u>Computer Networks</u>	3	0	0	3
CS2303	<u>Theory of Computation</u>	3	1	0	4
CS2304	<u>System Software</u>	3	1	0	4
CS2305	<u>Programming Paradigms</u>	3	0	0	3
PRACTICAL					
CS2307	<u>Network Lab</u>	0	0	3	2
CS2308	<u>System Software Lab</u>	0	0	3	2
CS2309	<u>Java Lab</u>	0	0	3	2
TOTAL		18	3	9	27

SEMESTER VI

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
CS2351	<u>Artificial Intelligence</u>	3	0	0	3
CS2352	<u>Principles of Compiler Design</u>	3	0	2	4
CS2353	<u>Object Oriented Analysis and Design</u>	3	0	0	3
CS2354	<u>Advanced Computer Architecture</u>	3	0	0	3
	Elective – I	3	0	0	3
	Elective – II	3	0	0	3
PRACTICAL					
CS2357	<u>Object Oriented Analysis and Design Lab</u>	0	0	3	2
GE2321	<u>Communication Skills Lab</u>	0	0	4	2
CS2358	<u>Internet Programming Lab</u>	1	0	3	2
TOTAL		19	0	12	25

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SEMESTER VII

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

Code No.	Course Title	L	T	P	C
THEORY					
MG2452	<u>Engineering Economics & Financial Accounting</u>	3	0	0	3
CS2401	<u>Computer Graphics</u>	3	0	0	3
CS2402	<u>Mobile and Pervasive Computing</u>	3	0	0	3
CS2403	<u>Digital Signal Processing</u>	3	0	0	3
	Elective III	3	0	0	3
	Elective IV	3	0	0	3
PRACTICAL					
CS2405	<u>Computer Graphics Lab</u>	0	0	3	2
CS2406	<u>Open Source Lab</u>	0	0	3	2
TOTAL		18	0	6	22

SEMESTER VIII

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

Code No.	Course Title	L	T	P	C
THEORY					
	Elective V	3	0	0	3
	Elective VI	3	0	0	3
PRACTICAL					
CS2451	Project Work	0	0	12	6
TOTAL		6	0	12	12

LIST OF ELECTIVES SEMESTER VI – Elective I

Code No.	Course Title	L	T	P	C
CS2021	<u>Multicore Programming</u>	3	0	0	3
CS2022	<u>Visual Programming</u>	3	0	0	3
CS2023	<u>Advanced JAVA Programming</u>	3	0	0	3
CS2024	<u>Parallel Programming</u>	3	0	0	3
IT2353	<u>Web Technology</u>	3	0	0	3

SEMESTER VI – Elective II

Code No.	Course Title	L	T	P	C
CS2028	<u>UNIX Internals</u>	3	0	0	3
MA2264	<u>Numerical Methods</u>	3	1	0	4
IT2354	<u>Embedded Systems</u>	3	0	0	3
CS2029	<u>Advanced Database Technology</u>	3	0	0	3
IT2043	<u>Knowledge Management</u>	3	0	0	3
CS2030	<u>High Performance Microprocessors</u>	3	0	0	3

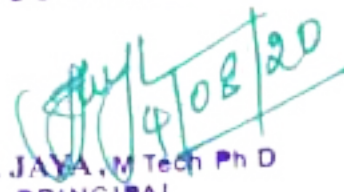
SEMESTER VII – Elective III

Code No.	Course Title	L	T	P	C
MG2453	<u>Resource Management Techniques</u>	3	0	0	3
CS2032	<u>Data Warehousing and Data Mining</u>	3	0	0	3
CS2033	<u>Real Time Systems</u>	3	0	0	3
CS2034	<u>TCP/IP Design and Implementation</u>	3	0	0	3
CS2035	<u>Natural Language Processing</u>	3	0	0	3
IT2024	<u>User Interface Design</u>	3	0	0	3
IT2401	<u>Service Oriented Architecture</u>	3	0	0	3

SEMESTER VII – Elective IV

Code No.	Course Title	L	T	P	C
CS2040	<u>Advanced Operating Systems</u>	3	0	0	3
CS2041	<u>C# and .NET Framework</u>	3	0	0	3
IT2352	<u>Cryptography and Network Security</u>	3	0	0	3
IT2061	<u>Systems Modeling & Simulation</u>	3	0	0	3
GE2022	<u>Total Quality Management</u>	3	0	0	3
IT2351	<u>Network Programming and Management</u>	3	0	0	3
IT2032	<u>Software Testing</u>	3	0	0	3
CS2045	<u>Wireless Networks</u>	3	0	0	3

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SEMESTER VIII – Elective V

Code No.	Course Title	L	T	P	C
GE2071	<u>Intellectual Property Rights</u>	3	0	0	3
CS2051	<u>Graph Theory</u>	3	0	0	3
IT2042	<u>Information Security</u>	3	0	0	3
CS2053	<u>Soft Computing</u>	3	0	0	3
IT2023	<u>Digital Image Processing</u>	3	0	0	3
CS2055	<u>Software Quality Assurance</u>	3	0	0	3
CS2056	<u>Distributed Systems</u>	3	0	0	3
CS2057	<u>Knowledge Based Decision Support Systems</u>	3	0	0	3
GE2025	<u>Professional Ethics in Engineering</u>	3	0	0	3
GE2023	<u>Fundamental of Nano Science</u>	3	0	0	3

SEMESTER VIII – Elective VI

Code No.	Course Title	L	T	P	C
GE2072	<u>Indian Constitution and Society</u>	3	0	0	3
CS2060	<u>High Speed Networks</u>	3	0	0	3
CS2061	<u>Robotics</u>	3	0	0	3
IT2403	<u>Software Project Management</u>	3	0	0	3
CS2062	<u>Quantum Computing</u>	3	0	0	3
CS2063	<u>Grid Computing</u>	3	0	0	3
CS2064	<u>Agent Based Intelligent Systems</u>	3	0	0	3
IT2033	<u>Bio Informatics</u>	3	0	0	3
IT2064	<u>Speech Processing</u>	3	0	0	3

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EXHIBIT No. 1.2.1 - C2

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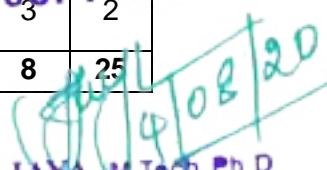
B.E. COMPUTER SCIENCE AND ENGINEERING
I TO VIII SEMESTER CURRICULUM AND SYLLABUS

SEMESTER I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			17	2	11	26

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	2	8	25

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SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	1	6	23

SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	1	9	25

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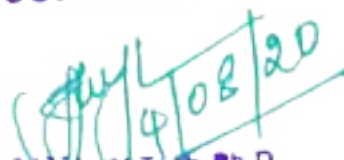
SEMESTER V

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			15	2	9	23

SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	1	10	25

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SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	CS6711	<u>Security Laboratory</u>	0	0	3	2
8.	CS6712	<u>Grid and Cloud Computing Laboratory</u>	0	0	3	2
TOTAL			18	0	6	22

SEMESTER VIII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
4.	CS6811	<u>Project Work</u>	0	0	12	6
TOTAL			9	0	12	15

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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I - VIII SEMESTERS CURRICULA AND SYLLABI

EXHIBIT No. 1.2.1 - C3

SEMESTER I

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

SEMESTER II

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	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
PRACTICALS								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	CS8261	C Programming Laboratory	PC	4	0	0	4	2
TOTAL				28	20	0	8	25

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SEMESTER III

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				31	17	0	14	24

SEMESTER IV

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				29	19	0	10	24

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SEMESTER V

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

SEMESTER VI

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				32	18	0	14	25

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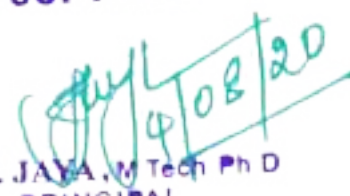
SEMESTER VII

SI. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
7.	CS8711	Cloud Computing Laboratory	PC	4	0	0	4	2
8.	IT8761	Security Laboratory	PC	4	0	0	4	2
TOTAL				26	18	0	8	22

SEMESTER VIII

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

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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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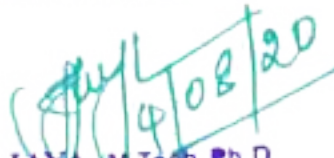
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PROFESSIONAL CORE (PC)

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**

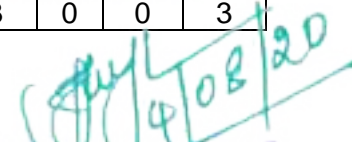
Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8075	Data Warehousing and Data Mining	PE	3	3	0	0	3
2.	IT8076	Software Testing	PE	3	3	0	0	3
3.	IT8072	Embedded Systems	PE	3	3	0	0	3
4.	CS8072	Agile Methodologies	PE	3	3	0	0	3
5.	CS8077	Graph Theory and Applications-	PE	3	3	0	0	3
6.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

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**SEMESTER VIII
ELECTIVE - IV**

SI. 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**

SI. 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)

SI. 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

R - 2008

B.E. ELECTRICAL AND ELECTRONICS ENGINEERING

II - VIII SEMESTERS CURRICULUM AND SYLLABI

SEMESTER II

CURRICULUM

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	HS2161	<u>Technical English – II*</u>	3	1	0	4
2.	MA2161	<u>Mathematics – II*</u>	3	1	0	4
3.	PH2161	<u>Engineering Physics – II*</u>	3	0	0	3
4.	CY2161	<u>Engineering Chemistry – II*</u>	3	0	0	3
5. a	ME2151	<u>Engineering Mechanics</u> (For non-circuit branches)	3	1	0	4
5. b	EE2151	<u>Circuit Theory</u> (For branches under Electrical Faculty)	3	1	0	4
5. c	EC2151	<u>Electric Circuits and Electron Devices</u> (For branches under I & C Faculty)	3	1	0	4
6. a	GE2151	<u>Basic Electrical & Electronics Engineering</u> (For non-circuit branches)	4	0	0	4
6. b	GE2152	<u>Basic Civil & Mechanical Engineering</u> (For circuit branches)	4	0	0	4
PRACTICAL						
7.	GE2155	<u>Computer Practice Laboratory-II*</u>	0	1	2	2
8.	GS2165	<u>Physics & Chemistry Laboratory - II*</u>	0	0	3	2
9. a	ME2155	<u>Computer Aided Drafting and Modeling Laboratory</u> (For non-circuits branches)	0	1	2	2
9. b	EE2155	<u>Electrical Circuits Laboratory</u> (For branches under Electrical Faculty)	0	0	3	2
9. c	EC2155	<u>Circuits and Devices Laboratory</u> (For branches under I & C Faculty)	0	0	3	2
TOTAL : 28 CREDITS						

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10.	-	English Language Laboratory ⁺	0	0	2	-
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* Common to all B.E. / B.Tech. Programmes

+ Offering English Language Laboratory as an additional subject (with no marks) during 2nd semester may be decided by the respective Colleges affiliated to Anna University Chennai.

A. CIRCUIT BRANCHES

I Faculty of Electrical Engineering

1. B.E. Electrical and Electronics Engineering
2. B.E. Electronics and Instrumentation Engineering
3. B.E. Instrumentation and Control Engineering

II Faculty of Information and Communication Engineering

1. B.E. Computer Science and Engineering
2. B.E. Electronics and Communication Engineering
3. B.E. Bio Medical Engineering
4. B.Tech. Information Technology

B. NON – CIRCUIT BRANCHES

I Faculty of Civil Engineering

1. B.E. Civil Engineering

II Faculty of Mechanical Engineering

1. B.E. Aeronautical Engineering
2. B.E. Automobile Engineering
3. B.E. Marine Engineering
4. B.E. Mechanical Engineering
5. B.E. Production Engineering

III Faculty of Technology

1. B.Tech. Chemical Engineering
2. B.Tech. Biotechnology
3. B.Tech. Polymer Technology
4. B.Tech. Textile Technology
5. B.Tech. Textile Technology (Fashion Technology)
6. B.Tech. Petroleum Engineering
7. B.Tech. Plastics Technology

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SEMESTER III

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

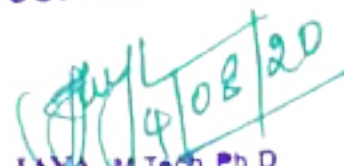
SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	MA 2211	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
2.	EE 2201	<u>Measurements & Instrumentation</u>	3	0	0	3
3.	EE 2202	<u>Electromagnetic Theory</u>	3	1	0	4
4.	GE 2211	<u>Environmental Science and Engineering</u>	3	0	0	3
5.	EE 2203	<u>Electronic Devices & Circuits</u>	3	0	0	3
6.	EE 2204	<u>Data Structures and Algorithms</u>	3	1	0	4
PRACTICAL						
1.	EE 2207	<u>Electron Devices and Circuits Laboratory</u>	0	0	3	2
2.	EE 2209	<u>Data Structures and Algorithms Laboratory</u>	0	0	3	2
3.	EE 2208	<u>Measurements & Instrumentation Laboratory</u>	0	0	3	2
TOTAL			18	3	9	27

SEMESTER IV

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	MA 2264	<u>Numerical Methods</u>	3	1	0	4
2.	EE 2251	<u>Electrical Machines – I</u>	3	1	0	4
3.	EE 2252	<u>Power Plant Engineering</u>	3	1	0	4
4.	EE 2253	<u>Control Systems</u>	3	1	0	4
5.	EE 2254	<u>Linear Integrated Circuits and Applications</u>	3	0	0	3
6.	EE 2255	<u>Digital Logic Circuits</u>	3	1	0	4
PRACTICAL						
1.	EE 2257	<u>Control Systems Laboratory</u>	0	0	3	2
2.	EE 2258	<u>Linear and Digital Integrated Circuits Laboratory</u>	0	0	3	2
3.	EE 2259	<u>Electrical Machines Laboratory – I</u>	0	0	3	2
TOTAL			18	5	9	29

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SEMESTER V

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	EC2311	<u>Communication Engineering</u>	3	0	0	3
2.	EC2314	<u>Digital Signal Processing</u>	3	1	0	4
3.	CS2311	<u>Object Oriented Programming</u>	3	0	0	3
4.	EE2301	<u>Power Electronics</u>	3	0	0	3
5.	EE2302	<u>Electrical Machines II</u>	3	1	0	4
6.	EE2303	<u>Transmission & Distribution</u>	3	1	0	4
PRACTICAL						
1.	CS2312	<u>Object Oriented Programming Laboratory</u>	0	0	3	2
2.	GE2321	<u>Communication Skills Laboratory</u>	0	0	4	2
3.	EE2304	<u>Power Electronics Laboratory</u>	0	0	3	2
4.	EE2305	<u>Electrical Machines Laboratory II</u>	0	0	3	2
TOTAL			18	3	13	29

SEMESTER VI

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	EE2351	<u>Power System Analysis</u>	3	1	0	4
2.	EE2352	<u>Solid State Drives</u>	3	0	0	3
3.	EE2353	<u>High Voltage Engineering</u>	3	0	0	3
4.	EE2354	<u>Microprocessors and Micro controller</u>	3	0	0	3
5.	EE2355	<u>Design of Electrical Machines</u>	3	1	0	4
6.	CS2363	<u>Computer Networks</u>	3	0	0	3
7.		Elective I	3	0	0	3
PRACTICAL						
1.	EE2356	<u>Microprocessor and Micro controller Laboratory</u>	0	0	3	2
2.	EE2357	<u>Presentation Skills and Technical Seminar</u>	0	0	2	1
TOTAL			21	2	5	26

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SEMESTER VII

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	EE2401	Power System Operation and Control	3	0	0	3
2.	EE2402	Protection & Switchgear	3	0	0	3
3.	EE2403	Special Electrical Machines	3	0	0	3
4.	MG2351	Principles of Management	3	0	0	3
5.	CS2411	Operating Systems	3	0	0	3
6.		Elective – II	3	0	0	3
PRACTICAL						
1.	EE2404	Power System Simulation Laboratory	0	0	3	2
2.	EE2405	Comprehension	0	0	2	1
TOTAL			18	0	5	21

SEMESTER VIII

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

THEORY			L	T	P	C
1.	EE2451	Electric Energy Generation, Utilization and Conservation	3	0	0	3
2.		Elective – III	3	0	0	3
3.		Elective – IV	3	0	0	3
PRACTICAL						
1.	EE2452	Project work	0	0	12	6
TOTAL			9	0	12	15

LIST OF ELECTIVES - R 2008

ELECTIVE I

SL.NO	CODE NO.	COURSE TITLE	L	T	P	C
1.	EI2404	Fibre Optics and Laser Instruments	3	0	0	3
2.	CS2070	Visual Languages and Applications	3	0	0	3
3.	IC2351	Advanced Control System	3	0	0	3
4.	EE2023	Robotics and Automation	3	0	0	3
5.	GE2025	Professional Ethics in Engineering	3	0	0	3
6.	EE2027	Power System Transients	3	0	0	3

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ELECTIVE II

7.	EI2311	<u>Biomedical Instrumentation</u>	3	0	0	3
8.	EE2025	<u>Intelligent Control</u>	3	0	0	3
9.	EE2026	<u>Power System Dynamics</u>	3	0	0	3
10.	CS2071	<u>Computer Architecture</u>	3	0	0	3
11.	GE2022	<u>Total Quality Management</u>	3	0	0	3

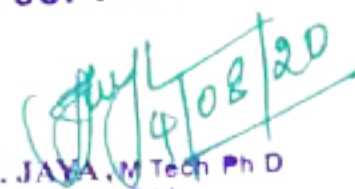
ELECTIVE III

12.	EE2028	<u>Power Quality</u>	3	0	0	3
13.	EE2029	<u>System Identification and Adaptive Control</u>	3	0	0	3
14.	EE2030	<u>Operations Research</u>	3	0	0	3
15.	EI2403	<u>VLSI Design</u>	3	0	0	3
16.	EE2032	<u>High Voltage Direct Current Transmission</u>	3	0	0	3

ELECTIVE IV

17.	GE2023	<u>Fundamental of NanoScience</u>	3	0	0	3
18.	EE2033	<u>Micro Electro Mechanical Systems</u>	3	0	0	3
19.	EE2034	<u>Software for Circuit Simulation</u>	3	0	0	3
20.	EE2035	<u>Computer Aided Design of Electrical Apparatus</u>	3	0	0	3
21.	EE2036	<u>Flexible AC Transmission Systems</u>	3	0	0	3

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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
THEORY						
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
PRACTICAL						
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
			17	2	11	26

SEMESTER II

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
		TOTAL	19	4	7	27

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SEMESTER III

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	EC6361	Electronics Laboratory	0	0	3	2
8.	EE6311	Linear and Digital Integrated Circuits Laboratory	0	0	3	2
TOTAL			18	4	6	26

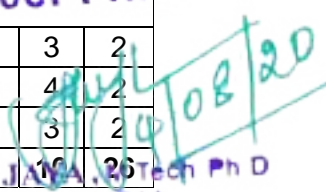
SEMESTER IV

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	CS6461	Object Oriented Programming Laboratory	0	0	3	2
8.	EE6411	Electrical Machines Laboratory - I	0	0	3	2
TOTAL			18	2	6	24

SEMESTER V

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	2	10	26

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SEMESTER VI

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	1	8	24

SEMESTER VII

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	EE6711	Power System Simulation Laboratory	0	0	3	2
8.	EE6712	Comprehension	0	0	2	1
TOTAL			18	0	5	21

SEMESTER VIII

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
4.	EE6811	Project Work	0	0	12	6
TOTAL			9	0	12	15

TOTAL CREDITS: 69

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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
OPEN ELECTIVES (Offered by Other Branches)

EXHIBIT No. 1.2.1 - D3

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

ANNA UNIVERSITY, CHENNAI

EXHIBIT No. 1.2.1 - E1

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B.E. ELECTRONICS AND COMMUNICATION ENGINEERING

II - VIII SEMESTERS CURRICULA AND SYLLABI

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	HS2161	<u>Technical English – II*</u>	3	1	0	4
2.	MA2161	<u>Mathematics – II*</u>	3	1	0	4
3.	PH2161	<u>Engineering Physics – II*</u>	3	0	0	3
4.	CY2161	<u>Engineering Chemistry – II*</u>	3	0	0	3
5. a	ME2151	<u>Engineering Mechanics</u> (For non-circuit branches)	3	1	0	4
5. b	EE2151	<u>Circuit Theory</u> (For branches under Electrical Faculty)	3	1	0	4
5. c	EC2151	<u>Electric Circuits and Electron Devices</u> (For branches under I & C Faculty)	3	1	0	4
6. a	GE2151	<u>Basic Electrical & Electronics Engineering</u> (For non-circuit branches)	4	0	0	4
6. b	GE2152	<u>Basic Civil & Mechanical Engineering</u> (For circuit branches)	4	0	0	4
PRACTICAL						
7.	GE2155	<u>Computer Practice Laboratory-II*</u>	0	1	2	2
8.	GS2165	<u>Physics & Chemistry Laboratory - II*</u>	0	0	3	2
9. a	ME2155	<u>Computer Aided Drafting and Modeling Laboratory</u> (For non-circuits branches)	0	1	2	2
9. b	EE2155	<u>Electrical Circuits Laboratory</u> (For branches under Electrical Faculty)	0	0	3	2
9. c	EC2155	<u>Circuits and Devices Laboratory</u> (For branches under I & C Faculty)	0	0	3	2
TOTAL : 28 CREDITS						
10.	-	<u>English Language Laboratory</u> *	0	0	2	-

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* Common to all B.E. / B.Tech. Programmes

+ Offering English Language Laboratory as an additional subject (with no marks) during 2nd semester may be decided by the respective Colleges affiliated to Anna University Chennai.

A. CIRCUIT BRANCHES

I Faculty of Electrical Engineering

1. B.E. Electrical and Electronics Engineering
2. B.E. Electronics and Instrumentation Engineering
3. B.E. Instrumentation and Control Engineering

II Faculty of Information and Communication Engineering

1. B.E. Computer Science and Engineering
2. B.E. Electronics and Communication Engineering
3. B.E. Bio Medical Engineering
4. B.Tech. Information Technology

B. NON – CIRCUIT BRANCHES

I Faculty of Civil Engineering

1. B.E. Civil Engineering


II Faculty of Mechanical Engineering

1. B.E. Aeronautical Engineering
2. B.E. Automobile Engineering
3. B.E. Marine Engineering
4. B.E. Mechanical Engineering
5. B.E. Production Engineering

III Faculty of Technology

1. B.Tech. Chemical Engineering
2. B.Tech. Biotechnology
3. B.Tech. Polymer Technology
4. B.Tech. Textile Technology
5. B.Tech. Textile Technology (Fashion Technology)
6. B.Tech. Petroleum Engineering
7. B.Tech. Plastics Technology

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SEMESTER III

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MA 2211	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
EC 2201	<u>Electrical Engineering</u>	3	0	0	3
EC 2202	<u>Data Structures and Object Oriented Programming in C++</u>	3	0	0	3
EC 2203	<u>Digital Electronics</u>	3	1	0	4
EC 2204	<u>Signals and systems</u>	3	1	0	4
EC 2205	<u>Electronic Circuits- I</u>	3	1	0	4
PRACTICAL					
EC 2207	<u>Digital Electronics Lab</u>	0	0	3	2
EC 2208	<u>Electronic Circuits Lab I</u>	0	0	3	2
EC 2209	<u>Data structures and Object Oriented Programming Lab</u>	0	0	3	2
	TOTAL	18	4	9	28

SEMESTER IV

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MA 2261	<u>Probability and Random Processes</u>	3	1	0	4
EC 2251	<u>Electronic Circuits II</u>	3	1	0	4
EC 2252	<u>Communication Theory</u>	3	1	0	4
EC 2253	<u>Electromagnetic Fields</u>	3	1	0	4
EC 2254	<u>Linear Integrated Circuits</u>	3	0	0	3
EC 2255	<u>Control Systems</u>	3	0	0	3
PRACTICAL					
EC 2257	<u>Electronics circuits II and simulation lab</u>	0	0	3	2
EC 2258	<u>Linear Integrated Circuit Lab</u>	0	0	3	2
EC 2259	<u>Electrical Engineering and Control System Lab</u>	0	0	3	2
	TOTAL	18	4	9	28

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SEMESTER V

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
EC2301	<u>Digital Communication</u>	3	0	0	3
EC2302	<u>Digital Signal Processing</u>	3	1	0	4
EC2303	<u>Computer Architecture and Organization</u>	3	0	0	3
EC2305	<u>Transmission Lines and Wave guides</u>	3	1	0	4
GE2021	<u>Environmental Science and Engineering</u>	3	0	0	3
EC2304	<u>Microprocessors and Microcontrollers</u>	3	1	0	4
PRACTICAL					
EC2306	<u>Digital Signal Processing Lab</u>	0	0	3	2
EC2307	<u>Communication System Lab</u>	0	0	3	2
EC2308	<u>Microprocessors and Microcontrollers Lab</u>	0	0	3	2
	TOTAL	18	3	9	27

SEMESTER VI

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MG2351	<u>Principles of Management</u>	3	0	0	3
EC2351	<u>Measurements and Instrumentation</u>	3	0	0	3
EC2352	<u>Computer Networks</u>	3	0	0	3
EC2353	<u>Antenna and Wave Propagation</u>	3	1	0	4
EC2354	<u>VLSI Design</u>	3	0	0	3
	Elective I	3	0	0	3
PRACTICAL					
EC2356	<u>Computer Networks Lab</u>	0	0	3	2
EC2357	<u>VLSI Design Lab</u>	0	0	3	2
GE2321	<u>Communication Skills Lab</u>	0	0	4	2
	TOTAL	18	1	10	25

SEMESTER VII

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
EC2401	<u>Wireless Communication</u>	3	0	0	3
EC2402	<u>Optical Communication and Networks</u>	3	0	0	3
EC2403	<u>RF and Microwave Engineering</u>	3	0	0	3
	Elective II	3	0	0	3
	Elective III	3	0	0	3
	Elective IV	3	0	0	3
PRACTICAL					
EC2404	<u>Electronics System Design Lab</u>	0	0	3	2
EC2405	<u>Optical & Microwave Lab</u>	0	0	3	2
TOTAL		18	0	6	22

SEMESTER VIII

(Applicable to the students admitted from the Academic year 2008–2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
	Elective V	3	0	0	3
	Elective VI	3	0	0	3
PRACTICAL					
EC2451	Project Work	0	0	12	6
TOTAL		6	0	12	12

LIST OF ELECTIVES
SEMESTER VI – Elective I

CODE NO.	COURSE TITLE	L	T	P	C
EC2021	<u>Medical Electronics</u>	3	0	0	3
EC2022	<u>Operating Systems</u>	3	0	0	3
EC2023	<u>Solid State Electronic Devices</u>	3	0	0	3
IT2064	<u>Speech Processing</u>	3	0	0	3
MA2264	<u>Numerical Methods</u>	3	1	0	4
CS2021	<u>Multicore Programming</u>	3	0	0	3

SEMESTER VII - Elective II

CODE NO.	COURSE TITLE	L	T	P	C
EC2030	<u>Advanced Digital Signal Processing</u>	3	0	0	3
GE2022	<u>Total Quality Management</u>	3	0	0	3
EC2035	<u>Cryptography and Network Security</u>	3	0	0	3
EC2036	<u>Information Theory</u>	3	0	0	3
GE2071	<u>Intellectual Property Rights</u>	3	0	0	3
GE2025	<u>Professional Ethics in Engineering</u>	3	0	0	3

SEMESTER VII - Elective III

CODE NO.	COURSE TITLE	L	T	P	C
EC2027	<u>Advanced Microprocessors</u>	3	0	0	3
EC2028	<u>Internet and Java</u>	3	0	0	3
CS2060	<u>High Speed Networks</u>	3	0	0	3
CS2053	<u>Soft Computing</u>	3	0	0	3
EC2037	<u>Multimedia Compression and Communication</u>	3	0	0	3
EC2039	<u>Parallel and Distributed Processing</u>	3	0	0	3

SEMESTER VII - Elective IV

CODE NO.	COURSE TITLE	L	T	P	C
EC2029	<u>Digital Image Processing</u>	3	0	0	3
EC2031	<u>Electromagnetic Interference and Compatibility</u>	3	0	0	3
EC2033	<u>Power Electronics</u>	3	0	0	3
EC2034	<u>Television and Video Engineering</u>	3	0	0	3
EC2038	<u>Nano Electronics</u>	3	0	0	3
EC2041	<u>Avionics</u>	3	0	0	3


SEMESTER VIII - Elective V

CODE NO.	COURSE TITLE	L	T	P	C
EC2042	<u>Embedded and Real Time Systems</u>	3	0	0	3
EC2046	<u>Advanced Electronic system design</u>	3	0	0	3
EC2047	<u>Optoelectronic devices</u>	3	0	0	3
EC2050	<u>Mobile Adhoc Networks</u>	3	0	0	3
EC2051	<u>Wireless Sensor Networks</u>	3	0	0	3
EC2052	<u>Remote Sensing</u>	3	0	0	3
EC2053	<u>Engineering Acoustics</u>	3	0	0	3

SEMESTER VIII - Elective VI

CODE NO.	COURSE TITLE	L	T	P	C
EC2043	<u>Wireless networks</u>	3	0	0	3
EC2044	<u>Telecommunication Switching and Networks</u>	3	0	0	3
EC2045	<u>Satellite Communication</u>	3	0	0	3
EC2048	<u>Telecommunication System Modeling and Simulation</u>	3	0	0	3
EC2049	<u>Radar and Navigational Aids</u>	3	0	0	3
EC2054	<u>Optical Networks</u>	3	0	0	3

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R-2013

B.E. ELECTRONICS AND COMMUNICATION ENGINEERING


I – VIII SEMESTERS CURRICULUM AND SYLLABUS

SEMESTER I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			17	2	11	26

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	3	5	24

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SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	4	6	26

SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	2	9	26

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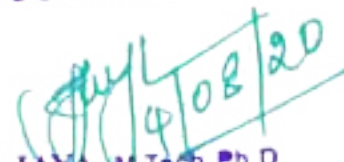
SEMESTER V

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
		TOTAL	15	2	9	23

SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
		TOTAL	18	0	10	24

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SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	EC6711	<u>Embedded Laboratory</u>	0	0	3	2
8.	EC6712	<u>Optical and Microwave Laboratory</u>	0	0	3	2
		TOTAL	18	0	6	22

SEMESTER VIII

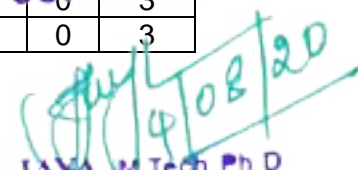
SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	EC6801	<u>Wireless Communication</u>	3	0	0	3
2.	EC6802	<u>Wireless Networks</u>	3	0	0	3
3.		Elective V	3	0	0	3
4.		Elective VI	3	0	0	3
PRACTICAL						
5.	EC6811	<u>Project Work</u>	0	0	12	6
		TOTAL	12	0	12	18

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

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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	3	0	0	3
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>	3	0	0	3
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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B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
I - VIII SEMESTERS CURRICULA AND SYLLABI

EXHIBIT No. 1.2.1 - E3


SEMESTER I

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

SEMESTER II

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	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
PRACTICALS								
7.	EC8261	Circuits and Devices Laboratory	PC	4	0	0	4	2
8.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
TOTAL				29	21	0	8	25

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SEMESTER III

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				30	20	0	10	25

SEMESTER IV

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				28	20	0	8	24

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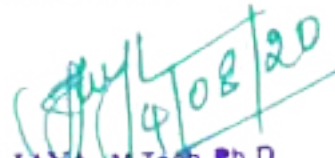
SEMESTER V

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

SEMESTER VI

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
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
TOTAL				28	18	0	10	23

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SEMESTER VII


Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
7.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
8.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2
TOTAL				26	18	0	8	22

SEMESTER VIII

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

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	0	0	4	2

		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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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**

Sl.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**


Sl.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%
	Total	25	25	25	24	25	23	22	16	185	
8.	Non Credit / Mandatory										

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B.E.
MECHANICAL
ENGINEERING

AFFILIATED INSTITUTIONS

R - 2008

B.E. MECHANICAL ENGINEERING
II TO VIII SEMESTERS CURRICULUM AND SYLLABI

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	HS2161	<u>Technical English – II*</u>	3	1	0	4
2.	MA2161	<u>Mathematics – II*</u>	3	1	0	4
3.	PH2161	<u>Engineering Physics – II*</u>	3	0	0	3
4.	CY2161	<u>Engineering Chemistry – II*</u>	3	0	0	3
5. a	ME2151	<u>Engineering Mechanics</u> (For non-circuit branches)	3	1	0	4
5. b	EE2151	<u>Circuit Theory</u> (For branches under Electrical Faculty)	3	1	0	4
5. c	EC2151	<u>Electric Circuits and Electron Devices</u> (For branches under I & C Faculty)	3	1	0	4
6. a	GE2151	<u>Basic Electrical & Electronics Engineering</u> (For non-circuit branches)	4	0	0	4
6. b	GE2152	<u>Basic Civil & Mechanical Engineering</u> (For circuit branches)	4	0	0	4
PRACTICAL						
7.	GE2155	<u>Computer Practice Laboratory-II*</u>	0	1	2	2
8.	GS2165	<u>Physics & Chemistry Laboratory - II*</u>	0	0	3	2
9. a	ME2155	<u>Computer Aided Drafting and Modeling Laboratory</u> (For non-circuits branches)	0	1	2	2

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9. b	EE2155	<u>Electrical Circuits Laboratory</u> (For branches under Electrical Faculty)	0	0	3	2
9. c	EC2155	<u>Circuits and Devices Laboratory</u> (For branches under I & C Faculty)	0	0	3	2
TOTAL : 28 CREDITS						
10.	-	<u>English Language Laboratory</u> ⁺	0	0	2	-

* **Common to all B.E. / B.Tech. Programmes**

+ Offering English Language Laboratory as an additional subject (with no marks) during 2nd semester may be decided by the respective Colleges affiliated to Anna University Chennai.

A. CIRCUIT BRANCHES

I Faculty of Electrical Engineering

1. B.E. Electrical and Electronics Engineering
2. B.E. Electronics and Instrumentation Engineering
3. B.E. Instrumentation and Control Engineering

II Faculty of Information and Communication Engineering

1. B.E. Computer Science and Engineering
2. B.E. Electronics and Communication Engineering
3. B.E. Bio Medical Engineering
4. B.Tech. Information Technology

B. NON – CIRCUIT BRANCHES

I Faculty of Civil Engineering

1. B.E. Civil Engineering

II Faculty of Mechanical Engineering

1. B.E. Aeronautical Engineering
2. B.E. Automobile Engineering
3. B.E. Marine Engineering
4. B.E. Mechanical Engineering
5. B.E. Production Engineering

III Faculty of Technology

1. B.Tech. Chemical Engineering
2. B.Tech. Biotechnology
3. B.Tech. Polymer Technology
4. B.Tech. Textile Technology
5. B.Tech. Textile Technology (Fashion Technology)
6. B.Tech. Petroleum Engineering

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SEMESTER III

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MA 2211	<u>Transforms and Partial Differential Equation</u>	3	1	0	4
ME 2201	<u>Manufacturing Technology – I</u>	3	0	0	3
ME 2202	<u>Engineering Thermodynamics</u>	3	1	0	4
ME 2203	<u>Kinematics of Machinery</u>	3	1	0	4
ME 2204	<u>Fluid Mechanics and Machinery</u>	3	1	0	4
ME 2205	<u>Electrical Drives and Control</u>	3	0	0	3
PRACTICAL					
ME 2207	<u>Manufacturing Technology Lab – I</u>	0	0	3	2
ME 2208	<u>Fluid Mechanics and Machinery Laboratory</u>	0	0	3	2
ME 2209	<u>Electrical Engineering Laboratory</u>	0	0	3	2
TOTAL		18	4	9	28

SEMESTER IV

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MA 2266	<u>Statistics and Numerical Methods</u>	3	1	0	4
ME 2251	<u>Heat and Mass Transfer</u>	3	1	0	4
ME 2252	<u>Manufacturing Technology – II</u>	3	0	0	3
ME 2253	<u>Engineering Materials and Metallurgy</u>	3	0	0	3
ME 2254	<u>Strength of Materials</u>	3	1	0	4
ME 2255	<u>Electronics and Microprocessors</u>	3	0	0	3
PRACTICAL					
ME 2258	<u>Manufacturing Technology Lab – II</u>	0	0	3	2
ME 2256	<u>Strength of Materials Lab</u>	0	0	3	2
ME 2257	<u>Computer Aided Machine Drawing Laboratory</u>	0	0	4	2
TOTAL		18	3	10	27

SEMESTER V

(Applicable to the students admitted from the Academic year 2008 – 2009 onwards)

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
GE 2021	<u>Environmental Science and Engineering</u>	3	0	0	3
ME 2301	<u>Thermal Engineering</u>	3	1	0	4
ME 2302	<u>Dynamics of Machinery</u>	3	1	0	4
ME 2303	<u>Design of Machine Elements</u>	3	1	0	4
ME 2304	<u>Engineering Metrology & Measurements</u>	3	0	0	3
ME 2305	<u>Applied Hydraulics & Pneumatics</u>	3	0	0	3
PRACTICALS					
ME 2306	<u>Thermal Engineering Lab – I</u>	0	0	3	2
ME 2307	<u>Dynamics Lab</u>	0	0	3	2
ME 2308	<u>Metrology & Measurements Lab</u>	0	0	3	2
ME 2309	<u>CAD / CAM Lab</u>	0	0	3	2
TOTAL		18	3	12	29

SEMESTER VI

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MG 2351	<u>Principles of Management</u>	3	0	0	3
ME 2351	<u>Gas Dynamics and Jet Propulsion</u>	3	1	0	4
ME 2352	<u>Design of Transmission Systems</u>	3	1	0	4
ME 2354	<u>Automobile Engineering</u>	3	0	0	3
ME 2353	<u>Finite Element Analysis</u>	3	1	0	4
	<u>Elective – I</u>	3	0	0	3
PRACTICALS					
ME 2355	<u>Thermal Engineering Lab – II</u>	0	0	3	2
ME 2356	<u>Design & Fabrication Project</u>	0	0	4	2
GE 2321	<u>Communication Skills Lab</u>	0	0	4	2
TOTAL		18	3	11	27


SEMESTER VII

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
GE 2022	<u>Total Quality Management</u>	3	0	0	3
ME 2401	<u>Mechatronics</u>	3	0	0	3
ME 2402	<u>Computer Integrated Manufacturing</u>	3	0	0	3
ME 2403	<u>Power Plant Engineering</u>	3	0	0	3
	<u>Elective – II</u>	3	0	0	3
	<u>Elective – III</u>	3	0	0	3
PRACTICALS					
ME 2404	<u>Computer Aided Simulation & Analysis Laboratory</u>	0	0	3	2
ME 2405	<u>Mechatronics Lab</u>	0	0	3	2
TOTAL		18	0	6	22

SEMESTER VIII

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MG 2451	<u>Engineering Economics and Cost Analysis</u>	3	0	0	3
	<u>Elective – IV</u>	3	0	0	3
	<u>Elective – V</u>	3	0	0	3
PRACTICALS					
ME 2452	<u>Comprehension</u>	0	0	2	1
ME 2453	<u>Project Work</u>	0	0	12	6
TOTAL		9	0	14	16

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SEMESTER VI
Elective I

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
MG 2021	<u>Marketing Management</u>	3	0	0	3
ME 2021	<u>Quality Control & Reliability Engineering</u>	3	0	0	3
ME 2022	<u>Refrigeration & Air conditioning</u>	3	0	0	3
ME 2023	<u>Renewable Sources of Energy</u>	3	0	0	3
ME 2024	<u>Industrial Tribology</u>	3	0	0	3
ME 2025	<u>Vibration & Noise Control</u>	3	0	0	3
ME 2026	<u>Unconventional Machining Processes</u>	3	0	0	3

SEMESTER VII
Elective II

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
ME 2027	<u>Process Planning & Cost Estimation</u>	3	0	0	3
ME 2029	<u>Design of Jigs, Fixtures & Press Tools</u>	3	0	0	3
ME 2030	<u>Composite Materials</u>	3	0	0	3

Elective III

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
ME 2028	<u>Robotics</u>	3	0	0	3
ME 2031	<u>Thermal Turbo machines</u>	3	0	0	3
ME 2032	<u>Computational Fluid Dynamics</u>	3	0	0	3
ME 2034	<u>Nuclear Engineering</u>	3	0	0	3

SEMESTER-VIII

Elective IV

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
GE 2025	<u>Professional Ethics In Engineering</u>	3	0	0	3
ME 2035	<u>Entrepreneurship Development</u>	3	0	0	3
ME 2036	<u>Production Planning and Control</u>	3	0	0	3
ME 2037	<u>Maintenance Engineering</u>	3	0	0	3
ME 2038	<u>Operations Research</u>	3	0	0	3

Elective V

CODE NO.	COURSE TITLE	L	T	P	C
THEORY					
GE2023	<u>Fundamentals of Nanoscience</u>	3	0	0	3
ME 2040	<u>Pressure Vessels & Piping Design</u>	3	0	0	3
ME 2041	<u>Advanced I.C. Engines</u>	3	0	0	3
ME 2042	<u>Design of Heat Exchangers</u>	3	0	0	3

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EXHIBIT No. 1.2.1 - F2

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

SEMESTER I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			17	2	11	26

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			19	4	4	25

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SEMESTER III

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	2	9	26

SEMESTER IV

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	1	9	25

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SEMESTER V

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	0	9	24

SEMESTER VI

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	0	11	24

SEMESTER VII

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
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
TOTAL			18	0	8	23

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SEMESTER VIII

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

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	Marketing Management	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	Micro Electro Mechanical Systems	3	0	0	3
6.	ME6021	Hydraulics and Pneumatics	3	0	0	3


**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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I TO VIII SEMESTERS CURRICULA AND SYLLABI

EXHIBIT No. 1.2.1 - F3


SEMESTER I

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

SEMESTER II

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

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SEMESTER III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	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
PRACTICAL								
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
TOTAL				33	17	2	14	25

SEMESTER IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8452	Statistics and Numerical Methods	BS	4	4	0	0	4
2.	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
PRACTICAL								
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
TOTAL				29	19	0	10	24

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SEMESTER V

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICAL								
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
TOTAL				28	16	0	12	22

SEMESTER VI

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICAL								
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
TOTAL				30	18	2	10	24

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SEMESTER VII


SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICAL								
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
TOTAL				28	18	0	10	23

SEMESTER VIII

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

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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**B.E.
MECHATRONICS
ENGINEERING**

ANNA UNIVERSITY, CHENNAI

AFFILIATED INSTITUTIONS

EXHIBIT No. 1.2.1 - G1

R - 2013

B.E. MECHATRONICS ENGINEERING

I – VIII SEMESTERS CURRICULUM AND SYLLABUS

SEMESTER I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			17	2	11	26

SEMESTER II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			19	4	4	25

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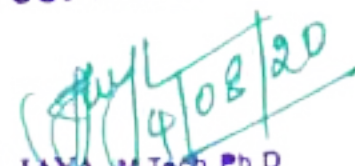
SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	2	9	26

SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	1	9	25

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SEMESTER V

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	0	9	24

SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	0	9	24

SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICALS						
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
TOTAL			18	0	10	24

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SEMESTER VIII

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

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	<u>Human Rights</u>	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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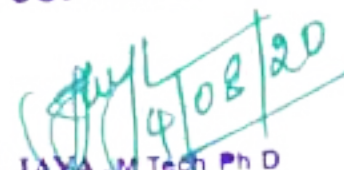
SEMESTER VIII**Elective IV**

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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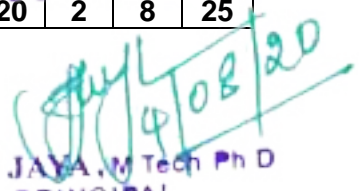
SEMESTER I

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

SEMESTER II

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

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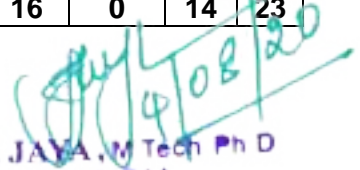
SEMESTER III

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

SEMESTER IV

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

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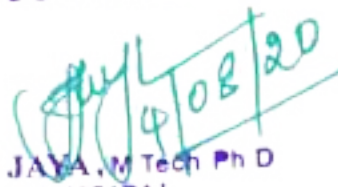
SEMESTER V

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

SEMESTER VI

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

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SEMESTER VII


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

SEMESTER VIII

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MT8801	Automotive Electronics	PC	3	3	0	0	3
2.		Professional Elective - IV	PE	3	3	0	0	3
3.		Professional Elective – V	PE	3	3	0	0	3
PRACTICALS								
4.	MT8811	Project Work	EEC	20	0	0	20	10
TOTAL				29	9	0	20	19

TOTAL NO. OF CREDITS:186

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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

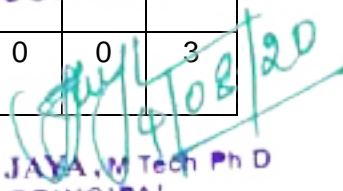
BASIC SCIENCE (BS)

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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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

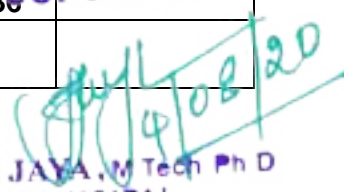
SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8492	Database Management Systems	PE	3	3	0	0	3
2.	MG8892	Marketing Management	PE	3	3	0	0	3
3.	IM8071	Product Design and Development	PE	3	3	0	0	3
4.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

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.E. MECHATRONICS ENGINEERING											
	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
	TOTAL	25	25	25	23	23	24	22	19	186	
8.	Non-Credit/ (Mandatory)										


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SEMESTER VIII

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

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**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
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

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
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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M.E.
COMPUTER SCIENCE AND
ENGINEERING

AFFILIATED INSTITUTIONS

Regulations - 2009

M.E.COMPUTER SCIENCE AND ENGINEERING

II TO IV SEMESTERS (FULL TIME) CURRICULUM AND SYLLABI

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1	CS9221	<u>Data Base Technology</u>	3	0	0	3
2	CS9222	<u>Advanced Operating Systems</u>	3	0	0	3
3	CS9223	<u>Advanced System Software</u>	3	0	0	3
4	CS9224	<u>Information Security</u>	3	0	0	3
5	CS9225	<u>Web Technology</u>	3	0	0	3
6	E1	Elective I	3	0	0	3
PRACTICAL						
7	CS9227	<u>Operating System Lab</u>	0	0	3	2
8	CS9228	<u>Web Technology Lab</u>	0	0	3	2
TOTAL			18	0	6	22

SEMESTER III

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1	E2	Elective II	3	0	0	3
2	E3	Elective III	3	0	0	3
3	E4	Elective IV	3	0	0	3
PRACTICAL						
4	CS9234	Project Work (Phase I)	0	0	12	6
TOTAL			9	0	12	15

SEMESTER IV

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
PRACTICAL						
1	CS9241	Project Work (Phase II)	0	0	24	12
TOTAL			0	0	24	12

TOTAL NO OF CREDITS TO BE EARNED FOR THE AWARD OF DEGREE: 20+22+15+12= 69

LIST OF ELECTIVES FOR M.E.COMPUTER SCIENCE AND ENGINEERING*

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1	CS9251	<u>Mobile Computing</u>	3	0	0	3
2	CS9252	<u>Grid Computing</u>	3	0	0	3
3	CS9253	<u>Theory of Computation</u>	3	0	0	3
4	CS9254	<u>Soft Computing</u>	3	0	0	3
5	CP9264	<u>Distributed Computing</u>	3	0	0	3
6	CS9256	<u>Multimedia Systems</u>	3	0	0	3
7	CS9257	<u>XML and Web Services</u>	3	0	0	3
8	CS9258	<u>Bio Informatics</u>	3	0	0	3
9	CS9259	<u>Network Security</u>	3	0	0	3
10	CS9260	<u>Embedded Systems</u>	3	0	0	3
11	CS9261	<u>Digital Imaging</u>	3	0	0	3
12	CS9262	<u>Software Quality Assurance</u>	3	0	0	3
13	CS9263	<u>Ad-hoc Networks</u>	3	0	0	3
14	CS9264	<u>Data Warehousing and Data Mining</u>	3	0	0	3
15	CS9265	<u>Performance Evaluation of Computer Systems and Networks</u>	3	0	0	3
16	CS9266	<u>Agent Based Intelligent Systems</u>	3	0	0	3
17	CS9267	<u>Visualization Techniques</u>	3	0	0	3
18	CS9268	<u>Advanced Databases</u>	3	0	0	3
19	CS9269	<u>Software Project Management</u>	3	0	0	3
20	CS9270	<u>Component Based Technology</u>	3	0	0	3

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EXHIBIT No. 1.2.1 - H2

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
THEORY						
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
PRACTICAL						
7.	CP7111	Advanced Data Structures Laboratory	0	0	4	2
8.	CP7112	Case Study - Network Design (Team Work)	0	0	2	1
TOTAL			18	1	6	22

SEMESTER II

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	CP7211	Advanced Databases Laboratory	0	0	4	2
8.	CP7212	Case Study - Operating Systems Design (Team Work)	0	0	2	1
TOTAL			18	1	6	22

SEMESTER III

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
5.	CP7311	Project Work (Phase I)	0	0	2	6
TOTAL			12	1	12	19

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SEMESTER IV

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

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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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
THEORY								
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
PRACTICALS								
7.	CP5161	Data Structures Laboratory	PC	4	0	0	4	2
TOTAL				24	20	0	4	22

SEMESTER II

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


SEMESTER III

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICALS								
4.	NE5311	Project Work Phase - I	EEC	12	0	0	12	6
TOTAL				21	9	0	12	15

SEMESTER IV

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

TOTAL NO. OF CREDITS: 70**TRUE COPY ATTESTED**


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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

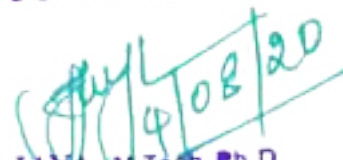
PROFESSIONAL CORE (PC)

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
REGULATION - 2009**

EXHIBIT No. 1.2.1 - II

M.E.STRUCTURAL ENGINEERING

II TO IV SEMESTERS (FULL TIME) CURRICULUM AND SYLLABUS

SEMESTER II

SL.No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1	ST 9221	<u>Finite Element Analysis</u>	3	1	0	4
2	ST 9222	<u>Experimental Techniques and Instrumentation</u>	2	0	2	3
3	ST 9223	<u>Steel Structures</u>	3	0	0	3
4	ST 9224	<u>Earthquake Analysis and Design of Structures</u>	3	0	0	3
5		<u>Elective III</u>	3	0	0	3
6		<u>Elective IV</u>	3	0	0	3
PRACTICAL						
7	ST 9225	<u>Advanced Structural Engineering Laboratory</u>	0	0	4	2
TOTAL			17	1	6	21

SEMESTER III

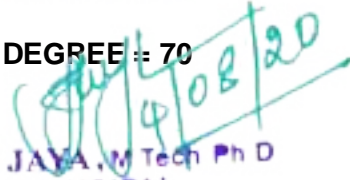
SL.No.	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1		<u>Elective V</u>	3	0	0	3
2		<u>Elective VI</u>	3	0	0	3
3		<u>Elective VII</u>	3	0	0	3
PRACTICAL						
4	ST 9231	Practical Training (4 Weeks)	0	0	0	1
5	ST 9232	Project Work (Phase I)	0	0	6	3
TOTAL			9	0	6	13

SEMESTER IV

SL.No.	COURSE CODE	COURSE TITLE	L	T	P	C
PRACTICAL						
1	ST 9241	Project Work (Phase II)	0	0	30	15
TOTAL			0	0	30	15

TOTAL CREDITS TO BE EARNED FOR THE AWARD OF THE DEGREE :: 70


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ELECTIVES FOR M.E.STRUCTURAL ENGINEERING

SL.No.	COURSE CODE	COURSE TITLE	L	T	P	C
1	CN 9251	<u>Advanced Concrete Technology</u>	3	0	0	3
2	ST 9251	<u>Computer Aided Design</u>	2	0	2	3
3	ST 9252	<u>Design of Bridges</u>	3	0	0	3
4	ST 9253	<u>Design of Shell and Spatial Structures</u>	2	0	2	3
5	ST 9254	<u>Design of Steel Concrete Composite Structures</u>	3	0	0	3
6	ST 9255	<u>Design of Tall Buildings</u>	3	0	0	3
7	ST 9256	<u>Industrial Structures</u>	3	0	0	3
8	ST 9257	<u>Maintenance and Rehabilitation of Structures</u>	3	0	0	3
9	ST 9258	<u>Mechanics of Composite Materials</u>	3	0	0	3
10	ST 9259	<u>Nonlinear Analysis of Structures</u>	3	0	0	3
11	ST 9260	<u>Offshore Structures</u>	3	0	0	3
12	ST 9261	<u>Optimisation of Structures</u>	3	0	0	3
13	ST 9262	<u>Prefabricated Structures</u>	3	0	0	3
14	ST 9263	<u>Prestressed Concrete</u>	3	0	0	3
15	ST 9264	<u>Stability of Structures</u>	3	0	0	3
16	ST 9265	<u>Theory of Plates</u>	3	0	0	3
17	ST 9266	<u>Wind and Cyclone Effects on Structures</u>	3	0	0	3

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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
THEORY						
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
TOTAL			18	1	0	19

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	ST7211	Advanced Structural Engineering Laboratory	0	0	4	2
TOTAL			16	0	8	20

SEMESTER III

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.		Elective V	3	0	0	3
2.		Elective VI	3	0	0	3
3.		Elective VII	3	0	0	3
PRACTICAL						
4.	ST7311	Seminar	0	0	2	1
5.	ST7312	Practical Training (4 Weeks)	-	-	-	1
6.	ST7313	Project Work (Phase I)	0	0	12	6
TOTAL			9	0	14	17

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SEMESTER IV

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

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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REGULATIONS – 2017
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CURRICULA AND SYLLABI


SEMESTER I

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA5151	Advanced Mathematical Methods	FC	4	4	0	0	4
2.	ST5101	Advanced Concrete Structures	PC	3	3	0	0	3
3.	ST5102	Dynamics of Structures	PC	3	3	0	0	3
4.	ST5103	Theory of Elasticity and Plasticity	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
TOTAL				19	19	0	0	19

SEMESTER II

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICAL								
7.	ST5211	Advanced Structural Engineering Laboratory	PC	4	0	0	4	2
8.	ST5212	Practical Training I (2 weeks)	EEC	0	0	0	0	1
TOTAL				22	18	0	4	21

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SEMESTER III


S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
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
PRACTICAL								
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
TOTAL				23	9	0	14	17

SEMESTER IV

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
PRACTICAL								
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
TOTAL				24	0	0	24	13

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	<u>Maintenance and Rehabilitation of Structures</u>	PE	3	3	0	0	3
2.	ST5002	<u>Prefabricated Structures</u>	PE	3	3	0	0	3
3.	ST5003	<u>Offshore Structures</u>	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

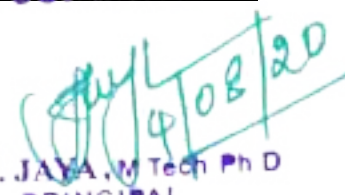
SEMESTER III
ELECTIVE V & VI

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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M.E. VLSI DESIGN

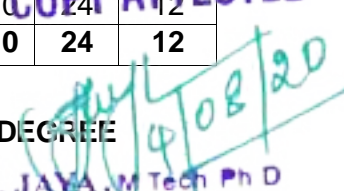
AFFILIATED INSTITUTIONS
ANNA UNIVERSITY : : CHENNAI 600 025
REGULATIONS - 2009
CURRICULUM II TO IV SEMESTERS (FULL TIME)
M.E. VLSI DESIGN
SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1	AP9221	<u>Analysis and Design of Analog Integrated Circuits</u>	3	0	0	3
2	VL9221	<u>CAD for VLSI Circuits</u>	3	0	0	3
3	AP9222	<u>Computer Architecture and Parallel Processing</u>	3	0	0	3
4	AP9224	<u>Embedded Systems</u>	3	0	0	3
5	E2	Elective II	3	0	0	3
6	E3	Elective III	3	0	0	3
PRACTICAL						
7	VL9225	<u>VLSI Design Lab II</u>	0	0	4	2
TOTAL			18	0	4	20

SEMESTER III						
SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1	E4	Elective IV	3	0	0	3
2	E5	Elective V	3	0	0	3
3	E6	Elective VI	3	0	0	3
PRACTICAL						
4	VL9234	Project Work (Phase I)	0	0	12	6
TOTAL			9	0	12	15

SEMESTER IV						
SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
PRACTICAL						
1	VL9241	Project Work (Phase II)	0	0	24	12
TOTAL			0	0	24	12


TOTAL NO.OF CREDITS TO BE EARNED FOR THE AWARD OF DEGREE
21+20+15+12 =68

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LIST OF ELECTIVES M.E. VLSI DESIGN

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1	VL9251	<u>Testing of VLSI Circuits</u>	3	0	0	3
2	VL9252	<u>Low Power VLSI Design</u>	3	0	0	3
3	VL9253	<u>VLSI Signal Processing</u>	3	0	0	3
4	VL9254	<u>Analog VLSI Design</u>	3	0	0	3
5	VL9255	<u>Design of Semiconductor Memories</u>	3	0	0	3
6	VL9256	<u>VLSI Technology</u>	3	0	0	3
7	VL9257	<u>Physical Design of VLSI Circuits</u>	3	0	0	3
8	VL9258	<u>Genetic Algorithms and their Applications</u>	3	0	0	3
9	AP9213	<u>Advanced Microprocessors and Microcontrollers</u>	3	0	0	3
10	AP9252	<u>Neural Networks and Its Applications</u>	3	0	0	3
11	VL9261	<u>ASIC Design</u>	3	0	0	3
12	NE9251	<u>Reliability Engineering</u>	3	0	0	3
13	AP9256	<u>Electromagnetic Interference and Compatibility in System Design</u>	3	0	0	3
14	VL9264	<u>Digital Speech Signal Processing</u>	3	0	0	3
15	VL9265	<u>DSP Processor Architecture and programming</u>	3	0	0	3
16	VL9266	<u>Introduction to MEMS System Design</u>	3	0	0	3
17		Special Elective	3	0	0	3

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ANNA UNIVERSITY, CHENNAI
REGULATIONS - 2013
M.E. VLSI DESIGN

EXHIBIT No. 1.2.1 - J2

I TO IV SEMESTERS CURRICULA AND SYLLABI (FULL TIME)

SEMESTER I

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	VL7111	VLSI Design Laboratory I	0	0	3	2
TOTAL			18	1	3	21

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
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
PRACTICAL						
7.	VL7211	VLSI Design Laboratory II	0	0	3	2
TOTAL			18	0	3	20

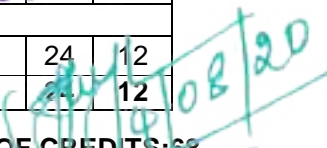
SEMESTER III

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

SEMESTER IV

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

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

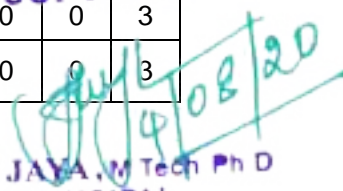
ELECTIVE VI

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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M.E. VLSI DESIGN
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
CURRICULA AND SYLLABI

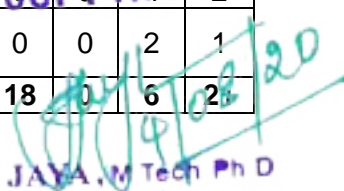
EXHIBIT No. 1.2.1 - J3

SEMESTER I

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

SEMESTER II

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

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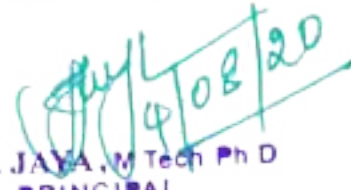
SEMESTER III

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

SEMESTER IV

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

TOTAL NO. OF CREDITS:70**TRUE COPY ATTESTED**


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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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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

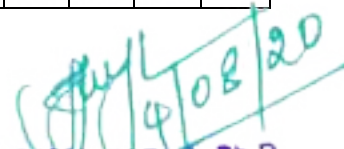
SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	DS5191	DSP Processor Architecture and Programming	PE	3	3	0	0	3
2.	VL5005	Networks on Chip	PE	3	3	0	0	3
3.	AP5094	Signal Integrity for High Speed Design	PE	3	3	0	0	3
4.	AP5091	Digital Control Engineering	PE	3	3	0	0	3

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

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**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

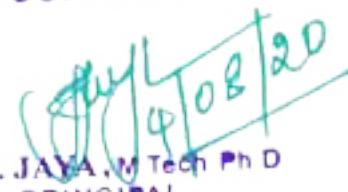
L - Total Lecture hours per week

T - Theory Lectures per week

P - Practical/lab sessions per week

C - Total Credits.

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