LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
L.B.Reddy Nagar, Mylavaram-521230, Krishna Dt., Andhra Pradesh

26.09.2021

Program structure (Academic Regulations), course structure, and CBCS/Elective course system implemented in the last completed academic year 2019-20.

Index

Principal
PRINCIPAL
Lakireddy Bali Reddy College of Engg.
MYLAVARAM 521 230.

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dt., Andhra Pradesh

Dt: 22-09-2021

CIRCULAR

The following are the programs offered under UG (Both R14 & R17 Regulations) and PG (R17 Regulations) in which CBCS/Elective course system implemented during the Academic Year 2019-20.

S.No	Program Name	Program Code	Regulations
	Under Graduate Programs-B.Tech		
1.	Aero Space Engineering	21	R14 & R17
2.	Civil Engineering	01	R14 & R17
3.	Computer Science and Engineering	05	R14 & R17
4.	Electronics and Communication Engineering	04	R14 & R17
5.	Electrical and Electronics Engineering	02	R14 & R17
6.	Electronics and Instrumentation Engineering	10	R14 & R17
7.	Information Technology	12	R14 & R17
8.	Mechanical Engineering	03	R14 & R17
	Post Graduate Programs	**Program Code**	**Regulations**
9.	M.Tech in Power Electronics & Drives	54	R17
10.	M.Tech in VLSI & Embedded Systems	68	R17
11.	M. Tech in Computer Science & Engineering	58	R17
12.	M.Tech in Thermal Engineering	21	R17
13.	Master of Business Administration	E0	R17
14.	Master of Computer Applications	F0	R17

Dean Academics

REGISTRAR
J.N.T. University Kakinada
KAKINADA-533 003

Principal
22/9/2021

PRINCIPAL
Lakireddy Balireddy College of Engg
MYLAVARAM - 521 230.

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
MYLAVARAM- 521 230, KRISHNA (DT), ANDHRA PRADESH, INDIA

ACADEMIC REGULATIONS R-17 FOR B.Tech (REGULAR)
(CHOICE BASED CREDIT SYSTEM)

Applicable for the students of B.Tech (Regular) from the Academic Year 2017-18

1. ELIGIBILITY CRITERIA FOR ADMISSION

The eligibility criteria for admission into B.Tech programme shall be as per the guidelines issued by the Andhra Pradesh State Council of Higher Education (APSCHE) or by any other competent authority.

2. PROGRAMMES OFFERED (UNDER GRADUATE)

A student shall be offered admission into any one AICTE-approved programme as given below:

S.No	Programme
1	Aerospace Engineering (AE)
2	Civil Engineering (CE)
3	Computer Science and Engineering (CSE)
4	Electronics and Communication Engineering (ECE)
5	Electrical and Electronics Engineering (EEE)
6	Electronics and Instrumentation Engineering (EIE)
7	Information Technology (IT)
8	Mechanical Engineering (ME)

3. AWARD OF DEGREE

A student will be declared eligible for the award of B. Tech. degree, if he/she fulfils the following academic requirements:

(i) **4 year B.Tech programme:**

- The student shall pursue a course of study for not less than four academic years and not more than eight academic years.
- The student shall register for 176 credits and secure all the 176 credits.
- The students, who fail to fulfill all the academic requirements for the award of degree within eight academic years from the year of their admission, shall forfeit their seat in B.Tech programme.
- Students shall secure a satisfactory grade (SA) in all non-credit courses/ activities.
- No disciplinary action pending against the student.

(ii) **3 year B.Tech programme under Lateral Entry Scheme (LES):**

- The student shall pursue a course of study for not less than three academic years and not more than six academic years.
- The student shall register for 132 credits and secure all the 132 credits.
- The students, who fail to fulfill all the academic requirements for the award of degree within six academic years from the year of their admission, shall forfeit their seat in B.Tech programme.
- Students shall secure a satisfactory grade (SA) in all non-credit courses/

activities.
- No disciplinary action pending against the student.

4. MEDIUM OF INSTRUCTION

The medium of instruction is English in all academic activities.

5 MINIMUM INSTRUCTION DAYS

The minimum instruction days for each semester shall be 90 days.

6. CATEGORIZATION OF COURSES

The curriculum of each programme shall contain various courses indicated in the following categories to train the students for employment, higher learning & research and entrepreneurship.

i. **Humanities and Social Sciences (HS):** These courses include Technical English, Environmental Science and Engineering, Industrial Management, Managerial Economics & Financial Accountancy, Communication skills etc.

ii. **Basic Sciences (BS):** These courses include Mathematics, Physics, Chemistry, Biology etc.

iii. **Engineering Sciences (ES):** These courses include Basics of Electrical / Electronics / Mechanical / Civil / Computer Engineering / Instrumentation and Engineering practices/Engineering Graphics.

iv. **Professional Core (PC):** These courses are the core courses that provide the requisite foundation in the chosen branch of engineering.

v. **Professional Elective (PE):** These courses are the elective courses opted by the students relevant to the chosen branch of engineering that provides the requisite foundation in a specific area of specialization.

vi. **Open Elective (OE):** These courses are inter-disciplinary in nature offered by other departments.

The department offers an elective course (OE/PE), if the number of students registered in such a course is a minimum of 30 or more.

vii. **Add-on Courses:** Add-on courses are similar to the programme based elective courses. These are offered to a student, one each in the V, VI and VII semesters. The student registering for add-on courses shall be permitted to seek exemption from as many electives that are offered in the VIII semester in order to focus more on the project work. A student shall undertake the project work, either within the college or premier institutions/ research laboratories/industries, when he/she registers all 3 add-on courses.

viii. **Online / self study courses:** An opportunity is given to the students to choose one online course offered by premier institutions like IITs/ Foreign institutions/ reputed universities to enhance the learning skills or a self-study course under a guidance of the faculty advisor to enhance the self-learning capabilities.

ix. **Personality Development (PD):** These courses include Integrated Learning Practices (ILPs), Mandatory Courses (MCs) & Extra-curricular/Co-curricular activities and help the students into a well-trained professionals and good human beings with a high employability potential, good communication skills, soft skills, good engineering practices, personality transformation, professional presentation skills and networking skills.

- **Integrated Learning Practices:** These courses include Mini project, Seminar, Internship, Comprehensive viva voce (CVV) and Project work. These courses are intended to provide students with specific learning outcomes in a branch of engineering, apart from broad skills are necessary for enhancing professional skills

among the future engineers.

- **Mandatory Courses:** The Professional Ethics & Human Values, Employability Enhancement Skills, Problem-assisted learning and Problem-based learning are non-credit courses and relevant for value education and also for enhancing employability skills.
- In addition to the above courses to enhance the overall personality & character of students and make them aware of societal needs, the extra-curricular/co-curricular activities are included, which do not carry any credits. These activities include National Service Scheme (NSS), National Cadet Corps (NCC), Yoga & Meditation, Sports & Games and Professional club activities.
- The students shall undergo Industrial training / In-house training to expose them to the practical environment.

7. CREDIT ASSIGNMENT

Each course is assigned a certain number of credits based on the following criteria:

Contact hours per week			Credits
L	T	P	
1	0	0	1
0	2	0	1
0	0	2	1

L : Lecture hours T : Tutorial hours P : Practical hours

8. SEMESTER-WISE DISTRIBUTION OF CREDITS

The entire course of study is for four academic years (three academic years in case of LES), all the years are on semester pattern. The distribution of credits in each semester is as follows.

Semester	Credits	
	Regular	LES
I	22	--
II	22	--
III	22	22
IV	22	22
V	22/25*	22/25*
VI	22/25*	22/25*
VII	22/25*	22/25*
VIII	13/16/19/22	13/16/19/22
Total	**176**	**132**

***** With add-on course

Note:

With 3- add-on courses registered, credits in VIII semester = 13

With 2- add-on courses registered, credits in VIII semester = 16

With 1- add-on course registered, credits in VIII semester = 19

Without add-on courses registered, credits in VIII semester = 22

- A faculty advisor or counsellor shall be assigned to a group of 20 students, who will advise the students about the under graduate programme, its course structure and curriculum, choice/option for courses based on their competence, progress, pre-requisites and interest.

9. ASSESSMENT AND EVALUATION

COURSE STRUCTURE

I SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication-I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE13	Engineering Physics	3	2	-	5	4	40	60	100
4	17CI01	Computer Programming	2	2	-	4	3	40	60	100
5	17ME01	Engineering Graphics	2	2	-	4	3	40	60	100
6	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
7	17FE63	Engineering Physics Lab	-	-	2	2	1	40	60	100
8	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
9	17ME60	Engineering Workshop	1		2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

II SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication-II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE14	Applied Chemistry	4	-	-	4	4	40	60	100
4	17EE50	Basic Electrical and Electronics Engineering	2	2	-	4	3	40	60	100
5	17ME02	Engineering Mechanics	2	2	-	4	3	40	60	100
6	17FE64	Applied Chemistry Lab	-	-	2	2	1	40	60	100
7	17EE72	Basic Electrical and Electronics Engineering Lab	-	-	2	2	1	40	60	100
8	17ME61	Engineering Mechanics and Fuel Testing Lab	-	-	2	2	1	40	60	100
9	17ME62	Computer Aided Engineering Graphics Lab	1	-	2	3	2	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

III SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
2	17ME05	Metallurgy and Material Science	3	-	-	3	3	40	60	100
3	17AE01	Engineering Fluid Mechanics	3	-	-	3	3	40	60	100
4	17AE02	Engineering Thermodynamics	3	-	-	3	3	40	60	100
5	17AE03	Strength of Materials	3	-	-	3	3	40	60	100
6	17AE04	Elements of Aerospace Engineering	3	-	-	3	3	40	60	100
7	17AE60	Basic Simulation Lab	-	-	2	2	1	40	60	100
8	17ME67	Fluid Mechanics and Hydraulic Machinery Lab	-	-	2	2	1	40	60	100
9	17AE61	Strength of Materials Lab	-	-	2	2	1	40	60	100
10	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
11	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
		Total	**21**	**2**	**7**	**30**	**22**	**500**	**600**	**1100**

IV SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE03	Environmental Science	3	-	-	3	3	40	60	100
2	17FE08	Probability and Statistics	3	2	-	5	4	40	60	100
3	17AE05	Thermal Engineering	2	2	-	4	3	40	60	100
4	17AE06	Manufacturing Technology	3		-	3	3	40	60	100
5	17AE07	Aerodynamics-I	2	2	-	4	3	40	60	100
6	17AE08	Aircraft Structures-I	2	2	-	4	3	40	60	100
7	17ME69	Thermal Engineering Lab	-	-	2	2	1	40	60	100
8	17AE62	Manufacturing Technology lab	-	-	2	2	1	40	60	100
9	17ME66	Computer Aided Machine Drawing Lab	-	-	2	2	1	40	60	100
10	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**15**	**8**	**7**	**30**	**22**	**460**	**540**	**1000**

V SEMESTER

S.No.	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering Economics and Accountancy	3	-	-	3	3	40	60	100
2	17AE09	Elements of Heat Transfer	3	-	-	3	3	40	60	100
3	17AE10	Aerodynamics-II	2	2	-	4	3	40	60	100
4	17AE11	Propulsion – I	3	-	-	3	3	40	60	100
5	17AE12	Aircraft Systems and Instruments	3	-	-	3	3	40	60	100
6	**PROGRAM ELECTIVE – I**		3	-	-	3	3	40	60	100
	17AE13	Theory of Machines								
	17ME22	CAD/CAM								
	17AE14	Non-Destructive Testing								
	17AE15	UAV System Design								
7	17AE90	Aerospace Materials **(*Add on course – I)**	3	-	-	3	3	40	60	100
8	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
9	17ME71	Heat Transfer Lab	-	-	2	2	1	40	60	100
10	17AE63	Aerodynamics Lab	-	-	2	2	1	40	60	100
11	17PD07	Seminar	-	-	2	2	1	100	-	100
12	17PD05	Employability Enhancement Skills-I	1	-	-	1	0	100	-	100
13	17PD06	Industrial Training/ In-house Training	-	-	-	-	-	-	-	-
		Total	**21**	**2**	**8**	**31**	**22/25***	**600**	**600**	**1200**

VI SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17AE16	Propulsion –II	3	-	-	3	3	40	60	100
2	17AE17	Aircraft Structures – II	2	2	-	4	3	40	60	100
3	17AE18	Flight Dynamics	3	-	-	3	3	40	60	100
4	17AE19	Finite Element Methods in Engineering	3	-	-	3	3	40	60	100
5	**PROGRAM ELECTIVE – II**		3	-	-	3	3	40	60	100
	17AE20	Aerodynamics of Missiles and Launch Vehicles								
	17AE21	Combustion in Aerospace Vehicles								
	17AE22	Experimental Stress Analysis								
	17AE23	Space Mechanics								
6	**OPEN ELECTIVE – I**		3	-	-	3	3	40	60	100
7	17AE91	Industrial Aerodynamics **(*Add on course – II)**	3	-	-	3	3	40	60	100
8	17AE64	Propulsion Lab	-	-	2	2	1	40	60	100
9	17AE65	Aircraft Structures Lab	-	-	2	2	1	40	60	100
10	17PD04	Mini Project	-	-	4	4	2	100	-	100
11	17PD08	Employability Enhancement Skills-II	1	-	-	1	0	100	-	100
		Total	**21**	**2**	**8**	**31**	**22/25***	**560**	**540**	**1100**

VII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17AE24	Mechanics of Composites	2	2		4	3	40	60	100
2	17AE25	Computational Fluid Dynamics	3	-	-	3	3	40	60	100
3	17AE26	Instrumentation, Measurements and Experiments in Fluids	3	-	-	3	3	40	60	100
4	**PROGRAM ELECTIVE - III**		3	-	-	3	3	40	60	100
	17AE27	Applied Gas Dynamics								
	17AE28	Introduction to Space Technology								
	17AE29	Theory of Elasticity								
	17AE30	Introduction to Smart Structures								
5	**PROGRAM ELECTIVE – IV**		3	-	-	3	3	40	60	100
	17AE31	Hypersonic Aerodynamics								
	17AE32	Propellant Technology								
	17AE33	Theory of Vibrations								
	17AE34	Fatigue and Fracture Mechanics								
6	**OPEN ELECTIVE– II**		3	-	-	3	3	40	60	100
7	17AE92	Airport Design **(*Add on course – III)**	3	-	-	3	3	40	60	100
8	17AE66	Aircraft Component Modeling and Analysis Lab	-	-	2	2	1	40	60	100
9	17AE67	Aircraft Design Lab	-	-	2	2	1	40	60	100
10	17PD09	Internship	-	-	1	1	2	100	-	100
11	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
		Total	**20**	**2**	**6**	**28**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAM ELECTIVE – V**		3	-	-	3	3	40	60	100
	17AE35	Helicopter Engineering								
	17AE36	Wind Engineering								
	17AE37	Cryogenics								
	17AE38	Aero Elasticity								
2	**PROGRAM ELECTIVE -VI**		3	-	-	3	3	40	60	100
	17AE39	Boundary Layer Theory								
	17AE40	Advanced Propulsion Systems								
	17AE41	Theory of Plates and Shells								
	17AE42	Aero Engine Repair and Maintenance								
3	**OPEN ELECTIVE– III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	**-**	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and SupplyManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking andInsuranceManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of AutomobileEngineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

COURSE STRUCTURES

I SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication - I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE13	Engineering Physics	3	2	-	5	4	40	60	100
4	17CI01	Computer Programming	2	2	-	4	3	40	60	100
5	17CE01	Building Materials and Construction	2	2	-	4	3	40	60	100
6	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
7	17FE63	Engineering Physics Lab	-	-	2	2	1	40	60	100
8	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
9	17ME60	Engineering Workshop	1	-	2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

II SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication - II	3	-	-	3	3	40	60	100
2	17FE06	Transformation techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE14	Applied Chemistry	4	-	-	4	4	40	60	100
4	17CE02	Applied Mechanics	2	2	-	4	3	40	60	100
5	17CE03	Surveying	2	2	-	4	3	40	60	100
6	17FE64	Applied Chemistry Lab	-	-	2	2	1	40	60	100
7	17CE60	Computer Based Engineering Drawing Lab	-	-	2	2	1	40	60	100
8	17CE61	Civil Engineering Drafting Techniques Lab	-	-	2	2	1	40	60	100
9	17CE62	Survey Field Work Lab	1	-	2	3	2	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

III SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
2	17EE51	Fundamentals of Electrical Engineering	3	-	-	3	3	40	60	100
3	17CE04	Strength of Materials - I	2	2	-	4	3	40	60	100
4	17CE05	Engineering Geology	2	2	-	4	3	40	60	100
5	17CE06	Mechanics of Fluids	2	2	-	4	3	40	60	100
6	17CE07	Concrete Technology	2	2	-	4	3	40	60	100
7	17CE63	Engineering Geology Lab	-	-	2	2	1	40	60	100
8	17CE64	Solid Mechanics Lab	-	-	2	2	1	40	60	100
9	17CE65	Advanced Survey Field Work Lab	-	-	2	2	1	40	60	100
10	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
11	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
		Total	**17**	**10**	**7**	**34**	**22**	**500**	**600**	**1100**

IV SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE03	Environmental Science	3	-	-	3	3	40	60	100
2	17FE08	Probability and Statistics	3	2	-	5	4	40	60	100
3	17CE08	Strength of Materials – II	3	-	-	3	3	40	60	100
4	17CE09	Hydraulics and Hydraulic Machinery Systems	3	-	-	3	3	40	60	100
5	17CE10	Structural Analysis – I	2	2	-	4	3	40	60	100
6	17CE11	Geo Technical Engineering – I	3	-	-	3	3	40	60	100
7	17CE66	Fluid Mechanics Lab	-	-	2	2	1	40	60	100
8	17CE67	Concrete Technology Lab	-	-	2	2	1	40	60	100
9	17CE68	Computer Aided Building Drawing Lab	-	-	2	2	1	40	60	100
10	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**17**	**4**	**7**	**28**	**22**	**460**	**540**	**1000**

V SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering Economics and Accountancy	3	-	-	3	3	40	60	100
2	17CE12	Structural Analysis – II	3	-	-	3	3	40	60	100
3	17CE13	Design of Reinforced Concrete Structures – I	3	-	-	3	3	40	60	100
4	17CE14	Highway Engineering	3	-	-	3	3	40	60	100
5	17CE15	Hydrology	3	-	-	3	3	40	60	100
6	**PROGRAM ELECTIVE – I**		3	-	-	3	3	40	60	100
	17CE16	Repair and Rehabilitation of Structures								
	17CE17	Town Planning and Architecture								
	17CE18	Construction Management								
	17CE19	Interior Designs and Decorations								
7	17CE69	Transportation Engineering Lab	-	-	2	2	1	40	60	100
8	17CE70	Geo Technical Engineering Lab	-	-	2	2	1	40	60	100
9	17PD04	Mini Project	-	-	4	4	2	100	-	100
10	17CE90	Green Buildings **(*Add on course – I)**	3	-	-	-	3	40	60	100
11	17PD05	Employability Enhancement Skills - I	1	-	-	1	0	100	-	100
12	17PD06	Industrial Training/In-house Training	-	-	-	-	-	-	-	-
		Total	**22**	**-**	**8**	**27**	**22/25***	**560**	**540**	**1100**

VI SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CE20	Design of Steel Structures	2	2	-	4	3	40	60	100
2	17CE21	Irrigation and Water Resources Engineering	2	2	-	4	3	40	60	100
3	17CE22	Water and Waste Water Engineering	3		-	3	3	40	60	100
4	17CE23	Geo Technical Engineering – II	3		-	3	3	40	60	100
5	**PROGRAM ELECTIVE – II**		3	-	-	3	3	40	60	100
	17CE24	Matrix Methods in Structural Analysis								
	17CE25	Railways, Airport Planning and Harbour Engineering								
	17CE26	Construction Techniques and Equipment Planning								
	17CE27	Urban Hydrology								
6	**OPEN ELECTIVE – I**		3	-	-	3	3	40	60	100
7	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
8	17CE71	Environmental Engineering Lab	-	-	2	2	1	40	60	100
9	17CE72	Computer Aided Analysis and Design Lab	-	-	2	2	1	40	60	100
10	17PD07	Seminar	-	-	2	2	1	100	-	100
11	17CE91	Low Cost and Eco-Friendly Building Technology **(*Add on course – II)**	3	-	-	-	3	40	60	100
12	17PD08	Employability Enhancement Skills – II	1	-	-	1	0	100	-	100
		Total	**20**	**4**	**8**	**29**	**22/25***	**600**	**600**	**1200**

VII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CE28	Estimation and Quantity Surveying	2	2		4	3	40	60	100
2	17CE29	Remote Sensing and GIS Applications	2	2		4	3	40	60	100
3	17CE30	Design of Reinforced Concrete Structures - II	2	2		4	3	40	60	100
4	**PROGRAM ELECTIVE – III**		3	-	-	3	3	40	60	100
	17CE31	Pre-stressed Concrete								
	17CE32	Pavement Analysis Design Engineering								
	17CE33	Ground Water Engineering and Management								
	17CE34	Earthquake Resistant Design								
5	**PROGRAM ELECTIVE – IV**		3	-	-	3	3	40	60	100
	17CE35	Environmental Engineering								
	17CE36	Rural Road Technology								
	17CE37	Ground Improvement Techniques								
	17CE38	Safety Engineering								
6	**OPEN ELECTIVE - II**		3			3	3	40	60	100
7	17CE73	GIS and Computer Applications in Civil Engineering Lab	-	-	2	2	1	40	60	100
8	17CE74	Quantity Estimation and Project Management Lab	-	-	2	2	1	40	60	100
9	17PD09	Internship	-	-	1	1	2	100	-	100
10	17CE92	Environmental Sanitation **(*Add on course – III)**	3	-	-	-	3	40	60	100
11	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
		Total	**18**	**6**	**6**	**27**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAM ELECTIVE – V**		3	-	-	3	3	40	60	100
	17CE39	Traffic Engineering and Transport Planning								
	17CE40	Environmental Hydraulics and Advanced Waste Water Treatment								
	17CE41	Pre-fabricated Structures								
	17CE42	Bridge Engineering								
2	**PROGRAM ELECTIVE – VI**		3	-	-	3	3	40	60	100
	17CE43	Advanced Structural Design								
	17CE44	Finite Element Methods in Civil Engineering								
	17CE45	Watershed Management								
	17CE46	Building Technology								
3	**OPEN ELECTIVE – III**		3			3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	**-**	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and Supply Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and Insurance Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.NO	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of Automobile Engineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S. No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

COURSE STRUCTURE

I SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication-I	3	-	-	3	3	40	60	100
2	17FE05	Differential Equations and Numerical Applications	3	2	-	5	4	40	60	100
3	17FE15	Engineering Chemistry	4	-	-	4	4	40	60	100
4	17CI01	Computer Programming	2	2	-	4	3	40	60	100
5	17EC02	Electronic Devices and Circuits	2	2	-	4	3	40	60	100
6	17FE65	Engineering Chemistry Lab	-	-	2	2	1	40	60	100
7	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
8	17EC61	Electronic Devices and Circuits Lab	-	-	2	2	1	40	60	100
9	17CI61	IT Workshop	1	-	2	3	2	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

II SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication-II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE12	Applied Physics	3	2	-	5	4	40	60	100
4	17EE52	Basic Electrical Engineering	2	2	-	4	3	40	60	100
5	17CI02	Digital Logic Design	2	2	-	4	3	40	60	100
6	17FE62	Applied Physics Lab	-	-	2	2	1	40	60	100
7	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
8	17CS60	Digital Logic Design Lab	-	-	2	2	1	40	60	100
9	17ME75	Computer Aided Engineering Drawing Lab	1	-	2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

III SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE08	Probability and Statistics	3	2	-	5	4	40	60	100
2	17FE03	Environmental Science	3	-	-	3	3	40	60	100
3	17CI03	Discrete Mathematical Structures	2	2	-	4	3	40	60	100
4	17CI04	Python Programming	2	2	-	4	3	40	60	100
5	17CI05	Data Structures	2	2	-	4	3	40	60	100
6	17CI06	Computer Architecture	2	2	-	4	3	40	60	100
7	17FE66	Statistical Programming with R Lab	-	-	2	2	1	40	60	100
8	17CI62	Python Programming Lab	-	-	2	2	1	40	60	100
9	17CI63	Data Structures Lab	-	-	2	2	1	40	60	100
10	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
		Total	**14**	**10**	**7**	**31**	**22**	**460**	**540**	**1000**

IV SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE11	Linear Algebra and Numerical Applications	3	2	-	5	4	40	60	100
2	17CI07	OOPs Through Java	3	-	-	3	3	40	60	100
3	17CI08	Design and Analysis of Algorithms	3	-	-	3	3	40	60	100
4	17CS01	Linux Programming	3	-	-	3	3	40	60	100
5	17CI09	Data Base Management Systems	2	2	-	4	3	40	60	100
6	17CI10	Software Engineering	3	-	-	3	3	40	60	100
7	17CI64	Database Management Systems Lab	-	-	2	2	1	40	60	100
8	17CS61	Linux Programming Lab	-	-	2	2	1	40	60	100
9	17CI65	OOPs through Java Lab	-	-	2	2	1	40	60	100
10	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
11	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**20**	**4**	**7**	**31**	**22**	**500**	**600**	**1100**

V SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering EconomicsandAccountancy	3	-	-	3	3	40	60	100
2	**PROGRAM ELECTIVE – I**		3	-	-	3	3	40	60	100
	17CI11	Computer Graphics								
	17CS02	Principles of Programming Languages								
	17CI12	Human Computer Interaction								
	17CI13	Advanced Database Management Systems								
3	17CS03	UML and Design Patterns	3	-	-	3	3	40	60	100
4	17CI14	Web Technologies	3	-	-	3	3	40	60	100
5	17CI15	Automata Theory and Compiler Design	3	-	-	3	3	40	60	100
6	17CS04	Operating Systems	3	-	-	3	3	40	60	100
7	17CS62	UML and Design Patterns lab	-	-	2	2	1	40	60	100
8	17CI66	Web Technologies Lab	-	-	2	2	1	40	60	100
9	17PD04	Mini Project	-	-	4	4	2	100	-	100
10	17PD05	Employability Enhancement Skills-I	1	-	-	1	0	100	-	100
11	17CS90	Advanced Graph Algorithms **(*Add on course – I)**	3	-	-	3	3	40	60	100
12	17PD06	Industrial Training/In-house Training	-	-	-	-	-	-	-	-
		Total	**22**	**-**	**8**	**30**	**22/25***	**560**	**540**	**1100**

VI SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CS05	Android Technologies	2	2	-	4	3	40	60	100
2	17CI16	Data Mining and Data Warehousing	2	2	-	4	3	40	60	100
3	17EC22	Microprocessors and Microcontrollers	3	-	-	3	3	40	60	100
4	17CI17	Data Communications and Computer Networks	3	-	-	3	3	40	60	100
5	**PROGRAM ELECTIVE – II**		3	-	-	3	3	40	60	100
	17CS06	Swift Programming								
	17CS07	Scala Programming								
	17CS08	PHP Programming								
	17CS09	Google Go Programming								
6	**OPEN ELECTIVE – I**		3			3	3	40	60	100
7	17CS63	Android Technologies Lab	-	-	2	2	1	40	60	100
8	17CI67	Data Mining and Data Warehousing Lab	-	-	2	2	1	40	60	100
9	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
10	17PD07	Seminar	-	-	2	2	1	100	-	100
11	17PD08	Employability Enhancement Skills – II	1	-	-	1	0	100	-	100
12	17CS91	Software Testing Methodologies **(*Addoncourse – II)**	3	-	-	3	3	40	60	100
		Total	**20**	**4**	**8**	**32**	**22/25***	**600**	**600**	**1200**

VII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CI18	Big Data Analytics	2	2	-	4	3	40	60	100
2	17CI19	Internet of Things	2	2	-	4	3	40	60	100
3	17CI20	Information Security	2	2	-	4	3	40	60	100
4	**PROGRAM ELECTIVE – III**		3	-	-	3	3	40	60	100
	17CI21	Software Project Management								
	17CI22	TCP/IP Networking								
	17CI23	Artificial Intelligence								
	17CI24	Image Processing								
5	**PROGRAM ELECTIVE – IV**		3	-	-	3	3	40	60	100
	17CS10	Service Oriented Architecture								
	17CI31	Ad-Hoc Networks								
	17CI25	Neural Networks and Fuzzy Logic								
	17CI26	Pattern Recognition								
6	**OPEN ELECTIVE – II**		3	-	-	3	3	40	60	100
7	17CI68	Big Data with HADOOP Lab	-	-	2	2	1	40	60	100
8	17CI69	Internet of Things Lab	-	-	2	2	1	40	60	100
9	17PD09	Internship	-	-	1	1	2	100		100
10	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
11	17CS92	Information Retrieval Systems**(*Add on course – III)**	3	-	-	3	3	40	60	100
		Total	**18**	**6**	**6**	**30**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAM ELECTIVE - V**		3	-	-	3	3	40	60	100
	17CI27	Software Requirements Engineering								
	17CS11	Storage Area Networks								
	17CI28	Machine Learning								
	17CS12	Color Image Processing								
2	**PROGRAM ELECTIVE - VI**		3	-	-	3	3	40	60	100
	17CS13	Software Security Engineering								
	17CI29	Cloud Computing								
	17CI30	Natural Language Processing								
	17CS14	Virtual Reality								
3	**OPEN ELECTIVE - III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	-	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and SupplyManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and InsuranceManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.NO	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of AutomobileEngineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

COURSE STRUCTURE

I SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication-I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE15	Engineering Chemistry	4	-	-	4	4	40	60	100
4	17EC01	Electrical Circuits and Networks	2	2	-	4	3	40	60	100
5	17EC02	Electronic Devices and Circuits	2	2	-	4	3	40	60	100
6	17FE65	Engineering Chemistry Lab	-	-	2	2	1	40	60	100
7	17EC60	Electrical Circuits and Networks Lab	-	-	2	2	1	40	60	100
8	17ME75	Computer Aided Engineering Drawing Lab	1	-	2	3	2	40	60	100
9	17EC61	Electronic Devices and Circuits Lab	-	-	2	2	1	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

II SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication-II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE12	Applied Physics	3	2	-	5	4	40	60	100
4	17EC03	Analog Electronic Circuits	2	2	-	4	3	40	60	100
5	17EC04	Digital Electronic Circuits	2	2	-	4	3	40	60	100
6	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
7	17FE62	Applied Physics Lab	-	-	2	2	1	40	60	100
8	17ME60	Engineering Workshop	1	-	2	3	2	40	60	100
9	17EC62	Analog and Digital Electronic Circuits Lab	-	-	2	2	1	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

III SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
2	17CI01	Computer Programming	2	2	-	4	3	40	60	100
3	17EC05	Signals and Systems	2	2	-	4	3	40	60	100
4	17EC06	Random Variables and Stochastic Processes	2	2	-	4	3	40	60	100
5	17EC07	Pulse and Switching Circuits	2	2	-	4	3	40	60	100
6	17EC08	Analog Integrated Circuits	2	2	-	4	3	40	60	100
7	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
8	17EC63	Pulse and Switching Circuits Lab	-	-	2	2	1	40	60	100
9	17EC64	Analog Integrated Circuits Lab	-	-	2	2	1	40	60	100
10	17PD03	Professional Ethics and Human Values	3	-		3	0	40	60	100
11	17PD01	Problem Assisted Learning	-	-	1	1	0	100		100
		Total	**16**	**12**	**7**	**35**	**22**	**500**	**600**	**1100**

IV SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE03	Environmental Science	3	-	-	3	3	40	60	100
2	17FE09	Functions of Complex Variables	3	2	-	5	4	40	60	100
3	17EC09	Electromagnetic Fields and Waves	2	2	-	4	3	40	60	100
4	17EC10	Digital Signal Processing	2	2	-	4	3	40	60	100
5	17EC11	Digital System Design	2	2	-	4	3	40	60	100
6	17EC12	Analog Communications	2	2	-	4	3	40	60	100
7	17EC65	Digital Signal Processing Lab	-	-	2	2	1	40	60	100
8	17EC66	Digital System Design Lab	-	-	2	2	1	40	60	100
9	17EC67	Analog Communications Lab	-	-	2	2	1	40	60	100
10	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**14**	**10**	**7**	**31**	**22**	**460**	**540**	**1000**

V SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering Economics and Accountancy	3	-	-	3	3	40	60	100
2	17EC13	Computer Organization and Architecture	3	-	-	3	3	40	60	100
3	17EC14	Transmission Lines and Wave Guides	2	2	-	4	3	40	60	100
4	17EC15	Digital Communications	2	2	-	4	3	40	60	100
5	17EC16	VLSI Design	3	-	-	3	3	40	60	100
6	**PROGRAM ELECTIVE-I**		3	-	-	3	3	40	60	100
	17EI18	Micro Electro Mechanical Systems								
	17EC17	PCB Design								
	17EC18	Advanced Communications								
	17EC19	Advanced Digital Signal Processing								
7	17EC90	Electronic Measurements and Instrumentation **(*Add on course – I)**	3	-	-	3	3	40	60	100
8	17EC68	Digital Communications Lab	-	-	2	2	1	40	60	100
9	17EC69	VLSI Design Lab	-	-	2	2	1	40	60	100
10	17PD04	Mini Project	-	-	4	4	2	100	-	100
11	17PD05	Employability Enhancement Skills-I	1	-	-	1	0	100	-	100
12	17PD06	Industrial Training/ In-house Training	-	-	-	-	-	-	-	-
		Total	**20**	**4**	**8**	**32**	**22/25***	**560**	**540**	**1100**

VI SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17EC20	Linear Control Systems	2	2	-	4	3	40	60	100
2	17CI07	OOPs through Java	3	-	-	3	3	40	60	100
3	17EC21	Antenna and Wave Propagation	2	2	-	4	3	40	60	100
4	17EC22	Microprocessors and Microcontrollers	3	-	-	3	3	40	60	100
5	**PROGRAM ELECTIVE - II**		3	-	-	3	3	40	60	100
	17EC23	Nano Electronics								
	17EC24	Low Power VLSI Design								
	17EC25	Cellular and Mobile Communications								
	17EC26	Transform Techniques								
6	**OPEN ELECTIVE - I**		3	-	-	3	3	40	60	100
7	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
8	17EC91	Telecommunication SwitchingSystems and Networks **(*Add on course – II)**	3	-	-	3	3	40	60	100
9	17CI65	OOPs through Java Lab	-	-	2	2	1	40	60	100
10	17EC70	Microprocessors and Microcontrollers Lab	-	-	2	2	1	40	60	100
11	17PD07	Seminar	-	-	2	2	1	100		100
12	17PD08	Employability Enhancement Skills-II	1	-	-	1	0	100	-	100
		Total	**20**	**4**	**8**	**32**	**22/25***	**600**	**600**	**1200**

VII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17EC27	Microwave Engineering	2	2	-	4	3	40	60	100
2	17EC28	Optical Communications	2	2	-	4	3	40	60	100
3	17EC29	Embedded System Design	3	-	-	3	3	40	60	100
4	**PROGRAM ELECTIVE-III**		3	-	-	3	3	40	60	100
	17EC30	Automobile and Consumer Electronics								
	17EC31	Analog VLSI Design								
	17EC32	Satellite Communications								
	17EC33	Digital Image Processing								
5	**PROGRAM ELECTIVE-IV**		3	-	-	3	3	40	60	100
	17EC34	Medical Electronics								
	17EC35	Advanced Microcontrollers								
	17EC36	Mobile Computing								
	17EC37	DSP Processors								
6	**OPEN ELECTIVE-II**		3	-	-	3	3	40	60	100
7	17EC92	Communication Networks **(*Add on course– III)**	3	-	-	3	3	40	60	100
8	17EC71	Microwave and Optical Communications Lab	-	-	2	2	1	40	60	100
9	17EC72	Embedded System Design Lab	-	-	2	2	1	40	60	100
10	17PD09	Internship	-	-	1	1	2	100	-	100
11	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
		Total	**19**	**4**	**6**	**29**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAM ELECTIVE-V**		3	-	-	3	3	40	60	100
	17EC38	Programmable Logic Devices								
	17EC39	Real Time Operating Systems for Embedded Systems								
	17EC40	Radar Systems								
	17EC41	Neural Networks and Fuzzy Control								
2	**PROGRAM ELECTIVE - VI**		3	-	-	3	3	40	60	100
	17EC42	Radio Frequency Integrated Circuits								
	17EC43	Design for Internet of Things								
	17EC44	Wireless Sensor Networks								
	17EC45	Bio Medical Signal Processing								
3	**OPEN ELECTIVE-III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	**-**	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and SupplyManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and InsuranceManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of AutomobileEngineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

COURSE STRUCTURE

I SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication - I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE12	Applied Physics	3	2	-	5	4	40	60	100
4	17CI01	Computer Programming	2	2	-	4	3	40	60	100
5	17ME50	Basic Engineering Mechanics	2	2	-	4	3	40	60	100
6	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
7	17FE62	Applied Physics Lab	-	-	2	2	1	40	60	100
8	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
9	17ME60	Engineering Workshop	1	-	2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

II SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication - II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE14	Applied Chemistry	4	-	-	4	4	40	60	100
4	17ME51	Thermal and Hydro Prime Movers	2	2	-	4	3	40	60	100
5	17EE01	Electronic Circuits and Devices	2	2	-	4	3	40	60	100
6	17FE64	Applied Chemistry Lab	-	-	2	2	1	40	60	100
7	17ME76	Thermal and Hydro Prime Movers Lab	-	-	2	2	1	40	60	100
8	17ME75	Computer Aided Engineering Drawing Lab	1	-	2	3	2	40	60	100
9	17EE60	Electronic Circuits and Devices Lab	-	-	2	2	1	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

LBRCE Dt.

M. Chandra
Dept. of Electrical and Electronics Engg.
Lakireddy Bali Reddy College of Engg
Mylavaram-521230, Krishna Dt. A.P

III SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
2	17CI05	Data Structures	2	2	-	4	3	40	60	100
3	17EE02	Electric and Magnetic Fields	2	2	-	4	3	40	60	100
4	17EE03	Network Theory - I	2	2	-	4	3	40	60	100
5	17EE04	Digital Logic Circuit Design	2	2	-	4	3	40	60	100
6	17EE05	Power Generation and Utilization	3	-	-	3	3	40	60	100
7	17CI63	Data Structures Lab	-	-	2	2	1	40	60	100
8	17EE61	Digital Logic Circuit Design Lab	-	-	2	2	1	40	60	100
9	17EE62	Electrical Workshop	-	-	2	2	1	40	60	100
10	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
11	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
		Total	**17**	**10**	**7**	34	**22**	**500**	**600**	**1100**

IV SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE03	Environmental Science	3	-	-	3	3	40	60	100
2	17FE10	Complex Variables and Statistical Methods	3	2	-	5	4	40	60	100
3	17EE06	Control Systems	2	2	-	4	3	40	60	100
4	17EE07	Network Theory - II	2	2	-	4	3	40	60	100
5	17EE08	Electronic Circuit Analysis	2	2	-	4	3	40	60	100
6	17EE09	Electrical Machines – I	2	2	-	4	3	40	60	100
7	17EE63	Numerical Methods Lab	-	-	2	2	1	40	60	100
8	17EE64	Electrical Networks Lab	-	-	2	2	1	40	60	100
9	17EE65	Control Systems Lab	-	-	2	2	1	40	60	100
10	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**14**	**10**	**7**	**31**	**22**	**460**	**540**	**1000**

LBRCE EXAM CELL

M. Chandra
Dept. of Electrical and Electronics Engg.
Lakireddy Bali Reddy College of Engg.
MYLAVARAM 521230, Krishna Dt., A.P.

V SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering Economics and Accountancy	3	-	-	3	3	40	60	100
2	17EE10	Linear and Digital Integrated Circuits	2	2	-	4	3	40	60	100
3	17EE11	Electrical Machines – II	2	2	-	4	3	40	60	100
4	17EE12	Electrical Power Transmission	2	2	-	4	3	40	60	100
5	17EC22	Microprocessors and Microcontrollers	3	-	-	3	3	40	60	100
6	**PROGRAMME ELECTIVE - I**									
	17EE13	Classical and Heuristic Optimization Techniques	3	-	-	3	3	40	60	100
	17EE14	Renewable Energy Technologies								
	17EE15	Electrical Engineering Materials								
	17EE16	Advanced Logic Design								
7	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
8	17EE66	Electrical Machines - I Lab	-	-	2	2	1	40	60	100
9	17EE67	Electronic Circuits and ICs Lab	-	-	2	2	1	40	60	100
10	17PD07	Seminar	-	-	2	2	1	100	-	100
11	17EE90	Electrical Safety (*Add on course – I)	3	-	-	3	3	40	60	100
12	17PD05	Employability Enhancement Skills - I	1	-	-	1	0	100	-	100
13	17PD06	Industrial Training/ In-house Training	-	-	-	-	-	-	-	-
		Total	19	6	8	33	22/25*	600	600	1200

LBRCE EXAM CELL Dt.

Dept. of Electrical and Electronics Engg.,
Lakireddy Bali Reddy College of Engg.
MYLAVARAM-521230., Krishna Dt., A.P.

VI SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17EE17	Analog and Digital Signal Processing	2	2	-	4	3	40	60	100
2	17EE18	Power System Analysis	2	2	-	4	3	40	60	100
3	17EE19	Power Electronics	2	2	-	4	3	40	60	100
4	17EE20	Measurements and Instrumentation	3		-	3	3	40	60	100
5	**PROGRAMME ELECTIVE - II**		3	-	-	3	3	40	60	100
	17EC51	Digital Controllers								
	17EC29	Embedded System Design								
	17EC52	Data Communications and Networking								
	17EC16	VLSI Design								
6	**OPEN ELECTIVE - I**		3	-	-	3	3	40	60	100
7	17EE68	Electrical Machines - II Lab	-	-	2	2	1	40	60	100
8	17EC70	Microprocessors and Microcontrollers Lab	-	-	2	2	1	40	60	100
9	17PD04	Mini Project	-	-	4	4	2	100	-	100
10	17EE91	Electrical Reliability Engineering **(*Add on course – II)**	3	-	-	3	3	40	60	100
11	17PD08	Employability Enhancement Skills - II	1	-	-	1	0	100	-	100
		Total	**19**	**6**	**8**	**33**	**22/25***	**560**	**540**	**1100**

LBRCE EXAM CELL DL

ok

M. Umadevi

Dept. of Electrical and Electronics Engg
Lakireddy Bali Reddy College of Engg
MYLAVARAM-521230, Krishna DL, A.P.

VII SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17EE21	Power System Protection	3	-	-	3	3	40	60	100
2	17EE22	Power Systems Operation and Control	2	2	-	4	3	40	60	100
3	17EE23	Solid State Drives	2	2	-	4	3	40	60	100
4	**PROGRAMME ELECTIVE - III**		3	-	-	3	3	40	60	100
	17EE24	Intelligent Control Systems								
	17EE25	Digital Control Systems								
	17EE26	Advanced Control Systems								
	17EE27	Industrial Process Control								
5	**PROGRAMME ELECTIVE - IV**		3	-	-	3	3	40	60	100
	17EE28	Energy Conservation and Audit								
	17EE29	PLC and Automation								
	17EE30	Energy Storage Systems								
	17EE31	Distribution System Planning and Automation								
6	**OPEN ELECTIVE - II**		3	-	-	3	3	40	60	100
7	17EE69	Power Electronics Lab	-	-	2	2	1	40	60	100
8	17EE70	Power Systems Lab	-	-	2	2	1	40	60	100
9	17PD09	Internship	-	-	1	1	2	100	-	100
10	17EE92	High Voltage Engineering (***Add on course – III**)	3	-	-	3	3	40	60	100
11	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
		Total	**19**	**4**	**6**	**29**	**22/25***	**460**	**540**	**1000**

LBRCE EXAM CELL

O.K.

M. Challa

Dept. of Electrical and Electronics Engg.
Lakireddy Bali Reddy College of Engg.
MYLAVARAM-521230., Krishna Dt, A.P.

VIII SEMESTER

S. No	Course code	Course Title	Contact hours/week L	T	P	Total	Credits	Scheme of Valuation CIE	SEE	Total
1	**PROGRAMME ELECTIVE - V**		3	-	-	3	3	40	60	100
	17EE32	Special Electrical Machines								
	17EE33	Modeling and Analysis of Electrical Machines								
	17EE34	Advanced Power Converters								
	17EE35	Switched Mode Power Converters								
2	**PROGRAMME ELECTIVE - VI**		3	-	-	3	3	40	60	100
	17EE36	Power Quality								
	17EE37	HVDC and FACTS								
	17EE38	Smart and Micro Grid								
	17EE39	Restructured Power Systems								
3	**OPEN ELECTIVE - III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	**-**	**26**	**35**	**22**	**260**	**240**	**500**

LBRCE Dt. EXAM CELL

O.K

M. Challa

P. S...

Dept. of Electrical and Electronics Engg., Lakireddy Bali Reddy College of Engg. MYLAVARAM 521230., Krishna Dt. A.P.

OPEN ELECTIVE – I (VI Semester)

S. No.	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and Supply Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and Insurance Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S. No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of Automobile Engineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

Dept. of Electrical and Electronics Engg.
Lakireddy Bali Reddy College of Engg
MYLAVARAM-521230, Krishna Dt, A.P

OPEN ELECTIVE – III (VIII Semester)

S. No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

LBRCE EXAM CELL

M. Chandra Sekhar

Dept. of Electrical and Electronics Engg.
Lakireddy Bali Reddy College of Engg
MYLAVARAM-521230, Krishna Dt. A.P.

COURSE STRUCTURE

I SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication-I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE15	Engineering Chemistry	4	-	-	4	4	40	60	100
4	17EC01	Electrical Circuits and Networks	2	2	-	4	3	40	60	100
5	17CI01	Computer Programming	2	2	-	4	3	40	60	100
6	17FE65	Engineering Chemistry Lab	-	-	2	2	1	40	60	100
7	17EC60	Electrical Circuits and Networks Lab	-	-	2	2	1	40	60	100
8	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
9	17ME75	Computer Aided Engineering Drawing Lab	1	-	2	3	2	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

II SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication-II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE12	Applied Physics	3	2	-	5	4	40	60	100
4	17EI01	Material Science and Engineering	2	2	-	4	3	40	60	100
5	17EC02	Electronic Devices and Circuits	2	2	-	4	3	40	60	100
6	17FE62	Applied Physics Lab	-	-	2	2	1	40	60	100
7	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
8	17EC61	Electronic Devices and Circuits Lab	-	-	2	2	1	40	60	100
9	17ME60	Engineering Workshop	1	-	2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

III SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
2	17FE03	Environmental Science	3	-	-	3	3	40	60	100
3	17EE53	Electrical Technology	2	2	-	4	3	40	60	100
4	17EI02	Transducers	2	2	-	4	3	40	60	100
5	17EC03	Analog Electronic Circuits	2	2	-	4	3	40	60	100
6	17EC04	Digital Electronic Circuits	2	2	-	4	3	40	60	100
7	17EE73	Electrical Technology Lab	-	-	2	2	1	40	60	100
8	17EI60	Transducers Lab	-	-	2	2	1	40	60	100
9	17EC62	Analog and Digital Electronic Circuits Lab	-	-	2	2	1	40	60	100
10	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
		Total	**14**	**10**	**7**	**31**	**22**	**460**	**540**	**1000**

IV SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE09	Functions of Complex Variables	3	2	-	5	4	40	60	100
2	17ME52	Fundamentals of Fluid Mechanics	3	-	-	3	3	40	60	100
3	17EI03	Electrical and Electronics Measurements	3	-	-	3	3	40	60	100
4	17EI04	Industrial Instrumentation	3	-	-	3	3	40	60	100
5	17EC05	Signals and Systems	2	2	-	4	3	40	60	100
6	17EC07	Pulse and Switching Circuits	2	2	-	4	3	40	60	100
7	17ME77	Engineering Fluid Mechanics Lab	-	-	2	2	1	40	60	100
8	17EC63	Pulse and Switching Circuits Lab	-	-	2	2	1	40	60	100
9	17EI61	Electrical and Electronics Measurements Lab	-	-	2	2	1	40	60	100
10	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
11	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**19**	**6**	**7**	**32**	**22**	**500**	**600**	**1100**

V SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering Economics and Accountancy	3	-	-	3	3	40	60	100
2	17EI05	Communication Systems	3	-	-	3	3	40	60	100
3	17EC22	Microprocessorsand Microcontrollers	3	-	-	3	3	40	60	100
4	17EI06	Integrated Circuits and Applications	3	-	-	3	3	40	60	100
5	17EI07	Control Systems Engineering	3	-	-	3	3	40	60	100
6	**PROGRAM ELECTIVE – I**		3	-	-	3	3	40	60	100
	17EC16	VLSI Design								
	17EI08	Industrial Electronics								
	17EI09	Intelligent Instrumentation								
	17IT81	Computer Networks								
7	17EC70	Microprocessorsand Microcontrollers Lab	-	-	2	2	1	40	60	100
8	17EI62	Integrated Circuits and Applications Lab	-	-	2	2	1	40	60	100
9	17PD04	Mini Project	-	-	4	4	2	100	-	100
10	17EI90	Safety Instrumentation **(*Add on course – I)**	3	-	-	-	3	40	60	100
11	17PD05	Employability Enhancement Skills-I	1	-	-	1	0	100	-	100
12	17PD06	Industrial Training/ In-house Training	-	-	-	-	-	-	-	-
		Total	**22**	**-**	**8**	**27**	**22/25***	**560**	**540**	**1100**

VI SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17EI10	Process Control Instrumentation	2	2	-	4	3	40	60	100
2	17EI11	Bio Medical Instrumentation	2	2	-	4	3	40	60	100
3	17EC10	Digital Signal Processing	2	2	-	4	3	40	60	100
4	17EI12	Opto Electronics and Laser Instrumentation	3	-	-	3	3	40	60	100
5	**PROGRAM ELECTIVE – II**		3	-	-	3	3	40	60	100
	17EI13	Virtual Instrumentation								
	17ME53	Industrial Robotics								
	17EC44	Wireless Sensor Networks								
	17EI14	Optimal Control								
6	**OPEN ELECTIVE – I**		3	-	-	3	3	40	60	100
7	17EI63	Process Control Instrumentation Lab	-	-	2	2	1	40	60	100
8	17EI64	Optical and BMI Lab	-	-	2	2	1	40	60	100
9	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
10	17PD07	Seminar	-	-	2	2	1	100	-	100
11	17EI91	Remote Sensing **(*Add on course – II)**	3	-	-	-	3	40	60	100
12	17PD08	Employability Enhancement Skills-II	1	-	-	1	0	100	-	100
		Total	**19**	**6**	**8**	**30**	**22/25***	**600**	**600**	**1200**

VII SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17EI15	PC Based Instrumentation	2	2	-	4	3	40	60	100
2	17EI16	PLC and SCADA	2	2	-	4	3	40	60	100
3	17EI17	Analytical Instrumentation	2	2	-	4	3	40	60	100
4	**PROGRAM ELECTIVE – III**		3	-	-	3	3	40	60	100
	17EI18	Micro Electro Mechanical Systems								
	17EI19	System Identification and Adaptive control								
	17EI20	Instrumentation Control in Paper Industries								
	17EI21	Instrumentation in Aerospace and Navigation								
5	**PROGRAM ELECTIVE – IV**		3	-	-	3	3	40	60	100
	17EI22	Automation of Industrial Process								
	17EC33	Digital Image Processing								
	17EC41	Neural Networks and Fuzzy Control								
	17EI23	Instrumentation in Petro Chemical Industries								
6	**OPEN ELECTIVE – II**		3	-	-	3	3	40	60	100
7	17EI65	Analytical instrumentation and PC Based Instrumentation Lab	-	-	2	2	1	40	60	100
8	17EI66	Programmable Logic Controllers Lab	-	-	2	2	1	40	60	100
9	17PD09	Internship	-	-	1	1	2	100	-	100
10	17EI92	Telemetry and Telemedicine **(*Add on course – III)**	3	-	-	-	3	40	60	100
11	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
		Total	**18**	**6**	**6**	**27**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAM ELECTIVE – V**		3	-	-	3	3	40	60	100
	17EI24	Advanced Sensors								
	17EI25	Advanced Process Control								
	17EC35	Advanced Microcontrollers								
	17EI26	Advanced Control System Design								
2	**PROGRAM ELECTIVE – VI**		3	-	-	3	3	40	60	100
	17EI27	Power Plant Instrumentation								
	17EC29	Embedded System Design								
	17EI28	Automotive Sensors								
	17EC19	Advanced Digital Signal Processing								
3	**OPEN ELECTIVE – III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	-	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and SupplyManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and InsuranceManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of AutomobileEngineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

COURSE STRUCTURE

I SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication - I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE15	Engineering Chemistry	4	-	-	4	4	40	60	100
4	17CI01	Computer Programming	2	2	-	4	3	40	60	100
5	17EC02	Electronic Devices and Circuits	2	2	-	4	3	40	60	100
6	17FE65	Engineering Chemistry Lab	-	-	2	2	1	40	60	100
7	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
8	17EC61	Electronic Devices and Circuits Lab	-	-	2	2	1	40	60	100
9	17ME75	Computer Aided Engineering Drawing Lab	1	-	2	3	2	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

II SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication - II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE12	Applied Physics	3	2	-	5	4	40	60	100
4	17EE52	Basic Electrical Engineering	2	2	-	4	3	40	60	100
5	17CI05	Data Structures	2	2	-	4	3	40	60	100
6	17FE62	Applied Physics Lab	-	-	2	2	1	40	60	100
7	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
8	17CI63	Data Structures Lab	-	-	2	2	1	40	60	100
9	17CI61	IT Workshop	1	-	2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

III SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
2	17FE03	Environmental Science	3	-	-	3	3	40	60	100
3	17CI07	OOPs through Java	3	-	-	3	3	40	60	100
4	17IT01	Operating System Principles	2	2	-	4	3	40	60	100
5	17CI02	Digital Logic Design	2	2	-	4	3	40	60	100
6	17CI09	Data Base Management Systems	2	2	-	4	3	40	60	100
7	17CI65	OOPs through Java Lab	-	-	2	2	1	40	60	100
8	17IT60	Operating System Principles Lab	-	-	2	2	1	40	60	100
9	17CI64	Database Management Systems Lab	-	-	2	2	1	40	60	100
10	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
		Total	**15**	**8**	**7**	**30**	**22**	**460**	**540**	**1000**

IV SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE08	Probability and Statistics	3	2	-	5	4	40	60	100
2	17CI14	Web Technologies	3	-	-	3	3	40	60	100
3	17CI06	Computer Architecture	2	2	-	4	3	40	60	100
4	17CI03	Discrete Mathematical Structures	2	2	-	4	3	40	60	100
5	17CI04	Python Programming	2	2	-	4	3	40	60	100
6	17IT02	Object Oriented Analysis and Design	3	-	-	3	3	40	60	100
7	17CI66	Web Technologies Lab	-	-	2	2	1	40	60	100
8	17IT61	Object Oriented Analysis and Design Lab	-	-	2	2	1	40	60	100
9	17CI62	Python Programming Lab	-	-	2	2	1	40	60	100
10	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
11	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
		Total	**19**	**6**	**7**	**32**	**22**	**500**	**600**	**1100**

V SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17HS01	Engineering Economics and Accountancy	3	-	-	3	3	40	60	100
2	17EC22	Microprocessors and Microcontrollers	3	-	-	3	3	40	60	100
3	17CI17	Data Communications and Computer Networks	3	-	-	3	3	40	60	100
4	17CI08	Design and Analysis of Algorithms	3	-	-	3	3	40	60	100
5	17CI10	Software Engineering	3	-	-	3	3	40	60	100
6	**PROGRAM ELECTIVE – I**		3	-	-	3	3	40	60	100
	17CI11	Computer Graphics								
	17IT04	Software Testing Quality Assurance								
	17CI13	Advanced Database Management Systems								
	17CI23	Artificial Intelligence								
7	17EC70	Microprocessors and Microcontrollers Lab	-	-	2	2	1	40	60	100
8	17IT62	Data Communications and Computer Networks Lab	-	-	2	2	1	40	60	100
9	17PD04	Mini Project	-	-	4	4	2	100	-	100
10	17PD05	Employability Enhancement Skills - I	1	-	-	1	0	100	-	100
11	17IT90	Real Time Operating Systems **(*Add on course – I)**	3	-	-	3	3	40	60	100
12	17PD06	Industrial Training/In-house Training	-	-	-	-	-	-	-	-
		Total	**22**	**-**	**8**	**30**	**22/25***	**560**	**540**	**1100**

VI SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CI20	Information Security	2	2	-	4	3	40	60	100
2	17IT03	R Programming	2	2	-	4	3	40	60	100
3	17CI16	Data Mining and Data Warehousing	2	2	-	4	3	40	60	100
4	17CI15	Automata Theory and Compiler Design	3	-	-	3	3	40	60	100
5	**PROGRAM ELECTIVE – II**		3	-	-	3	3	40	60	100
	17IT05	Object Oriented Software Engineering								
	17IT06	Sensor Networks								
	17CI24	Image Processing								
	17CI25	Neural Networks and Fuzzy Logic								
6	**OPEN ELECTIVE – I**		3	-	-	3	3	40	60	100
7	17CI67	Data Mining and Data Warehousing Lab	-	-	2	2	1	40	60	100
8	17IT63	R Programming Lab	-	-	2	2	1	40	60	100
9	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
10	17PD07	Seminar	-	-	2	2	1	100	-	100
11	17PD08	Employability Enhancement Skills - II	1	-	-	1	0	100	-	100
12	17IT91	Network Programming **(*Add on course – II)**	3	-	-	3	3	40	60	100
		Total	**19**	**6**	**8**	**33**	**22/25***	**600**	**600**	**1200**

VII SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CI18	Big Data Analytics	2	2	-	4	3	40	60	100
2	17CI19	Internet of Things	2	2	-	4	3	40	60	100
3	17CI29	Cloud Computing	3	-	-	3	3	40	60	100
4	**PROGRAM ELECTIVE - III**		3	-	-	3	3	40	60	100
	17IT07	Android Programming								
	17CI26	Pattern Recognition								
	17CI27	Software Requirements Engineering								
	17IT08	Mobile Communications								
5	**PROGRAM ELECTIVE – IV**		3	-	-	3	3	40	60	100
	17IT09	Computational Geometrics								
	17IT10	Advanced Computer Architecture								
	17IT11	Distributed Systems								
	17IT12	Design Patterns								
6	**OPEN ELECTIVE - II**		3	-	-	3	3	40	60	100
7	17CI68	Big Data with HADOOP Lab	-	-	2	2	1	40	60	100
8	17CI69	Internet of Things Lab	-	-	2	2	1	40	60	100
9	17PD09	Internship	-	-	1	1	2	100	-	100
10	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
11	17IT92	Bio-Informatics **(*Add on course – III)**	3	-		3	3	40	60	100
		Total	**19**	**4**	**6**	**29**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAM ELECTIVE – V**		3	-	-	3	3	40	60	100
	17CI12	Human Computer Interaction								
	17IT13	Fault Tolerance Systems								
	17CI28	Machine Learning								
	17CI30	Natural Language Processing								
2	**PROGRAM ELECTIVE - VI**		3	-	-	3	3	40	60	100
	17IT14	Bio-Metrics								
	17CI22	TCP/IP Networking								
	17CI31	Ad-Hoc Networks								
	17CI21	Software Project Management								
3	**OPEN ELECTIVE – III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**9**	-	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and SupplyManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and InsuranceManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of AutomobileEngineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

COURSE STRUCTURE

I SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE01	Professional Communication - I	3	-	-	3	3	40	60	100
2	17FE04	Differential Equations and Linear Algebra	3	2	-	5	4	40	60	100
3	17FE13	Engineering Physics	3	2	-	5	4	40	60	100
4	17CI01	Computer Programming	2	2	-	4	3	40	60	100
5	17ME01	Engineering Graphics	2	2	-	4	3	40	60	100
6	17FE60	English Communication Skills Lab	-	-	2	2	1	40	60	100
7	17FE63	Engineering Physics Lab	-	-	2	2	1	40	60	100
8	17CI60	Computer Programming Lab	-	-	2	2	1	40	60	100
9	17ME60	Engineering Workshop	1	-	2	3	2	40	60	100
		Total	**14**	**8**	**8**	**30**	**22**	**360**	**540**	**900**

II SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE02	Professional Communication - II	3	-	-	3	3	40	60	100
2	17FE06	Transformation Techniques and Vector Calculus	3	2	-	5	4	40	60	100
3	17FE14	Applied Chemistry	4	-	-	4	4	40	60	100
4	17EE52	Basic Electrical Engineering	2	2	-	4	3	40	60	100
5	17ME02	Engineering Mechanics	2	2	-	4	3	40	60	100
6	17FE64	Applied Chemistry Lab	-	-	2	2	1	40	60	100
7	17EE71	Basic Electrical Engineering Lab	-	-	2	2	1	40	60	100
8	17ME61	Engineering Mechanics and Fuel Testing Lab	-	-	2	2	1	40	60	100
9	17ME62	Computer Aided Engineering Graphics Lab	1	-	2	3	2	40	60	100
		Total	**15**	**6**	**8**	**29**	**22**	**360**	**540**	**900**

III SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE03	Environmental Science	3	-	-	3	3	40	60	100
2	17FE07	Numerical Methods and Fourier Analysis	3	2	-	5	4	40	60	100
3	17EC50	Basic Electronics Engineering	2	2	-	4	3	40	60	100
4	17ME03	Thermodynamics	2	2	-	4	3	40	60	100
5	17ME04	Mechanics of Solids	2	2	-	4	3	40	60	100
6	17ME05	Metallurgy and Material Science	3		-	3	3	40	60	100
7	17EC75	Basic Electronics Engineering Lab	-	-	2	2	1	40	60	100
8	17ME63	Metallurgy and Material Science Lab	-	-	2	2	1	40	60	100
9	17ME64	Materials Testing Lab	-	-	2	2	1	40	60	100
10	17PD01	Problem Assisted Learning	-	-	1	1	0	100	-	100
		Total	**15**	**08**	**07**	**30**	**22**	**460**	**540**	**1000**

IV SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17FE08	Probability and Statistics	3	2	-	5	4	40	60	100
2	17ME06	Operations Research	3	-	-	3	3	40	60	100
3	17ME07	Fluid Mechanics and Hydraulic Machinery	3	-	-	3	3	40	60	100
4	17ME08	Production Technology	3	-	-	3	3	40	60	100
5	17ME09	Applied Thermodynamics	2	2	-	4	3	40	60	100
6	17ME10	Kinematics of Machines	3	-	-	3	3	40	60	100
7	17ME65	Production Technology Lab	-	-	2	2	1	40	60	100
8	17ME66	Computer Aided Machine Drawing Lab	-	-	2	2	1	40	60	100
9	17ME67	Fluid Mechanics and Hydraulic Machinery Lab	-	-	2	2	1	40	60	100
10	17PD02	Problem Based Learning	-	-	1	1	0	100	-	100
11	17PD03	Professional Ethics and Human Values	3	-	-	3	0	40	60	100
		Total	**20**	**04**	**07**	**31**	**22**	**500**	**600**	**1100**

V SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17ME11	Industrial Management	3	-	-	3	3	40	60	100
2	17ME12	IC Engines and Gas Turbines	3	-	-	3	3	40	60	100
3	17ME13	Mechanical Engineering Design - I	2	2	-	4	3	40	60	100
4	17ME14	Dynamics of Machines	2	2	-	4	3	40	60	100
5	17ME15	Metal Cutting and Machine Tools	2	2	-	4	3	40	60	100
6	**PROGRAMME ELECTIVE - I**		3	-	-	3	3	40	60	100
	17ME16	Non-Conventional Energy Sources								
	17ME17	Mechanical Vibrations								
	17ME18	Non Destructive Evaluation and Testing								
	17ME19	Optimization Techniques for Engineers								
7	17ME68	Machine Tools and Dynamics Lab	-	-	2	2	1	40	60	100
8	17ME69	Thermal Engineering Lab	-	-	2	2	1	40	60	100
9	17PD04	Mini Project	-	-	4	4	2	100	-	100
10	17ME90	Energy, Environment and Pollution **(*Add on course – I)**	3	-	-	3	3	40	60	100
11	17PD05	Employability Enhancement Skills - I	1	-	-	1	0	100	-	100
12	17PD06	Industrial Training/In-house Training	-	-	-	-	-	-	-	-
		Total	**19**	**6**	**8**	**33**	**22/25***	**560**	**540**	**1100**

VI SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17ME20	Heat Transfer	2	2	-	4	3	40	60	100
2	17ME21	Mechanical Engineering Design - II	2	2	-	4	3	40	60	100
3	17ME22	CAD/CAM	3	-	-	3	3	40	60	100
4	17ME23	Finite Element Analysis	3	-	-	3	3	40	60	100
5	**PROGRAMME ELECTIVE - II**		3	-	-	3	3	40	60	100
	17ME24	Automobile Engineering								
	17ME25	Conditional Monitoring								
	17ME26	Modern Machining Processes								
	17ME27	Managing Innovation and Entrepreneurship								
6	**OPEN ELECTIVE – I**		3	-	-	3	3	40	60	100
7	17FE61	Presentation Skills Lab	-	-	2	2	1	40	60	100
8	17ME70	CAD/CAM Lab	-	-	2	2	1	40	60	100
9	17ME71	Heat Transfer Lab	-	-	2	2	1	40	60	100
10	17PD07	Seminar	-	-	2	2	1	100	-	100
11	17ME91	Design of Experiments **(*Add on course – II)**	3	-	-	3	3	40	60	100
12	17PD08	Employability Enhancement Skills - II	1	-	-	1	0	100	-	100
		Total	**20**	**04**	**08**	**32**	**22/25***	**600**	**600**	**1200**

VII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17ME28	Refrigeration and Air Conditioning	2	2	-	4	3	40	60	100
2	17ME29	Robotics	2	2	-	4	3	40	60	100
3	17ME30	Metrology and Instrumentation	2	2	-	4	3	40	60	100
4	**PROGRAMME ELECTIVE - III**		3	-	-	3	3	40	60	100
	17AE25	Computational Fluid Dynamics								
	17ME31	Fundamentals of Tribology								
	17ME32	Mechatronics								
	17ME33	Production Planning and Control								
5	**PROGRAMME ELECTIVE – IV**		3	-	-	3	3	40	60	100
	17ME34	Power Plant Engineering								
	17AE29	Theory of Elasticity								
	17ME35	Additive Manufacturing								
	17ME36	Total Quality Management								
6	**OPEN ELECTIVE – II**		3	-	-	3	3	40	60	100
7	17ME72	Robotics and Simulation Lab	-	-	2	2	1	40	60	100
8	17ME73	Metrology and Instrumentation Lab	-	-	2	2	1	40	60	100
9	17PD09	Internship	-	-	1	1	2	100	-	100
10	17PD10	Extra-curricular/Co-curricular Activities	-	-	1	1	-	-	-	-
11	17ME92	Computer Integrated Manufacturing **(*Add on course – III)**	3	-		3	3	40	60	100
		Total	**18**	**6**	**6**	**30**	**22/25***	**460**	**540**	**1000**

VIII SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	**PROGRAMME ELECTIVE - V**		3	-	-	3	3	40	60	100
	17ME37	Energy Conservation and Management								
	17ME38	Mechanics of Composite Materials								
	17ME39	Automation in Manufacturing								
	17ME40	Project Planning andManagement								
2	**PROGRAMME ELECTIVE - VI**		3	-	-	3	3	40	60	100
	17ME41	Nuclear Science and Engineering								
	17ME42	Fracture Mechanics								
	17ME43	Estimation, Costing and Engineering Economics								
	17ME44	Plant Layout and Material Handling								
3	**OPEN ELECTIVE - III**		3	-	-	3	3	40	60	100
4	17PD11	Project Work	-	-	24	24	12	40	60	100
5	17PD12	Comprehensive Viva-Voce	-	-	2	2	1	100	-	100
		Total	**09**	**-**	**26**	**35**	**22**	**260**	**240**	**500**

OPEN ELECTIVE – I (VI Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17MB80	Industrial Engineering and Management	MBA	AE, CE, CSE, ECE, EEE, EIE & IT
2	17MB81	Project Management	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
3	17MB82	Logistics and SupplyManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME
4	17MB83	Banking and InsuranceManagement	MBA	AE, CE, CSE, ECE, EEE, EIE, IT & ME

OPEN ELECTIVE – II (VII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE80	Principles of Flight	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE80	Basic Civil Engineering	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS80	Java Programming	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS81	Introduction to Operating Systems	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC80	Satellite Technology	ECE	AE, CE, CSE, EEE, EIE, IT & ME
6	17EC81	Analog and Digital Communications	ECE	AE, CE, CSE, EEE, IT & ME
7	17EE80	Basic Control Systems	EEE	AE, CE, CSE, IT & ME
8	17EE81	Utilization of Electrical Energy	EEE	AE, CE, CSE, ECE, EIE, IT & ME
9	17EI80	Instrumentation Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT80	Introduction to Database	IT	AE, CE, ECE, EEE, EIE & ME
11	17ME80	Optimization Techniques	ME	AE, CE, CSE, ECE, EIE & IT
12	17ME81	Elements of AutomobileEngineering	ME	AE, CE, CSE, ECE, EEE, EIE, & IT

OPEN ELECTIVE – III (VIII Semester)

S.No.	Course Code	Title of the Course	Offered by	Chosen by
1	17AE81	Space Technology	AE	CE, CSE, ECE, EEE, EIE, IT & ME
2	17CE81	Disaster Management	CE	AE, CSE, ECE, EEE, EIE, IT & ME
3	17CS82	Internet Technologies	CSE	AE, CE, ECE, EEE, EIE & ME
4	17CS83	Shell Programming	CSE	AE, CE, ECE, EEE, EIE & ME
5	17EC82	Elements of Communication Systems	ECE	AE, CE, CSE, IT & ME
6	17EC83	Systems and Signal Processing	ECE	AE, CE, CSE, IT & ME
7	17EE82	Energy Auditing	EEE	AE, CE, CSE, ECE, EIE, IT & ME
8	17EE83	Renewable Energy Sources	EEE	AE, CE, CSE, ECE, EIE & IT
9	17EI81	Nano Technology	EIE	AE, CE, CSE, ECE, EEE, IT & ME
10	17IT81	Computer Networks	IT	AE, CE, EEE & ME
11	17ME82	Robotics and Automation	ME	AE, CE, CSE, ECE, EEE & IT
12	17ME83	Mechanical Handling Systems and Equipments	ME	AE, CE, CSE, ECE, EEE, EIE & IT

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
MYLAVARAM- 521 230, KRISHNA (DT), ANDHRA PRADESH, INDIA

ACADEMIC REGULATIONS R-17 FOR M.B.A (REGULAR)
(CHOICE BASED CREDIT SYSTEM)

Applicable for the students of M.B.A (Regular) from the Academic Year 2017 – 18.

1. PROGRAMME OFFERED (POST GRADUATE)

Master of Business Administration (M.B.A)

2. ELIGIBILITY CRITERIA FOR ADMISSION

The eligibility criteria for admission into the first year of the M.B.A programme is in accordance with the guidelines issued by AICTE, New Delhi, A.P State Council of Higher Education or any other competent authority from time to time.

3. AWARD OF DEGREE

A student will be declared eligible for the award of M.B.A degree, if he/she fulfils the following academic requirements:

- A student shall be declared eligible for the award of the M.B.A degree, if he/she pursues a programme of study in not less than two and not more than four academic years.
- The student shall register for 88 credits and secure all the 88 credits.
- The students, who fail to fulfill all the academic requirements for the award of degree within four academic years from the year of their admission, shall forfeit their seat in M.B.A programme.
- No disciplinary action pending against the student.

4. MEDIUM OF INSTRUCTION

The medium of instruction is English in all academic activities.

5. MINIMUM INSTRUCTION DAYS

The minimum instruction days for each semester shall be 90 days.

6. CREDIT ASSIGNMENT

Each course is assigned a certain number of credits based on the following criteria:

Contact hours per week			Credits
L	T	P	
1	0	0	1
0	2	0	1
0	0	2	1

L : Lecture hours T : Tutorial hours P : Practical hours

7. SEMESTER-WISE DISTRIBUTION OF CREDITS

The entire course of study is for two academic years, all the years are on semester pattern. The distribution of credits in each semester is as follows.

Semester	Credits
I	22
II	22

III	22
IV	22
Total	**88**

8. ASSESSMENT AND EVALUATION

a) THEORY COURSES

Each theory course is evaluated for maximum 100 marks with distribution of 40 marks for Continuous Internal Evaluation (CIE) and 60 marks for Semester End Examination (SEE).

i) The CIE for theory courses requires evaluation through two mid-term examinations and report writing for a total 40 marks. Two mid-term examinations shall be conducted with syllabi comprising units I & II for the first and units III, IV & V for the second. Each mid-term examination shall be conducted for 35 marks (25 marks for the descriptive test and 10 marks for quiz). Each student shall submit a report and deliver a seminar on the topic assigned in the corresponding syllabi, which shall be evaluated for 5 marks to be added to the CIE for 40 marks. Each internal descriptive and quiz tests shall be conducted for duration of 120 minutes. The descriptive test shall consists of one compulsory question and two other questions having 'either'/ 'or' option. However, 75% weightage for the better and 25% for the other mid-term examination shall be considered for awarding of mid-term marks.

ii) The SEE for theory course shall be conducted for 3 hours duration for a total 60 marks, covering the entire syllabus. Students have to answer one compulsory question and four other questions having 'either'/ 'or' option carrying 12 marks each.

b) LABORATORY COURSES

Each laboratory course is evaluated for maximum 100 marks with distribution of 40 marks for CIE and 60 marks for SEE.

i) Continuous Internal Evaluation (CIE)

The Continuous Internal Evaluation (CIE) is based on the following parameters:

Parameter	Marks
Day to day work	20
Internal Test	10
Viva voce	10
Total	40

ii) Semester End Examinations (SEE)

The Semester End examinations (SEE) for laboratory courses shall be jointly conducted by internal and external examiners for duration of 3 hours and evaluated for a maximum 60 marks. The performance of the students shall be evaluated as per the parameters indicated below:

Parameter	Marks
Procedure / Algorithm	10
Experimentation / Program execution	15
Observations / Calculations / Testing	15
Result	10
Viva voce	10
Total	60

c) INDUSTRIAL DATA ANALYSIS AND PRESENTATION

I SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MB01	Principles of Management	3	-	-	3	3	40	60	100
2	17MB02	Managerial Economics	3	-	-	3	3	40	60	100
3	17MB03	Accounting for Managers	4	-	-	4	4	40	60	100
4	17MB04	Statistics for Management	4	-	-	4	4	40	60	100
5	17MB05	Business Environment and Laws	3	-	-	3	3	40	60	100
6	17MB06	Business communication	3	-	-	3	3	40	60	100
7	17MB60	Information Technology Lab	-	-	2	2	1	40	60	100
8	17MB61	Business communication Lab-I	-	-	2	2	1	40	60	100
		TOTAL	**20**	**0**	**4**	**24**	**22**	**320**	**480**	**800**

II SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MB07	Organizational Behavior	3	-	-	3	3	40	60	100
2	17MB08	Marketing Management	3	-	-	3	3	40	60	100
3	17MB09	Financial Management	4	-	-	4	4	40	60	100
4	17MB10	Human Resource Management	3	-	-	3	3	40	60	100
5	17MB11	Business Research Methods	3	-	-	3	3	40	60	100
6	17MB12	Operations Management	3	-	-	3	3	40	60	100
7	17MB51	Industrial Data Analysis and Presentation	-	-	4	4	2	100	-	100
8	17MB62	Business Communication Lab-II	-	-	2	2	1	40	60	100
		TOTAL	**19**	**0**	**6**	**25**	**22**	**380**	**420**	**800**

LBRCE EXAM CELL Dt. 2/7/18

HEAD
Dept. of Business Administration
Lakireddy Bali Reddy College of Engg.
Mylavaram-521230., Krishna Dt.

III SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MB13	Strategic Management	4	-	-	4	4	40	60	100
2	17MB14	Operations Research	3	-	-	3	3	40	60	100
FINANCE										
3	17MB15	Security Analysis and Portfolio Management	3	-	-	3	3	40	60	100
4	17MB16	Financial Institutions and Services	3	-	-	3	3	40	60	100
5	17MB17	Strategic Financial Management	3	-	-	3	3	40	60	100
HRM										
6	17MB18	Performance Management	3	-	-	3	3	40	60	100
7	17MB19	Management of Industrial Relations	3	-	-	3	3	40	60	100
8	17MB20	Leadership and team building	3	-	-	3	3	40	60	100
MARKETING										
9	17MB21	Service Marketing Retail Management	3	-	-	3	3	40	60	100
10	17MB22	Advertising and Brand Management	3	-	-	3	3	40	60	100
11	17MB23	Social Media & Digital Marketing	3	-	-	3	3	40	60	100
SYSTEMS										
12	17MB24	Database Management System	3	-	-	3	3	40	60	100
13	17MB25	E-Commerce	3	-	-	3	3	40	60	100
14	17MB26	Management Information System	3	-	-	3	3	40	60	100
OPERATIONS MANAGEMENT										
15	17MB27	Materials Management	3	-	-	3	3	40	60	100
16	17MB28	Service operations management	3	-	-	3	3	40	60	100
17	17MB29	Project Management	3	-	-	3	3	40	60	100
18	**17MB63**	**Data Analysis Lab**	-	-	2	2	1	40	60	100
19	**17MB52**	**Project Work (Phase – I)**	-	-	3	3	2	100	-	100
		TOTAL	**19**	**0**	**05**	**24**	**22**	**380**	**420**	**800**

Note: Specialization papers will be offered in five areas viz., Finance, HRM, Marketing, Systems and Operations Management, out of which students shall choose any two specializations. In each specialization, the student is required to opt any two courses.

Dept. of Business Administration
Lakireddy Bali Reddy College of Engg.
Mylavaram-521 230., Krishna Dt.

IV SEMESTER

S. No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MB30	Entrepreneurship	3	-	-	3	3	40	60	100
2	17MB31	Business Ethics and Corporate Governance	3	-	-	3	3	40	60	100
FINANCE										
3	17MB32	International Financial Management	3	-	-	3	3	40	60	100
4	17MB33	Financial Derivatives	3	-	-	3	3	40	60	100
5	17MB34	Banking and Insurance Management	3	-	-	3	3	40	60	100
HRM										
6	17MB35	Strategic Human Resource Management	3	-	-	3	3	40	60	100
7	17MB36	Management of Change	3	-	-	3	3	40	60	100
8	17MB37	Talent Management	3	-	-	3	3	40	60	100
MARKETING										
9	17MB38	Consumer Behaviour	3	-	-	3	3	40	60	100
10	17MB39	Customer Relationship Management	3	-	-	3	3	40	60	100
11	17MB40	International Marketing	3	-	-	3	3	40	60	100
SYSTEMS										
12	17MB41	Data Warehousing and Data Mining	3	-	-	3	3	40	60	100
13	17MB42	Decision Support Systems & Intelligence System	3	-	-	3	3	40	60	100
14	17MB43	Enterprise Resource Planning	3	-	-	3	3	40	60	100
OPERATIONS MANAGEMENT										
15	17MB44	Product design	3	-	-	3	3	40	60	100
16	17MB45	Process Management	3	-	-	3	3	40	60	100
17	17MB46	Six Sigma	3	-	-	3	3	40	60	100
18	**17MB53**	**Project Work (Phase - II)**	-	-	6	6	4	40	60	100
		TOTAL	**18**	**-**	**06**	**24**	**22**	**280**	**420**	**700**

Note: Specialization papers will be offered in five areas viz., Finance, HRM, Marketing, Systems and Operations Management, out of which students shall choose any two specializations. In each specialization, the student is required to opt any two courses.

EXAM CELL Dt.....

HEAD
Dept. of Business Administration
Lakireddy Bali Reddy College of Engg.
Mylavaram-521230., Krishna Dt.

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
MYLAVARAM- 521 230, KRISHNA (DT), ANDHRA PRADESH, INDIA

ACADEMIC REGULATIONS R-17 FOR M.C.A (REGULAR)
(CHOICE BASED CREDIT SYSTEM)

Applicable for the students of M.C.A from the Academic Year 2017-18

1. PROGRAMME OFFERED (POST GRADUATE)

Master of Computer Applications (M.C.A)

2. ELIGIBILITY CRITERIA FOR ADMISSION

The eligibility criteria for admission into first year M.C.A programme in accordance with the guidelines issued by AICTE, New Delhi, A.P State Council of Higher Education or any other competent authority from time to time.

3. AWARD OF DEGREE

A student will be declared eligible for the award of M.C.A degree, if he/she fulfils the following academic requirements:

- A student shall be declared eligible for the award of the M.C.A degree, if he/she pursues a programme of study in not less than three and not more than six academic years.
- The student shall register for 124 credits and secure all the 124 credits.
- The students, who fail to fulfill all the academic requirements for the award of degree within six academic years from the year of their admission, shall forfeit their seat in M.C.A programme.
- Students shall secure a satisfactory grade (SA) in the non-credit course.
- No disciplinary action pending against the student.

4. MEDIUM OF INSTRUCTION

The medium of instruction is English in all academic activities.

5. MINIMUM INSTRUCTION DAYS

The minimum instruction days for each semester shall be 90 days.

6. CREDIT ASSIGNMENT

Each course is assigned a certain number of credits based on the following criteria:

Contact hours per week			Credits
L	T	P	
1	0	0	1
0	2	0	1
0	0	2	1

L : Lecture hours T : Tutorial hours P : Practical hours

7. SEMESTER-WISE DISTRIBUTION OF CREDITS

The entire course of study is for three academic years, all the years are on semester pattern. The distribution of credits in each semester is as follows.

Semester	Credits
I	22
II	22
III	22
IV	22
V	22
VI	14
Total	**124**

8. ASSESSMENT AND EVALUATION

a) THEORY COURSES

Each theory course is evaluated for maximum of 100 Marks with distribution of 40 Marks for Continuous Internal Evaluation (CIE) and 60 Marks for Semester End Examination (SEE).

i) The CIE methodology for theory courses is based on two mid-term examinations, each for maximum 40 marks. Two mid-term examinations shall be conducted with syllabi from units I & II for the first and units III, IV & V for the second. The mid-term examination question paper shall be for 40 marks. Each mid-term examination shall be conducted for 2 hours duration and students have to answer all three questions with each question having 'either'/ 'or' option. However, 75% weightage for the better of the two and 25% for the other test shall be considered for awarding marks of 40.

ii) The Semester End Examination (SEE) for theory courses requires evaluation for 60 marks. The question paper in each course for the semester end examination consists of five questions, one from each unit with 'either' / 'or' option, carrying 12 marks each. The students are required to answer all five questions for maximum 60 marks. The duration of SEE is 3 hours.

b) LABORATORY COURSES

Each laboratory course is evaluated for a maximum 100 marks with distribution of 40 marks for Continuous Internal Evaluation (CIE) and 60 Marks for Semester End Examination (SEE).

i) Continuous Internal Evaluation (CIE)

The Continuous Internal Evaluation (CIE) is based on the following parameters:

Parameter	Marks
Day to day work	20
Internal Test	10
Viva voce	10
Total	40

ii) Semester End Examinations (SEE)

The Semester End examinations (SEE) for laboratory courses shall be jointly conducted by internal and external examiners with 3 hours duration and evaluated for 60 marks. The performance of the student shall be evaluated as per the parameters indicated below:

Parameter	Marks
Procedure / Algorithm	10
Experimentation / Program execution	15

COURSE STRUCTURE

I SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MC01	Accounting and Financial Management	3	-	-	3	3	40	60	100
2	17MC02	C Programming and Data Structures	2	2	-	4	3	40	60	100
3	17MC03	Digital Logic and Computer System Organization	2	2	-	4	3	40	60	100
4	17MC04	Discrete Structures and Graph Theory	3	-	-	3	3	40	60	100
5	17MC05	English Language for Communication	2	-	-	2	2	40	60	100
6	17MC06	Probability and Statistics	3	-	-	3	3	40	60	100
7	17MC60	C Programming Lab	-	-	4	4	2	40	60	100
8	17MC61	Digital Logic and Computer System Organization Lab	-	-	4	4	2	40	60	100
9	17MC62	IT Lab	-	-	2	2	1	40	60	100
		Total	**15**	**4**	**10**	**29**	**22**	**360**	**540**	**900**

II SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MC07	Computer Networks	3	-	-	3	3	40	60	100
2	17MC08	Database Management Systems	2	2	-	4	3	40	60	100
3	17MC09	Operating Systems	2	2	-	4	3	40	60	100
4	17MC10	Software Engineering	3	-	-	3	3	40	60	100
5	17MC11	Organization Structure and Personal Management	3	-	-	3	3	40	60	100
6	17MC63	Data Structures Lab	-	-	4	4	2	40	60	100
7	17MC64	Data Base Management Systems Lab	-	-	4	4	2	40	60	100
8	17MC65	English Communication Skills Lab	-	-	4	4	2	40	60	100
9	17MC50	Technical Seminar-I	-	2	-	2	1	100	-	100
		Total	**13**	**6**	**12**	**31**	**22**	**420**	**480**	**900**

LBRCE EXAM CELL

HEAD
Master of Computer Applications
Lakireddy Bali Reddy College of Engg.
MYLAVARAM - 521 230., Krishna Dt, A.P.

III SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MC12	Automata Theory and Compiler Design	3	-	-	3	3	40	60	100
2	17MC13	Design and Analysis of Algorithms	3	-	-	3	3	40	60	100
3	17MC14	OOPs Through Java	2	2	-	4	3	40	60	100
4	17MC15	UNIX Programming	2	2	-	4	3	40	60	100
5	17MC16	Operations Research	3	-	-	3	3	40	60	100
6	17MC66	OOPs Through Java Lab	-	-	4	4	2	40	60	100
7	17MC67	UNIX Programming Lab	-	-	4	4	2	40	60	100
8	17MC68	R Programming Lab	-	-	4	4	2	40	60	100
9	17MC51	Technical Seminar-II	-	2	-	2	1	100	-	100
10	17MC52	Professional Ethics and Human Values	2	-	-	2	0	40	60	100
		Total	**15**	**06**	**12**	**33**	**22**	**460**	**540**	**1000**

IV SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MC17	Cloud Computing	3	-	-	3	3	40	60	100
2	17MC18	Data Warehousing and Mining	3	-	-	3	3	40	60	100
3	17MC19	Object Oriented Analysis and Design	2	2	-	4	3	40	60	100
4	17MC20	Web Technologies	2	2	-	4	3	40	60	100
5	**PROGRAM ELECTIVE - I**		3	-	-	3	3	40	60	100
	17MC21	Cryptography and Network Security								
	17MC22	Distributed Operating Systems								
	17MC23	Software Design Methodologies								
	17MC24	Distributed Databases								
6	17MC69	Data Warehousing and Mining Lab	-	-	4	4	2	40	60	100
7	17MC70	Object Oriented Analysis and Design Lab	-	-	4	4	2	40	60	100
8	17MC71	Web Technologies Lab	-	-	4	4	2	40	60	100
9	17MC53	Mini Project	-	-	2	2	1	100	-	100
		Total	**13**	**4**	**14**	**31**	**22**	**420**	**480**	**900**

LBRCE EXAM CELL Dt.....

HEAD
Master of Computer Applications
Lakireddy Bali Reddy College of Engg.
MYLAVARAM - 521 230, Krishna Dt. A.P.

V SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MC25	Big Data Analytics	3	-	-	3	3	40	60	100
2	17MC26	Mobile Application Development	2	2	-	4	3	40	60	100
3	17MC27	Python Programming	2	2	-	4	3	40	60	100
4	**PROGRAM ELECTIVE – II**		3	-	-	3	3	40	60	100
	17MC28	Internet of Things								
	17MC29	Open Source Software								
	17MC30	Software Testing Methodologies								
	17MC31	Database Tuning								
5	**PROGRAM ELECTIVE - III**		3	-	-	3	3	40	60	100
	17MC32	E-Commerce								
	17MC33	Unix Administration								
	17MC34	Software Project Management								
	17MC35	Database Administration								
6	17MC72	Big Data Analytics Lab	-	-	4	4	2	40	60	100
7	17MC73	Mobile Application Development Lab	-	-	4	4	2	40	60	100
8	17MC74	Python Programming Lab	-	-	4	4	2	40	60	100
9	17MC54	Internship	-	2	-	2	1	100	-	100
		Total	**13**	**6**	**12**	**31**	**22**	**420**	**480**	**900**

VI SEMESTER

S.No	Course code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17MC55	Project work	-	-	24	-	12	40	60	100
2	17MC56	Comprehensive Viva-Voce	-	-	4	-	2	100	-	100
		Total	-	-	**28**	-	**14**	**140**	60	**200**

LBRCE EXAM CELL

HEAD
Master of Computer Applications
Lakireddy Bali Reddy College of Engg.
Krishna Dt, A.P.

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
MYLAVARAM- 521 230, KRISHNA (DT), ANDHRA PRADESH, INDIA

ACADEMIC REGULATIONS R-17 FOR M.Tech (REGULAR)
(CHOICE BASED CREDIT SYSTEM)

Applicable for the students of M.Tech (Regular) from the Academic Year 2017 – 18

1. ELIGIBILITY CRITERIA FOR ADMISSION

The eligibility criteria for admission into the first year of M.Tech programs is in accordance with the guidelines issued by AICTE, New Delhi, A.P State Council of Higher Education or any other competent authority from time to time.

2. PROGRAMMES OFFERED (POST GRADUATE)

The following M.Tech programmes approved by AICTE, New Delhi are offered in the college.

S.No	Department	Specialization
1	Computer Science and Engineering	Computer Science and Engineering
2	Electronics & Communication Engineering	VLSI and Embedded Systems
3	Electrical & Electronics Engineering	Power Electronics and Drives
4	Mechanical Engineering	Thermal Engineering

3. AWARD OF DEGREE

A student will be declared eligible for the award of M. Tech. degree if he/she fulfils the following academic requirements:

- A student shall be declared eligible for the award of the M. Tech degree, if he/she pursues a course of study in not less than two and not more than four academic years.
- The student shall register for 72 credits and secure all the 72 credits.
- The students, who fail to fulfill all the academic requirements for the award of degree within four academic years from the year of their admission, shall forfeit their seat in M.Tech programme.
- No disciplinary action pending against the student.

4. MEDIUM OF INSTRUCTION

The medium of instruction is English in all academic activities.

5. MINIMUM INSTRUCTION DAYS

The minimum instruction days for each semester shall be 90 days.

6. CREDIT ASSIGNMENT

Each course is assigned a certain number of credits based on the following criteria:

Contact hours per week			Credits
L	T	P	
1	0	0	1
0	2	0	1

0 0 2	1

L: Lecture hours T: Tutorial hours P: Practical hours

7. SEMESTER –WISE DISTRIBUTION OF CREDITS

The entire course of study is for two academic years, all the years are on semester pattern. The distribution of credits in each semester is as follows.

Semester	Credits
I	18/21*
II	18/21*
III	18/15/12
IV	18
Total	**72**

***** with add-on course

Note:

Without add-on courses registered, credits in III semester = 18

With 1- add-on course registered, credits in III semester = 15

With 2- add-on courses registered, credits in III semester = 12

8. ASSESSMENT AND EVALUATION

The performance of a student in each course shall be evaluated based on Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) or only Continuous Internal Evaluation.

S.No	Category of course	Marks	
		CIE	SEE
1	Theory courses	40	60
2	Laboratory courses	40	60
3	Technical seminar	100	--
4	Mini project	100	--
5	Internship	100	--
6	Comprehensive viva voce	100	--
7	Project work (Phase-I and Phase-II)	40	60

8.1 THEORY COURSES

Each theory course is evaluated for maximum 100 marks with distribution of 40 marks for Continuous Internal Evaluation (CIE) and 60 marks for Semester End Examination (SEE).

i) The CIE methodology for theory courses is based on two mid-term examinations, each for maximum 40 marks. Two mid-term examinations shall be conducted with syllabi from units I & II for the first and units III, IV & V for the second. The mid-term examination question paper shall be for 40 marks. Each mid-term examination shall be conducted for 120 minutes duration and students have to answer all three questions with each question having ‘either’/ ‘or’ option. However, 75% weightage for the better of the two and 25% for the other test shall be considered for awarding 40 marks.

ii) The Semester End Examination (SEE) for theory courses requires evaluation for 60 marks. The question paper in each course for the semester end examination consists

M.Tech.(CSE), R17 Course Structure (Choice Based Credit System)

I SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CO01	Android Technologies	3	-	-	3	3	40	60	100
2	17CO02	Fundamentals of Data Science	3	-	-	3	3	40	60	100
3	17CO03	Machine Learning	3	-	-	3	3	40	60	100
4	PE-I	Programme Elective-I	3	-	-	3	3	40	60	100
5	PE-II	Programme Elective-II	3	-	-	3	3	40	60	100
6	17CO60	Android Technologies Lab	-	-	2	2	1	40	60	100
7	17CO61	Fundamentals of Data Science Lab	-	-	2	2	1	40	60	100
8	17CO50	Technical Seminar	-	-	2	2	1	100	--	100
10	17CO90	**Add-on-Course-1** High Performance Computing	3	-	-	3	3	40	60	100
		Total	**15/ 18**	-	**6**	**21/24 ***	**18/21***	**380/ 420***	**420/ 480***	**800/ 900***

***With inclusion of Add on course**

II SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CO10	Big Data Analytics	3	-	-	3	3	40	60	100
2	17CO11	Internet of Things	3	-	-	3	3	40	60	100
3	17CO12	Cryptography and Network Security	3	-	-	3	3	40	60	100
4	PE-III	Programme Elective-III	3	-	-	3	3	40	60	100
5	PE-IV	Programme Elective-IV	3	-	-	3	3	40	60	100
6	17CO62	Big Data Analytics Lab	-	-	2	2	1	40	60	100
7	17CO63	Internet of Things Lab	-	-	2	2	1	40	60	100
8	17CO51	Mini Project	-	-	2	2	1	100	--	100
10	17CO91	**Add-on-Course-2** Information Retrieval Systems	3	-	-	3	3	40	60	100
		Total	**15/ 18***	-	**6**	**21/ 24***	**18/ 21***	**380/ 420***	**420/ 480***	**800/ 900***

***With inclusion of Add on course**

LBRCE EXAM CELL

HEAD
Dept. of Computer Science and Engineering
Lakireddy Bali Reddy College of Engg.
MYLAVARAM - 521 230, Krishna Dt. A.P.

III SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	PE-V	Programme Elective -V	3	-	-	3	3	40	60	100
2	PE-VI	Programme Elective -VI	3	-	-	3	3	40	60	100
3	17CO52	Internship	-	-	-	-	2	100	--	100
4	17CO53	Project Work (Phase-I)	-	-	20	20	10	40	60	100
		Total	**6**	**-**	**20**	**26**	**12/15/18**	**220**	**180**	**400**

IV SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17CO54	Project Work (Phase-II)	-	-	32	32	16	40	60	100
2	17CO55	Comprehensive Viva Voce	-	-	4	4	2	100	--	100
		Total	**-**	**-**	**36**	**36**	**18**	**140**	**60**	**200**

LIST OF COURSES FOR PROGRAMME ELECTIVE- I & II

S.No	Course Code	Course Title
1	17CO04	Advanced Algorithm Design
2	17CO05	Ad-hoc Networks
3	17CO06	Object Oriented Software Engineering
4	17CO07	Image Processing
5	17CO08	Cloud Computing
6	17CO09	Parallel Algorithms

Note: Students are required to choose any two courses as Programme Elective- I & II

List of courses for Programme Elective- III& IV

S.No	Course Code	Course Title
1	17CO13	Advanced Data Mining
2	17CO14	TCP/IP Networking
3	17CO15	Software Testing and Quality Assurance
4	17CO16	Neural Networks
5	17CO17	Web and Database Security
6	17CO18	Graph Analytics

Note: Students are required to choose any two courses as Programme Elective- III & IV.

List of courses for Programme Elective-V & VI

S.No	Course Code	Course Title
1	17CO19	Web Mining
2	17CO20	Storage Area Networks
3	17CO21	Software Project Management
4	17CO22	Pattern Recognition
5	17CO23	Computer Forensics
6	17CO24	Deep Learning

Note: Students are required to choose two/one courses as Programme Elective- III & IV , depending on the add-on-courses opted in Semester I & II.

* * * * * * * * * * *

LBRARY Dt..... EXAM CELL

HEAD
Dept. of Computer Science and Engineering
Lakireddy Bali Reddy College of Engg.
MYLAVARAM - 521 230, Krishna Dt., A.P.

M.Tech., R17 Course Structure (Choice Based Credit System)

I SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17VE01	Digital VLSI System Design	3	-	-	3	3	40	60	100
2	17VE02	Embedded System Design	3	-	-	3	3	40	60	100
3	17VE03	CPLD and FPGA Architectures and Applications	3	-	-	3	3	40	60	100
4	PE-I	Programme Elective - I	3	-	-	3	3	40	60	100
5	PE-II	Programme Elective - II	3	-	-	3	3	40	60	100
6	17VE60	Digital VLSI System Design Lab	-	-	2	2	1	40	60	100
7	17VE61	Embedded System Design Lab	-	-	2	2	1	40	60	100
8	17VE50	Technical Seminar	-	-	2	2	1	100	--	100
10	17VE90	Advanced Computer Architecture	3	-	-	3	3	40	60	100
		Total	15/ 18*	-	6	21/ 24*	18/ 21*	380/ 420*	420/ 480*	800/ 900*

*With inclusion of Add on course

II SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17VE10	Analog VLSI Design	3	-	-	3	3	40	60	100
2	17VE11	Real Time Operating Systems	3	-	-	3	3	40	60	100
3	17VE12	DSP Processors and Architecture	3	-	-	3	3	40	60	100
4	PE-III	Programme Elective -III	3	-	-	3	3	40	60	100
5	PE-IV	Programme Elective -IV	3	-	-	3	3	40	60	100
6	17VE62	Analog VLSI Design Lab	-	-	2	2	1	40	60	100
7	17VE63	Real Time Operating Systems Lab	-	-	2	2	1	40	60	100
8	17VE51	Mini Project	-	-	2	2	1	100	--	100
10	17VE91	ASIC Design	3	-	-	3	3	40	60	100
		Total	15/ 18*	-	6	21/ 24*	18/ 21*	380/ 420*	420/ 480*	800/ 900*

*With inclusion of Add on course

HEAD
Department of Electronics & Communication Engineering
Lakireddy Bali Reddy College of Engineering
MYLAVARAM, Krishna Dt., Andhra Pradesh

LBRCE Dt. CELL

III SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	PE-V	Programme Elective -V	3	-	-	3	3	40	60	100
2	PE-VI	Programme Elective-VI	3	-	-	3	3	40	60	100
3	17VE52	Internship	-	-	-	-	2	100	--	100
4	17VE53	Project Work (Phase-I)	-	-	20	20	10	40	60	100
		Total	**6**	**-**	**20**	**26**	**12/15/18**	**220**	**180**	**400**

IV SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17VE54	Project Work (Phase-II)	-	-	32	32	16	40	60	100
2	17VE55	Comprehensive Viva Voce	-	-	4	4	2	100	--	100
		Total	**-**	**-**	**36**	**36**	**18**	**140**	**60**	**200**

List of courses for Programme Elective- I & II

S.No	CourseCode	Course Title
1	17VE04	Cryptography and Network Security
2	17VE05	Design for Internet of Things
3	17VE06	High Speed VLSI Design
4	17VE07	Image and Video Processing
5	17VE08	System Modeling and Simulation
6	17VE09	VLSI Design Automation

Note: Students are required to choose any two courses as Programme Elective- I & II

List of courses for Programme Elective- III& IV

S.No	Course Code	Course Title
1	17VE13	CMOS RF Circuit Design
2	17VE14	Embedded Software Design
3	17VE15	VLSI Testing and Verification
4	17VE16	VLSI Architecture for Signal Processing
5	17VE17	SOC Design
6	17VE18	Wireless Communications & Networks

Note: Students are required to choose any two courses as Programme Elective- III & IV.

List of courses for Programme Elective- V & VI

S.No	CourseCode	Course Title
1	17VE19	Design of Semiconductor Memories
2	17VE20	Embedded Linux
3	17VE21	Multimedia systems
4	17VE22	MEMS Design and Fabrication
5	17VE23	Nano Electronics
6	17VE24	Low Power VLSI Design

Note: Students are required to choose two/one courses as Programme Elective- III & IV, depending on the add-on-courses opted in Semester I & II.

* * * * * * * * * * *

HEAD
Department of Electronics & Communication Engineering
Lakireddy Bali Reddy College of Engineering
MYLAVARAM, Krishna Dt., Andhra Pradesh

M.Tech.(PED), R17 Course Structure (Choice Based Credit System)

I SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17PE01	Computational Mathematics	2	2	-	4	3	40	60	100
2	17PE02	Analysis of Power Converters	2	2	-	4	3	40	60	100
3	17PE03	Control of Motor Drives-I	2	2	-	4	3	40	60	100
4	PE-I	Programme Elective -I	2	2	-	4	3	40	60	100
5	PE-II	Programme Elective -II	2	2	-	4	3	40	60	100
6	17PE60	Power Converter and Drives-I Lab	-	-	2	2	1	40	60	100
7	17PE61	Simulation of Power converters and Drives-I Lab	-	-	2	2	1	40	60	100
8	17PE50	Technical Seminar	-	-	2	2	1	100	--	100
10	17PE90	**Add-on-Course-1** Advanced Power Semiconductor Devices and their Protection	3	-	-	3	3	40	60	100
		Total	**10/ 13**	**10**	**6**	**26/ 29***	**18/ 21***	**380/ 420***	**420/ 480***	**800/ 900***

***With inclusion of Add on course**

II SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17PE10	Modern Control Theory	2	2	-	4	3	40	60	100
2	17PE11	Switched Mode Power Conversion	2	2	-	4	3	40	60	100
3	17PE12	Control of Motor Drives-II	2	2	-	4	3	40	60	100
4	PE-III	Programme Elective -III	2	2	-	4	3	40	60	100
5	PE-IV	Programme Elective -IV	2	2	-	4	3	40	60	100
6	17PE62	Power Converter and Drives-II Lab	-	-	2	2	1	40	60	100
7	17PE63	Simulation of Power Converters and Drives –II Lab	-	-	2	2	1	40	60	100
8	17PE51	Mini Project	-	-	2	2	1	100	--	100
10	17PE91	**Add-on-Course-2** Integration of Renewable Sources	3	-	-	3	3	40	60	100
		Total	**10/ 13***	**10**	**6**	**26/ 29***	**18/ 21***	**380/ 420***	**420/ 480***	**800/ 900***

***With inclusion of Add on course**

LBRCE * EXAM CELL *

Dept. of Electronics Engg.
Lakireddy Bali Reddy College of Engg
MYLAVARAM-521230, Krishna DT, A.P

III SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	PE-V	Programme Elective -V	2	2	-	4	3	40	60	100
2	PE-VI	Programme Elective -VI	2	2	-	4	3	40	60	100
3	17PE52	Internship	-	-	-	-	2	100	--	100
4	17PE53	Project Work (Phase-I)	-	-	20	20	10	40	60	100
		Total	**0/ 2/ 4**	**0/ 2/ 4**	**20**	**20/ 24/ 28**	**12/15/18**	**140/ 180/ 220**	**60/ 120/ 180**	**200/ 300/ 400**

IV SEMESTER

S.No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17PE54	Project Work (Phase-II)	-	-	32	32	16	40	60	100
2	17PE55	Comprehensive Viva Voce	-	-	4	4	2	100	--	100
		Total	-	-	**36**	**36**	**18**	**140**	**60**	**200**

List of courses for Programme Elective- I & II

S.No	Course Code	Course Title
1	17PE04	Optimization Techniques in Electrical Engineering
2	17PE05	HVDC and FACTS
3	17PE06	Energy Auditing and Management
4	17PE07	Machine Modeling and Analysis
5	17PE08	Analysis of Special Electrical Machines
6	17PE09	Modeling and Simulation of Power Electronic Systems

Note: Students are required to choose any two courses as Programme Elective- I & II

List of courses for Programme Elective- III& IV

S.No	Course Code	Course Title
1	17PE13	Power Quality Engineering
2	17PE14	Hybrid Electrical Vehicles
3	17PE15	Reactive Power Management
4	17PE16	DSP and FPGA Processors
5	17PE17	Applications of Artificial Intelligence Techniques
6	17PE18	Advanced Micro processors and Micro controllers

Note: Students are required to choose any two courses as Programme Elective- III & IV.

List of courses for Programme Elective- V & VI

S.No	Course Code	Course Title
1	17PE19	Industrial Electronics
2	17PE20	Micro and Smart Grids
3	17PE21	Drive Systems in Electric Traction
4	17PE22	Emerging Trends in Power Converter Technologies
5	17PE23	Electromagnetic Interference and Compatibility
6	17PE24	Instrumentation in Electric Drives

Note: Students are required to choose two/one courses as Programme Elective- III & IV, depending on the add-on-courses opted in Semester I & II.

****

HOD of Electrical and Electronics Engg.
Lakireddy Bali Reddy College of Engg
MYLAVARAM-521230, Krishna Dt. A.P

M.Tech.(TE), R17 Course Structure (Choice Based Credit System)

I SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17TE01	Advanced Thermodynamics	3	-	-	3	3	40	60	100
2	17TE02	Advanced Heat and Mass Transfer	3	-	-	3	3	40	60	100
3	17TE03	Internal Combustion Engines and Pollution	3	-	-	3	3	40	60	100
4	PE-I	Programme Elective –I	3	-	-	3	3	40	60	100
5	PE-II	Programme Elective –II	3	-	-	3	3	40	60	100
6	17TE60	Thermal Systems Lab	-	-	2	2	1	40	60	100
7	17TE61	Simulation Lab	-	-	2	2	1	40	60	100
8	17TE50	Technical Seminar	-	-	2	2	1	100	--	100
10	17TE90	**Add-on-Course-1** Thermal and Nuclear Power Plant Engineering	3	-	-	3	3	40	60	100
		Total	**15/ 18**	**-**	**6**	**21/ 24***	**18/21***	**380/ 420***	**420/ 480***	**800/ 900***

***With inclusion of Add on course**

II SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17TE10	Computational Fluid Dynamics	3	-	-	3	3	40	60	100
2	17TE11	Renewable Energy Technology	3	-	-	3	3	40	60	100
3	17TE12	Design of Thermal Systems	3	-	-	3	3	40	60	100
4	PE-III	Programme Elective –III	3	-	-	3	3	40	60	100
5	PE-IV	Programme Elective –IV	3	-	-	3	3	40	60	100
6	17TE62	Renewable Energy Technology Lab	-	-	2	2	1	40	60	100
7	17TE63	Computational Methods Lab	-	-	2	2	1	40	60	100
8	17TE51	Mini Project	-	-	2	2	1	100	--	100
10	17TE91	**Add-on-Course-2** Fuels, Combustion and Environment	3	-	-	3	3	40	60	100
		Total	**15/ 18***	**-**	**6**	**21/ 24***	**18/ 21***	**380/ 420***	**420/ 480***	**800/ 900***

***With inclusion of Add on course**

HEAD
Dept.of Mechanical Engineering
LAKIREDDY BALI REDDY COLLEGE OF ENGG
MYLAVARAM-521 230, Krishna Dt, A.P.

III SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	PE-V	Programme Elective -V	3	-	-	3	3	40	60	100
2	PE-VI	Programme Elective -VI	3	-	-	3	3	40	60	100
3	17TE52	Internship	-	-	-	-	2	100	--	100
4	17TE53	Project Work (Phase-I)	-	-	20	20	10	40	60	100
		Total	**6**	**-**	**20**	**26**	**12/15/18**	**220**	**180**	**400**

IV SEMESTER

S. No	Course Code	Course Title	Contact hours/week				Credits	Scheme of Valuation		
			L	T	P	Total		CIE	SEE	Total
1	17TE54	Project Work (Phase-II)	-	-	32	32	16	40	60	100
2	17TE55	Comprehensive Viva Voce	-	-	4	4	2	100	--	100
		Total	**-**	**-**	**36**	**36**	**18**	**140**	**60**	**200**

List of courses for Programme Elective- I & II

S.No	Course Code	Course Title
1	17TE04	Solar Energy
2	17TE05	Turbo Machines
3	17TE06	Statistical Analysis and Design of Experiments
4	17TE07	Advanced Fluid Mechanics
5	17TE08	Finite Element Methods in Thermal engineering
6	17TE09	Nano Technology

Note: Students are required to choose any two courses as Programme Elective- I & II

List of courses for Programme Elective- III& IV

S.No	Course Code	Course Title
1	17TE13	Optimization Methods in Engineering
2	17TE14	Jet and Rocket Propulsion
3	17TE15	Gas Turbine Theory
4	17TE16	Refrigeration and Cryogenics
5	17TE17	Measurements in Thermal Engineering
6	17TE18	Fuel Cell Technology

Note: Students are required to choose any two courses as Programme Elective- III & IV.

List of courses for Programme Elective- V & VI

S.No	Course Code	Course Title
1	17TE19	Waste Heat Recovery Systems
2	17TE20	Convective Heat and mass transfer
3	17TE21	Heating, Ventilating and Air-conditioning
4	17TE22	Energy Conservation and Management
5	17TE23	Radiative Heat Transfer
6	17TE24	Two Phase Flow and Heat Transfer

Note: Students are required to choose two/one courses as Programme Elective- III & IV , depending on the add-on-courses opted in Semester I & II.

LBRCE EXAM CELL

HEAD
Dept.of Mechanical Engineering
LAKIREDDY BALI REDDY COLLEGE OF ENGG
MYLAVARAM - 521 230, Krishna Dt, A.P.

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

Lakireddy Bali Reddy College of Engineering is promoted and established in the year 1998 by Lakireddy Bali Reddy Charitable Trust whose architect is Sri Lakireddy Bali Reddy garu ably supported by his brother Lakireddy Jaya Prakash Reddy garu with intense desire to provide world class educational opportunities in Science, Engineering, Technology and Management to the students of this region and elsewhere. The institution over a period of time has undergone huge transformation quantitatively and qualitatively. Now the institution offers 8 B.Tech programmes in CSE, IT, ECE, EEE, ME, CE, ASE & EIE, 5 M.Tech programmes in Computer Science and Engineering, Thermal Engineering, Software Engineering, Power Electronics and Drives & Systems and Signal Processing, M.B.A and M.C.A programmes. The state-of-the art laboratories, workshops, computer centers, seminar halls, lecture halls, drawing halls for all the departments and a world class library are provided in the college. A well qualified and experienced faculty guide the students in all theoretical and practical aspects of all courses. The institution is AUTONOMOUS as approved by UGC, New Delhi, accredited by NAAC & NBA and is ISO:2001-2008 certified. The institution is located at Mylavaram in Krishna District and 40 KM away from Vijayawada on Bhadrachalam highway and 35 KM from the Gannavaram air port.

VISION

To empower the students to become technologically vibrant, innovative and emotionally matured and to train them to face the challenges of the quality conscious globalized world economy.

MISSION

- To provide an environment most conducive to learning and to create a stimulating intellectual atmosphere on the campus.
- To achieve Academic Excellence.
- To ensure a holistic development of personality.
- To spread education to rural areas.
- To establish partnership between Institution & Industry.

ACADEMIC REGULATIONS (R14) FOR B.Tech. (REGULAR)

Applicable to the students of B.Tech. (Regular) course admitted from the Academic Year 2014-15.

1. Award of B.Tech. Degree

A student will be declared eligible for the award of B.Tech. Degree if he/she fulfills the following academic regulations:

I A student shall be declared eligible for the award of the B.Tech. Degree, if he/she pursues a course of study in not less than four academic years and not more than eight academic years

II The candidate shall register for 182 credits and secure all the 182 credits.

2. Course of study

The following courses of study are offered in the college at present for the B.Tech. programs.

S.No	Branch
1	Aerospace Engineering
2	Civil Engineering
3	Computer Science and Engineering
4	Electronics and Communication Engineering
5	Electrical and Electronics Engineering
6	Electronics and Instrumentation Engineering
7	Information Technology
8	Mechanical Engineering

3. Distribution and Weightage of Marks

(i) In each semester, the course of study consists of 5 or 6 theory subjects and 2 to 4 laboratories. However, in the VIII semester, there shall be only 3 theory subjects in addition to the project work and comprehensive viva-voce.

(ii) The performance of the students in each semester shall be evaluated subject wise for a maximum of 100 marks for theory and 75 marks for practical subjects. In addition, seminar, mini project, internship, project work and comprehensive viva shall be evaluated for 75, 75, 75, 200 and 75 marks respectively.

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)

VII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S405	Theory of Vibrations	4+1		3	25	75	100
2	S329	Operations Research	4+1		3	25	75	100
3	S275	Instrumentation, Measurements and Experiments in Fluids	4+1		3	25	75	100
4	S281	Introduction to Computational Fluid Dynamics	4+1		3	25	75	100
		Program Elective-III						
5	S149	Boundary Layer Theory	4+1		3	25	75	100
	S358	Propellant Technology						
	S124	Airframe Repair and Maintenance						
	S387	Space Mechanics						
		Open Elective-I						
6	S154	CAD/CAM	4+1		3	25	75	100
	S289	Linear Control Systems						
	S372	Robotics						
	S180	Database Management Systems						
7	L102	Aircraft Component Modeling and Analysis Lab.		3	2	25	50	75
8	L103	Aircraft Design Lab.		3	2	25	50	75
9	L153	Internship			2	75	--	75
		Total			**24**	**275**	**550**	**825**

VIII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S349	Principles of Management	4+1		3	25	75	100
2		**Program Elective-IV**	4+1		3	25	75	100
	S287	Launch Vehicle Aerodynamics						
	S106	Advanced Propulsion Systems						
	S416	Virtual Instrumentation						
	S115	Aero Engine Repair and Maintenance						
3		**Open Elective-II**	4+1		3	25	75	100
	S376	Satellite Technology						
	S311	Micro Electro Mechanical Systems						
	S319	Nano Technology						
	S325	Object Oriented Programming using Java						
4	L157	Main Project		3	9	50	150	200
5	L121	Comprehensive Viva-voce			2	75	--	75
		Total			20	200	375	575

Note: A few courses as notified in the respective departments are offered to the students on electives under Massive Open Online Courses (MOOCs).

VII-SEMESTER

S. No	Subject Code	Name of the Subject	Contact Hours/ Week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S244	Estimation and Quantity Surveying	4+1		3	25	75	100
2	S348	Prestressed Concrete Structures	4+1		3	25	75	100
3	S184	Design of Reinforced Concrete Structures - II	4+1		3	25	75	100
4		**Program Elective – III**	4+1		3	25	75	100
	S432	Environmental Pollution Control						
	S258	Ground Improvement Techniques						
	S439	Traffic Engineering and Transport Planning						
5	S172	Construction Management	4+1		3	25	75	100
6		**Open Elective – I**	4+1		3	25	75	100
	S196	Disaster Management						
	S424	Watershed Management						
	S369	Remote Sensing and Geographical Information System						
7	L122	Computer Aided Analysis and Design Lab		3	2	25	50	75
8	L151	Highway and Concrete Technology Lab		3	2	25	50	75
9	L153	Internship			2	75		75
		TOTAL			**24**	**275**	**550**	**825**

VIII – SEMESTER

S. No	Subject Code	Name of the Subject	Contact Hours/ Week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1		**Program Elective –IV**	4+1		3	25	75	100
	S111	Advanced Structural Design						
	S430	Advanced Foundation Engineering						
	S438	Rural Road Technology						
2	S338	Pavement Analysis and Design Engineering	4+1		3	25	75	100
3		**Open Elective – II**	4+1		3	25	75	100
	S433	Green Buildings						
	S151	Building Technology						
	S436	Modern Construction Systems and Techniques						
4	L157	Main Project		3	9	50	150	200
5	L121	Comprehensive Viva-voce			2	75		75
		TOTAL			**20**	**200**	**375**	**575**

Note: A few courses as notified in the respective departments are offered to the students on electives under Massive Open Online Courses (MOOCs).

VII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S177	Data Mining and Data Warehousing	4+1		3	25	75	100
2	S316	Mobile Computing	4+1		3	25	75	100
3	S186	Design Patterns	4+1		3	25	75	100
4	S153	C# and NETProgramming	4+1		3	25	75	100
5		**Program Elective-III**	4+1		3	25	75	100
	S383	Software TestingMethodologies						
	S205	E-Commerce						
	S315	Middleware Technologies						
	S326	Object Oriented Software Engineering						
		Open Elective-I	4+1		3	25	75	100
	S249	Fault Tolerant Systems						
	S270	Industrial Management						
	S397	System Modeling and Simulation						
	S417	Virtual Reality						
6	L165	Mobile Computing Lab		3	2	25	50	75
7	L116	C# and NET Programming Lab		3	2	25	50	75
8	L153	Internship			2	75		75
		Total			**24**	**275**	**550**	**825**

VIII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S329	Operations Research	4+1		3	25	75	100
2		**Program Elective-IV**	4+1		3	25	75	100
	S157	Cloud Computing						
	S377	Service Oriented Architecture						
	S228	Embedded Systems						
	S322	Neural Networks and Fuzzy Logic						
3		**Open Elective-IV**	4+1		3	25	75	100
	S296	Managing Innovation and Entrepreneurship						
	S332	Optimization Techniques						
	S373	Robotics and Automation						
	S241	Enterprise Information Systems						
4	L157	Main Project		3	9	50	150	200
5	L121	Comprehensive viva-voce			2	75		75
		Total			**20**	**200**	**375**	**575**

VII SEMESTER

S.No	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S270	Industrial Management	4+1		3	25	75	100
2	S314	Microwave Engineering	4+1		3	25	75	100
3	S330	Optical Communications	4+1		3	25	75	100
4	S155	Cellular and Mobile Communications	4+1		3	25	75	100
5		**Program Elective-III**	4+1		3	25	75	100
	S318	Nano Electronics						
	S356	Programmable Logic Devices						
	S193	Digital Signal Processors						
	S389	Spread Spectrum Communications						
6		**Open Elective-I**	4+1		3	25	75	100
	S173	Consumer Electronics						
	S168	Computer Networks						
	S322	Neural Networks and Fuzzy Logic						
	S327	Operating Systems						
7	L132	Digital System Design Lab		3	2	25	50	75
8	L163	Microwave and Optical Communications Lab		3	2	25	50	75
9	L153	Internship			2	75		75
		Total			**24**	**275**	**550**	**825**

VIII SEMESTER

S.No	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S362	Radar Systems	4+1		3	25	75	100
2		**Program Elective-IV**	4+1		3	25	75	100
	S375	Satellite Communications						
	S316	Mobile Computing						
	S366	Real Time Operating Systems						
	S426	Wireless Sensor Networks						
3		**Open Elective-II**	4+1		3	25	75	100
	S140	Automobile Electronics						
	S246	Evolutionary Computing Techniques						
	S371	Robot Engineering						
	S425	Web Technologies						
4	L157	Main Project			9	50	150	200
5	L121	Comprehensive Viva-Voce			2	75		75
		Total			**20**	**200**	**375**	**575**

Note: A few course as notified in the respective departments are offered to the students on electives under Massive Open Online Courses (MOOCs).

VII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S270	Industrial Management	4+1		3	25	75	100
2	S346	Power System Operation and Control	4+1		3	25	75	100
3	S385	Solid State Drives	4+1		3	25	75	100
4	S347	Power System Protection	4+1		3	25	75	100
5		**Program Elective-III**	4+1		3	25	75	100
	S419	VLSI Design						
	S188	Digital Control Systems						
	S218	Electrical Power Quality						
	S379	Smart Grid						
6		**Open Elective-I**	4+1		3	25	75	100
	S168	Computer Networks						
	S295	Managerial Economics and Financial Analysis						
	S381	Software Engineering						
	S324	Object Oriented Programming through C++						
7	L119	Communication and Presentation Skills lab		3	2	25	50	75
8	L170	Power Systems Lab		3	2	25	50	75
9	L153	Internship			2	75	--	75
		Total			24	275	550	825

VIII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S230	Energy Conservation and Audit	4+1		3	25	75	100
2		**Program Elective-IV**	4+1		3	25	75	100
	S263	HVDC Transmission						
	S221	Electrical Tractions						
	S229	Embedded Systems Design						
	S248	FACTS Controllers						
3		**Open Elective-II**	4+1		3	25	75	100
	S196	Disaster Management						
	S373	Robotics and Automation						
	S357	Project Management						
	S180	Database Management Systems						
4	L157	Main Project		3	9	50	150	200
5	L121	Comprehensive Viva-voce			2	75	--	75
		Total			20	200	375	575

LBRCE EXAMINATION SECTION

HEAD
Dept. of Electrical and Electronics Engg
Lakireddy Bali Reddy College of Engineering

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)

VII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S313	Micro Processors and Microcontrollers	4+1		3	25	75	100
2	S419	VLSI Design	4+1		3	25	75	100
3	S148	Bio Medical Instrumentation	4+1		3	25	75	100
4		**Program Elective-III**	4+1		3	25	75	100
	S344	Power Plant Instrumentation						
	S202	DSP Processors and Architectures						
	S236	Engineering Materials						
	S373	Robotics and Automation						
5		**Open Elective-I**	4+1		3	25	75	100
	S319	Nano Technology						
	S388	Space Sciences						
	S332	Optimization Techniques						
	S270	Industrial Management						
6	S340	PLC and SCADA	4+1		3	25	75	100
7	L161	Micro Processors and Microcontrollers Lab		3	2	25	50	75
8	L168	PLC and Bio Medical Instrumentation Lab		3	2	25	50	75
9	L153	Internship			2	75	--	75
		Total			**24**	**275**	**550**	**825**

VIII SEMESTER

S. No.	Subject code	Name of the Subject	Contact hours/week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal (CIE)	External (SEE)	
1	S311	Micro Electro Mechanical Systems	4+1		3	25	75	100
2		**Program Elective-IV**	4+1		3	25	75	100
	S229	Embedded Systems Design						
	S107	Advanced Sensors						
	S399	Telemetry and Tele Medicine						
	S380	Soft Computing Techniques						
3		**Open Elective-II**	4+1		3	25	75	100
	S370	Renewable Energy Sources						
	S196	Disaster Management						
	S157	Cloud Computing						
	S180	Data Base Management Systems						
4	L157	Main Project		3	9	50	150	200
5	L121	Comprehensive Viva-voce			2	75	--	75
		Total	**15**	**3**	**20**	**200**	**375**	**575**

Note: A few course as notified in the respective departments are offered to the students on electives under Massive Open Online Courses (MOOCs).

VII-SEMESTER

S. No	Subject Code	Name of the Subject	Contact Hours/Week		Credits	Scheme of Evaluation		Total
			L+T	P		Internal (CIE)	External (SEE)	
1	S175	Cryptography and Network Security	4+1		3	25	75	100
2	S157	Cloud Computing	4+1		3	25	75	100
3	S130	Android Application Development	4+1		3	25	75	100
4	S186	Design Patterns	4+1		3	25	75	100
5		**Program Elective - III**	4+1		3	25	75	100
	S102	Ad-Hoc Networks						
	S382	Software Project Management						
	S337	Pattern Recognition						
	S166	Computational Geometry						
6		**Open Elective - I**	4+1		3	25	75	100
	S142	Banking Operations						
	S276	Insurance Operations						
	S395	Supply Chain Management						
	S101	Actuarial Sciences and Risk Management						
7	L118	Cloud Computing and Information Security Lab.		3	2	25	50	75
8	L110	Android Applications lab.		3	2	25	50	75
9	L153	Internship			2	75		75
		Total			**24**	**275**	**550**	**825**

VIII-SEMESTER

S. No	Subject Code	Name of the Subject	Contact Hours/Week		Credits	Scheme of Evaluation		Total
			L+T	P		Internal (CIE)	External (SEE)	
1	S270	Industrial Management	4+1		3	25	75	100
2		**Program Elective-IV**	4+1		3	25	75	100
	S316	Mobile Computing						
	S326	Object Oriented Software Engineering						
	S320	Natural Language Processing						
	S249	Fault Tolerant Systems						
3		**Open Elective-II**	4+1		3	25	75	100
	S328	Operations Management						
	S329	Operations Research						
	S370	Renewable Energy Sources						
	S254	Fuzzy Logic						
4	L121	Comprehensive Viva-voce		3	2	75		75
5	L157	Main Project		3	9	50	150	200
		Total			**20**	**200**	**375**	**575**

Note: A few course as notified in the respective departments are offered to the students on electives under Massive Open Online Courses (MOOCs).

VII – SEMESTER

S. No	Subject Code	Name of the Subject	Contact hours/ week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal	External	
1	S250	Finite Element Method	4+1	- -	3	25	75	100
2	S154	CAD/CAM	4	- -	3	25	75	100
3	S367	Refrigeration and Air Conditioning	4+1	- -	3	25	75	100
4	S310	Metrology and Instrumentation	4	- -	3	25	75	100
5		**PROGRAM ELECTIVE – III**	4	- -	3	25	75	100
	S303	Mechanics of Composites						
	S231	Energy Conservation and Management						
	S138	Automation in Manufacturing						
	S331	Optimization Methods and Applications						
6		**OPEN ELECTIVE – I**	4	- -	3	25	75	100
	S319	Nano Technology						
	S311	Micro Electro Mechanical Systems						
	S370	Renewable Energy Sources						
	S357	Project Management						
7	L117	CAD/CAM Lab	--	3	2	25	50	75
8	L160	Metrology and Instrumentation Lab	--	3	2	25	50	75
9	L153	Internship	--	2	2	75		75
		TOTAL			**24**	**275**	**550**	**825**

VIII – SEMESTER

S. No	Subject Code	Name of the Subject	Contact hours/ week		Credits	Scheme of Valuation		Total Marks
			L+T	P		Internal	External	
1	S343	Power Plant Engineering	4	--	3	25	75	100
2		**PROGRAM ELECTIVE – IV**	4		3	25	75	100
	S109	Advanced Strength of Materials						
	S165	Computational Fluid Dynamics						
	S365	Rapid Prototyping						
	S353	Production Planning and Control						
3		**OPEN ELECTIVE – II**	4	--	3	25	75	100
	S158	Cognitive Engineering						
	S306	Mechatronics						
	S273	Innovation and Entrepreneurship						
	S409	Total Quality Management						
4	L121	Comprehensive Viva voce	-	3	2	75		75
5	L157	Main Project	-	8	9	50	150	200
		TOTAL			**20**	**200**	**375**	**575**

Note: A few courses as notified in the respective departments are offered to the students on electives under Massive Open Online Courses (MOOCs).