

GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)

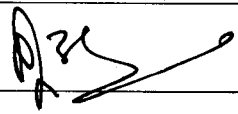

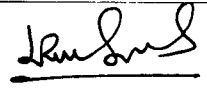
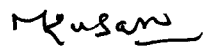

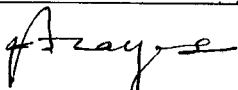
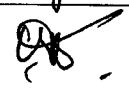
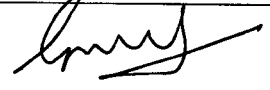
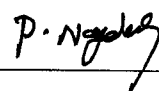

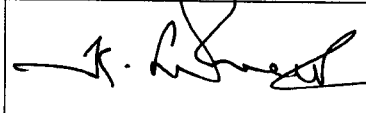
Seshadri Rao Knowledge Village

Gudlavalleru – 521 356, Krishna District, Andhra Pradesh

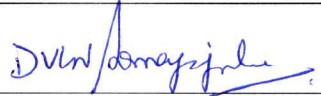

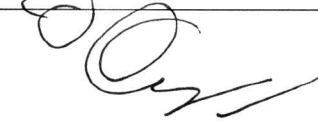




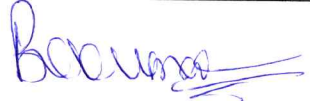
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The Tenth Meeting of Academic Council of Gudlavalleru Engineering College (Autonomous), Seshadri Rao Knowledge Village, Gudlavalleru is held today i.e. 09-06-2018 (Saturday) at 10-00 AM in the Management's Conference Hall of the college under the Chairmanship of Dr. P. Ravindra Babu, Principal of the College.

MEMBERS PRESENT:

Sl. No.	Name of the Member	Designation	Signature
1	Dr. P. Ravindra Babu Principal	Chairman	
2	Dr. P. Kodanda Rama Rao Professor & HoD of CE	Member	
3	Dr. L. Ravi Srinivas Professor & HoD of EEE	Member	
4	Dr. M. R. Ch. Sastry Professor & HoD of ME	Member	
5	Dr. V. V. K. D. V. Prasad Professor & HoD of ECE	Member	
6	Dr. S. Narayana Professor & HoD of CSE	Member	
7	Dr. Ch. Kavitha Professor & HoD of IT	Member	
8	Dr. Ch. Nirmal Chand Professor & HoD of MBA	Member	Could not attend
9	Dr. G. S. Bhaskara Rao Professor of Mathematics & HoD of BS&H	Member	
10	Dr. M. Vijaya Lakshmi Associate Professor & HoD of English	Member	Could not attend
11	Dr. P. Nageswara Reddy Professor of ME & Director (AS&A)	Member	
12	Mrs. Ch. Sujatha Associate Professor of EEE	Member	Could not attend
13	Mr. A. H. L. Swarup Sr.Gr.Asst.Professor of CE	Member	
14	Dr. K. Lal Kishore Director, R&D, CVR College of Engg., Hyderabad Former Vice – Chancellor, JNTUA, Ananthapur, Former Rector, JNTUH, Hyderabad	Member	

(Contd.....2)

15	Dr. D. V. L. N. Somayajulu Professor of CSE, NIT, Warrangal	Member	
16	Dr. B. G. Barki Professor of Education & Former Director of NITTTR, Chennai	Member	could not attend
17	Dr. Parimi S.R. Professor of Civil Engineering and Structural Engg. Consultant, Vijayawada,	Member	
18	Dr. Ramanujam Parthasarathy Professor of English, G3, Sreeja Apartments, Srinivasa Nagar Bank Colony, Vijayawada.	Member	
19	Mr. J. S. R. K. Prasad CEO, Better Castings Pvt. Limited, JRD Tata Industrial Estate, Gantivari Street, Christurajapuram, Kanuru, Vijayawada – 520 007.	Member	
20	Mr. Jaya Rama Krishna Nutulapati Client Partner & Principal Consultant, Tata Consultancy Services, Hyderabad,	Member	
21	Dr. Ch. Satyanarayana Professor of CSE and Director, Academics & Planning, JNTUK, Kakinada	Member	could not attend
22	Prof. P. Subba Rao Professor of Civil Engineering, Director of Evaluation, JNTUK, Kakinada.	Member	
23	Dr. G. Abbaiah Professor of Civil Engineering, University College of Engineering, JNTUK, Kakinada.	Member	
24	Dr. B. Karuna Kumar Professor of ME and Vice Principal - Administration	Member Secretary	

GUDLAVALLERU ENGINEERING COLLEGE

Seshadri Rao Knowledge Village, GUDLAVALLERU – 521 356

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Minutes of the Tenth Meeting of the Academic Council held on 09-06-2018, Saturday, in the Management Conference Hall.

10.1 To confirm the minutes of the last Meeting of the Academic Council held on 19-05-2017.

Resolution : The Minutes of the 9th Academic Council meeting held on 19-05-2017 have been confirmed.

10.2 To discuss and approve the R17 Academic Regulations revised, in view of the recommendations made by the AICTE, New Delhi.

Resolution : It is resolved that the following revised R17 academic regulations are approved.

A) Program Credits:

- a. Each discipline of the B.Tech program is designed to have a total of **160** credits and the student shall have to complete the four-year course work and earn all the **160** credits for the award of the B.Tech Degree.
- b. Students joining the B.Tech program into the II year 1st semester directly through Lateral Entry (LE) Scheme shall have to complete the three-year course work and earn **120** credits for the award of the B.Tech degree.
- c. Students may register for optional elective courses beyond 160 (120 for Lateral Entry) credits for a maximum of 20 credits from II year 1st semester to IV year 1st semester, five credits in each semester, subject to the condition that there shall not be any backlogs up to the previous semester with a CGPA of not less than 7.5. Optional elective courses shall be treated as self-study courses, but performance in optional elective courses shall not be taken into account in calculating the SGPA.

B) Makeup Examinations:

No Makeup examinations shall be conducted.

The approved Academic Regulations are given as Annexure – I.

10.3 To discuss and finalize the course structures of II, III & IV B.Tech UG programs of R17 regulations, in view of the recommendations made by the AICTE, New Delhi.

Resolution : It is resolved that the course structures of II, III & IV B.Tech to be effective from the academic year 2018-19 are approved. The approved courses are given as Annexure – II.

It is also resolved that the Syllabi of II, III & IV B.Tech to be effective from the academic year 2018-19 are approved.

10.4 Any other matter with the permission of the Chair.

i) To review the semester end examination results.

The Academic Council reviewed and ratified the First & Second Semesters End Examinations results for the academic year 2017-18.

UG – B.Tech Programs:

I B.Tech 2nd Semester (R14) (2016 Admitted) Regular Examinations, May 2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	140	136	97	39	69.29	71.32
Electrical and Electronics Engineering	127	126	95	31	74.80	75.40
Mechanical Engineering	157	154	101	53	64.33	65.58
Electronics and Communication Engineering	235	235	201	34	85.53	85.53
Computer Science and Engineering	239	237	188	49	78.66	79.32
Information Technology	112	109	75	34	66.96	68.81
Overall Pass Percentage	1010	997	757	240	74.95	75.93

I B.Tech 1st Semester (R17) (2017 Admitted) Regular Examinations, Dec.2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	143	142	90	52	62.94	63.38
Electrical and Electronics Engineering	121	121	81	40	66.94	66.94
Mechanical Engineering	148	147	93	54	62.84	63.27
Electronics and Communication Engineering	232	230	204	26	87.93	88.70
Computer Science and Engineering	232	232	190	42	81.90	81.90
Information Technology	111	111	75	36	67.57	67.57
Overall Pass Percentage	987	983	733	250	74.27	74.57

I B.Tech 2nd Semester (R17) (2017 Admitted) Regular Examinations, April 2018

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	140	139	83	56	59.29	59.71
Electrical and Electronics Engineering	120	117	78	39	65.00	66.67
Mechanical Engineering	147	140	89	51	60.54	63.57
Electronics and Communication Engineering	233	232	185	47	79.40	79.74
Computer Science and Engineering	234	233	186	47	79.49	79.83
Information Technology	111	109	70	39	63.06	64.22
Overall Pass Percentage	985	970	691	279	70.15	71.24

II B.Tech 1st Semester (R14) (2016 Admitted) Regular Examinations, Nov. 2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	196	194	134	60	68.37	69.07
Electrical and Electronics Engineering	183	181	113	68	61.75	62.43
Mechanical Engineering	212	211	110	101	51.89	52.13
Electronics and Communication Engineering	282	280	217	63	76.95	77.50
Computer Science and Engineering	264	262	211	51	79.92	80.53
Information Technology	110	110	71	39	64.55	64.55
Overall Pass Percentage	1247	1238	856	382	68.64	69.14

II B.Tech 2nd Semester (R14) (2016 Admitted) Regular Examinations, April 2018

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	193	191	111	80	57.51	58.12
Electrical and Electronics Engineering	182	175	100	75	54.95	57.14
Mechanical Engineering	210	207	123	84	58.57	59.42
Electronics and Communication Engineering	281	273	200	73	71.17	73.26
Computer Science and Engineering	262	259	198	61	75.57	76.45
Information Technology	109	108	78	30	71.56	72.22
Overall Pass Percentage	1237	1213	810	403	65.48	66.78

III B.Tech 1st Semester (R14) (2015 Admitted) Regular Examinations, Nov. 2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	206	204	159	45	77.18	77.94
Electrical and Electronics Engineering	204	203	174	29	85.29	85.71
Mechanical Engineering	211	207	156	51	73.93	75.36
Electronics and Communication Engineering	281	278	232	46	82.56	83.45
Computer Science and Engineering	274	273	256	17	93.43	93.77
Information Technology	107	107	101	6	94.39	94.39
Overall Pass Percentage	1283	1272	1078	194	84.02	84.75

III B.Tech 2nd Semester (R14) (2015 Admitted) Regular Examinations, April 2018

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	208	205	176	29	84.62	85.85
Electrical and Electronics Engineering	204	203	175	28	85.78	86.21
Mechanical Engineering	210	205	164	41	78.10	80.00
Electronics and Communication Engineering	277	274	232	42	83.75	84.67
Computer Science and Engineering	273	271	243	28	89.01	89.67
Information Technology	107	107	95	12	88.79	88.79
Overall Pass Percentage	1279	1265	1085	180	84.83	85.77

IV B.Tech 1st Semester (R14) (2014 Admitted) Regular Examinations, Nov. 2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	196	195	182	13	92.86	93.33
Electrical and Electronics Engineering	162	162	146	16	90.12	90.12
Mechanical Engineering	200	197	172	25	86.00	87.31
Electronics and Communication Engineering	264	264	242	22	91.67	91.67
Computer Science and Engineering	197	196	180	16	91.37	91.84
Information Technology	96	94	89	5	92.71	94.68
Overall Pass Percentage	1115	1108	1011	97	90.67	91.25

IV B.Tech 2nd Semester (R14) (2014 Admitted) Regular Examinations, April 2018

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Civil Engineering	196	195	193	2	98.47	98.47
Electrical and Electronics Engineering	162	160	158	2	97.53	98.75
Mechanical Engineering	200	197	194	3	97.00	98.48
Electronics and Communication Engineering	264	262	256	6	96.97	97.71
Computer Science and Engineering	196	195	190	5	96.94	97.44
Information Technology	96	96	94	2	97.92	97.92
Overall Pass Percentage	1114	1105	1085	20	97.40	98.19

PG – M.Tech & MBA Programs:

M.Tech I Semester (R17) (2017 Admitted) Regular Examinations, February 2018

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Structural Engineering	19	19	19	0	100.00	100.00
Power Electronics and Electric Drives	8	8	5	3	62.50	62.50
Machine Design	13	13	12	1	92.31	92.31
Embedded Systems	10	10	8	2	80.00	80.00
Computer Science and Engineering	11	10	7	3	63.64	70.00
Overall Pass Percentage	61	60	51	9	83.61	85.00

M.Tech II Semester (R14) (2016 Admitted) Regular Examinations, July 2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Structural Engineering	16	16	14	2	87.50	87.50
Power Electronics and Electric Drives	10	10	8	2	80.00	80.00
Machine Design	12	12	12	0	100.00	100.00
Digital Electronics and Communication Systems	8	8	6	2	75.00	75.00
Embedded Systems	11	11	10	1	90.91	90.91
Computer Science and Engineering	8	8	8	0	100.00	100.00
Overall Pass Percentage	65	65	58	7	89.23	89.23

M.Tech III Semester (R14) (2016 Admitted) Regular Examinations, Dec. 2017

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
Structural Engineering	16	16	16	0	100.00	100.00
Power Electronics and Electric Drives	10	10	9	1	90.00	90.00
Machine Design	12	12	12	0	100.00	100.00
Digital Electronics and Communication Systems	8	8	8	0	100.00	100.00
Embedded Systems	11	11	10	1	90.91	90.91
Computer Science and Engineering	8	8	8	0	100.00	100.00
Overall Pass Percentage	65	65	63	2	96.92	96.92

PG – MBA Programs:

MBA Regular Examinations Results Analysis

Subject	Reg.	App.	Passed	Failed	Reg. Pass %	App. Pass %
I Semester (R17) (2017 Admitted) Dec.2017	96	94	57	37	59.38	60.64
II Semester (R17) (2017 Admitted) May 2018	95	95	90	5	94.74	94.74
II Semester (R14) (2016 Admitted) July 2017	99	96	92	4	95.83	95.83
III Semester (R14) (2016 Admitted) Dec. 2017	96	96	95	1	98.96	98.96
IV Semester (R14) (2016 Admitted) May 2018	95	95	95	0	100.00	100.00
IV Semester (R14) (2015 Admitted) May 2017	96	95	95	0	98.96	100.00

- i) The Academic Council discussed the external examination pattern of UG B.Tech programs and resolved to implement the external examination question paper of six questions, one from each unit and with internal choice by dispensing with the Part A and Part B pattern of the existing system. The revised R17 Academic Regulations are given as Annexure – II.
- ii) The Academic Council discussed the provision recommended by the AICTE to award a UG degree with Honours or additional Minor Engineering to the student who completes an additional 20 credits beyond the prescribed number of credits and resolved to make a representation to JNTUK, Kakinada, to recognize the interest and effort of the students who have earned 20 additional credits, by awarding them B.Tech (Honours) degree.
- iii) The Academic Council resolved to communicate the Academic Calendar and examination results to JNTUK, Kakinda, as per the time line.



Annexure – I

Academic Regulations (Revised) (R17)

I. INTRODUCTION

The college was established in the year 1998 and is presently offering six UG-B.Tech programs with a total intake of 1140 and six PG-M.Tech programs with a total intake of 120 besides PG – MBA with an intake of 120. The college is permanently affiliated to JNTUK, Kakinada and accredited by NAAC with 'A' Grade in the year 2016. All the six B.Tech programs have been accreted by NBA, CSE for five years with effect from 05-08-2013 and CE, EEE, ME, ECE & IT for three academic years respectively 2016-17, 2017-18 & 2018-19 i.e., up to 30-06-2019. All these programs except Civil Engineering were earlier accredited by NBA twice. UGC, New Delhi has conferred Autonomous status on the college for a period of six years from the academic year 2014-15.

Academic programs of the College are governed by the rules and regulations as approved by the Academic Council, which is the highest academic body of the College. R14 academic regulations have been in force from the academic year 2014-15. The revised academic regulations (R17) will be effective for the batches of students admitted into the four year undergraduate B.Tech programs and the two year Post Graduate M.Tech & MBA programs offered by the college from the academic year 2017-18 and henceforth until these regulations are revised.

II. PROGRAMS OFFERED

UG – B.Tech Programs:

1. Civil Engineering (CE)
2. Electrical and Electronics Engineering (EEE)
3. Mechanical Engineering (ME)
4. Electronics and Communication Engineering (ECE)
5. Computer Science and Engineering (CSE)
6. Information Technology (IT)

PG – M.Tech Programs:

1. Structural Engineering (CE)
2. Power Electronics and Electric Drives (EEE)
3. Machine Design (ME)
4. Embedded Systems (ECE)
5. Computer Science and Engineering (CSE)

PG – MBA: Master of Business Administration

III. B.Tech Programs

1. Duration of the Program

The duration of the program is four academic years consisting of eight semesters. However, a student is permitted to complete the course work of B.Tech program in the stipulated time frame of **EIGHT** years from the date of joining. Students admitted into II year 1st semester of B.Tech program directly, through Lateral Entry (LE), shall have to complete the course work of B.Tech program in the stipulated time frame of **SIX** years from the date of joining.

2. Minimum Instruction Days

Each semester consists of a minimum of ninety instruction days.

3. Eligibility Criteria for Admission

The eligibility criteria for admission into first year of B.Tech Degree programs shall be as mentioned below:

- i) The candidate shall be an Indian National.
- ii) The candidate should have passed the qualifying examination Intermediate or equivalent with Mathematics, Physics and Chemistry as optional subjects or any equivalent examination recognized by JNTUK, Kakinada on the date of admission.
- iii) Seats in each program are classified into **Category-A** (70% of intake) and **Category-B** (30% of intake).

3.1 Category - A Seats:

These seats shall be filled by the Convener, EAMCET admissions based on the ranks in EAMCET examination.

3.2 Category - B Seats:

These seats shall be filled by the College as per the guidelines of Andhra Pradesh State Council of Higher Education.

3.3 Lateral Entry Seats:

Additional seats of 20% of the sanctioned intake in each discipline shall be filled up in the third semester directly by candidates with Diploma Qualification based on the rank secured in Engineering Common Entrance Test (ECET (FDH)) in accordance with the instructions received from the Convener, ECET and Government of Andhra Pradesh.

4. Course Structure

The course structure of B.Tech programs has been designed as per the guidelines of AICTE & UGC, New Delhi by providing more choices to the students in the form of Open Electives, Professional Electives, Optional Electives and MOOCs with true spirit of implementing the Choice Based Credit System (CBCS).

4.1 Program Credits

- i) Each discipline of the B.Tech program is designed to have a total of **160** credits and the student shall have to complete the four year course work and earn all the **160** credits for the award of B.Tech Degree.
- ii) Students joining the B.Tech program into the II year 1st semester directly through Lateral Entry (LE) Scheme shall have to complete the three year course work and earn **120** credits for the award of B.Tech degree.
- iii) Students may register for optional elective courses beyond 160 (120 for Lateral Entry) credits for a maximum of 20 credits from II year 2nd semester to IV year 1st semester, five credits in each semester, subject to the condition that there shall not be any backlogs up to previous semester with CGPA not less than 7.5. Optional elective courses shall be treated on par with self study courses, but performance in optional elective courses shall not be included in calculating the SGPA.
- iv) Student shall register for a course only once in any semester in the entire program. He shall not register that course as open elective or optional elective or provisional elective further.
- v) Students with no backlogs up to III year 1st semester with CGPA not less than 7.5 may register for two professional elective courses offered in IV year 2nd semester in advance i.e. one in III year 2nd semester and another one in IV year 1st semester so as to have exclusive project work during the IV year 2nd semester.

4.2 Curricular Components

The curricular components of course structure of each discipline of the B.Tech programs is given in Table-4.1:

Table – 4.1 Curricular Components of B.Tech Programs

Sl. No.	Course Work-Subject Area	No. of credits	% of Total credits	% of credits as per UGC
1	Basic Sciences (BS)	21	13.13	15-20
2	Humanities and Social Sciences (HSS)	14	8.75	10-15
3	Engineering Sciences (ES)	26	16.25	10-20
4	Professional Core (PC)	55	34.37	25-35
5	Professional Electives (PE)	18	11.25	8-12
6	Open Electives (OE) & Self Study Course	12	7.50	5-10
7	Other (Project, Survey Camp, Term Paper, Internship, etc.)	14	8.75	8-10
8	Mandatory Non-Credit Courses	-	-	-

4.3 Course Code and Course Numbering Scheme

- i) Course code consists of Six characters.
- ii) The first and second characters are as described in table 4.2.

Table 4.2: First and second character description

First & Second Characters	Description
EG	Subjects offered by English Department
MA	Subjects offered by Mathematics Department
PH	Subjects offered by Physics Department
CH	Subjects offered by Chemistry Department
EN	Subjects offered by Environmental Studies Department
CE	Subjects offered by Civil Engineering Department
EE	Subjects offered by Electrical and Electronics Engg. Department
ME	Subjects offered by Mechanical Engineering Department
EC	Subjects offered by Electronics and Communication Engineering Department
CS	Subjects offered by Computer Science and Engineering Department
IT	Subjects offered by Information Technology Department
CT	Subjects offered by Computer Science and Engineering & Information Technology Departments
BA	Subjects offered by Business Administration Department

- iii) Third character is the numeral indicating the regulation, eg. '1' for 2014 regulations, '2' for 2017 regulations, etc.
- iv) The Fourth character is the numeral, '5' for UG programs and '9' for PG programs.
- v) Fifth and sixth characters represent the course number with two digits in the serial order of subjects offered by a department, '01', '02', '03' '11', '12' etc.

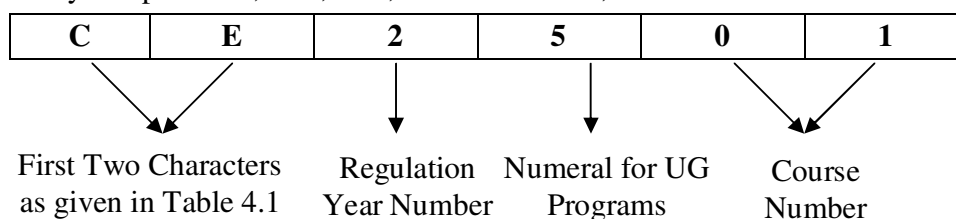


Figure 4.1: Course Code description

4.4 Credit Norms:

The Course Credits are broadly fixed based on the following norms.

- i) A theory course with two credits shall have three lecture periods.
- ii) A theory course with three credits shall have four lecture periods or three lecture periods and one tutorial / two practice periods or two lecture periods and three practice periods.
- iii) A theory course with four credits shall have four lecture periods and one tutorial / two practice periods.
- ii) Three or four credits for an integrated theory and laboratory course with four or three lecture periods and one or two practice periods.
- iii) One or Two credits for a laboratory course with two or four periods respectively.
- iv) Two credits for Internship / Industrial Training / Practical Training.
- v) One or two credits for Mini project / filed work / Survey Camp with two / four practice periods.
- vi) Ten credits for project work with 20 contact periods.

5. Medium of Instruction

The medium of instruction and examination is English.

6. Syllabus

As recommended by the Board of Studies concerned and approved by the Academic Council.

7. Attendance Regulations

- 7.1 A student shall be eligible to appear for Semester End Examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- 7.2 Condoning of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester will be considered for genuine reasons such as medical grounds and participation in co-curricular and extra-curricular activities and shall be granted only after approval by the College Academic Committee. The student should submit application for medical leave along with medical certificate from a registered medical practitioner within three days from reporting to the class work after the expiry of the Medical Leave. In case of participation in co-curricular and extra-curricular activities, either in the college or other colleges, students must take prior written permission from HoD concerned and should also submit the certificate of participation from the organizer of the event within three days after the completion of the event. Only such cases will be considered for condoning attendance shortage.
- 7.3 A student shall be eligible to claim for condonation of attendance shortage for a maximum of two times during the four year (eight semesters) course work of B.Tech / three year (six semesters) course work of B.Tech, Lateral Entry. However, additional one time condonation exclusively during IV Year shall be considered on genuine valid reasons.
- 7.4 A student will not be promoted to the next semester unless he satisfies the attendance requirement of the current semester. He may seek re-admission for that semester when offered next.
- 7.5 Shortage of Attendance below 65% in aggregate shall in *NO* case be condoned.
- 7.6 Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examination of that class and their registration shall stand cancelled.
- 7.7 A fee stipulated by the college shall be payable towards condonation of attendance shortage.
- 7.8 A student is required to put up a minimum of 75% of attendance in the mandatory non-credit courses such as Sports & Games/Cultural and Fine Arts/Yoga/Self Defense/NSS despite satisfactory performance / participation in the activities organized under each event for getting the satisfactory grade.

8. Examinations and Scheme of Evaluation

8.1 Theory / Electives (2 or 3 or 4 credits):

Each theory course shall be evaluated for a total of 100 marks, consisting of 40 marks for internal assessment and 60 marks for semester end examination.

Internal Assessment:

- i) Of 40 marks for internal assessment, 10 marks are for continuous assessment in the form of two quiz or subjective tests and 30 marks are based on two mid-term examinations. The first mid-term examination shall be from the first three units of syllabus and second mid-term from the last three units of syllabus, conducted during the semester.
- ii) Two quiz or subjective tests, one before first mid-term examination from I & II units of syllabus and another before second mid-term examination from IV & V units of syllabus, each for 10 marks, with 45 minutes duration, are conducted in a semester and the average marks of the two tests are taken as the marks for the continuous evaluation process.
- iii) Each mid-term examination is conducted for 40 marks with two hours duration. Each mid-term examination consists of five questions, each for 10 Marks and four questions need to be answered. First question shall have 5 short questions from all the three units, each of two marks or 10 objective questions each of one mark and is compulsory, three questions are of descriptive type, one from each unit of syllabus and the fifth question is from all the three units of syllabus.
- iv) Sum of the 75% marks of better scored mid-term examination and 25% marks of less scored mid-term examination are scaled down to 30 marks.
- v) For the subjects such as Engineering Graphics, Engineering Drawing, Machine Drawing, Design & Drawing of R.C., Structures, Steel Structures, Irrigation Structures, Estimation Cost and Valuation, Building Planning and Drawing etc., the distribution of 40 marks for internal evaluation shall be 20 marks for day-to-day work, and 20 marks based on two mid-term examinations. Each mid-term examination is conducted for 40 marks with two hours duration. Sum of the 75% marks of better scored mid-term examination and 25% marks of less scored mid-term examination are scaled down to 20 marks.
- vi) For subjects like Functional English and Professional Communication, the pattern of mid-term examination is given along with the syllabus of respective subject.
- vii) For the integrated course with theory and laboratory, the distribution of 40 marks for internal evaluation shall be 20 marks for theory based on two mid- term examinations and 20 marks for laboratory. Each mid-term examination is conducted for 40 marks with two hours duration. Each mid-term examination consists of five questions, each for 10 Marks and four questions need to be answered. First question shall have 5 short questions from all the three units, each of two marks or 10 objective questions each of one mark and is compulsory, three questions are of descriptive type, one from each unit of syllabus and the fifth question is from all the three units of syllabus. Sum of the 75% marks of better scored mid-term examination and 25% marks of less scored mid-term examination are scaled down to 20 marks. Of 20 marks for laboratory, 10 marks for day-to-day performance and 10 marks for semester end internal examination.
- viii) For the project based theory course, the distribution of 40 marks for internal evaluation shall be 20 marks for theory, based on two mid- term examinations and 20 marks for project. Each mid-term examination is conducted for 40 marks with two hours duration. Each mid-term examination consists of five questions, each for 10 Marks and four questions need to be answered. First question shall have 5 short questions from all the three units, each of two marks or 10 objective questions each of one mark and is compulsory, three questions are of descriptive type, one from each unit of syllabus and the fifth question is from all the three

units of syllabus. Sum of the 75% marks of better scored mid-term examination and 25% marks of less scored mid-term examination are scaled down to 20 marks.

External Assessment:

- i) Semester End Examination will have six questions with internal choice, one question from each unit. All questions carry equal marks of 10 each.
- ii) For the integrated theory and laboratory course, the pattern of examination is same as above. There will not be any external assessment for laboratory component.
- iii) For the project based theory course, semester end examination will have three questions, each for 20 marks, with internal choice. All the questions need to be answered. There will be no external assessment for project component.
- iv) For subjects like Functional English, Professional Communication, Building Planning & Drawing, etc, the pattern of semester end examination is given along with the syllabus of respective subject.

8.2 Laboratory Course (1 or 2 credits):

- i) For practical courses the distribution shall be 40 marks for Internal Evaluation and 60 marks for the semester end examinations. There shall be continuous evaluation by the internal subject teacher during the semester for 40 internal marks of which 25 marks shall be for day-to-day performance (15 marks for day-to-day evaluation and 10 marks for Record) and 15 marks shall be evaluated by conducting an internal laboratory test towards the end of semester.
- ii) Semester end examination shall be conducted by the teacher concerned and external examiner for 60 marks.

8.3 Mandatory Non-Credit Courses:

A student is required to take up two Non-Credit courses, viz. Sports & Games/ Cultural and Fine Arts/Yoga/Self Defense/NSS, one in II year 1st semester and the other in II year 2nd semester. Marks are awarded based on the day-to-day participation and performance in the activities organized under each event. A student is required to score 40 marks out of 100 marks despite putting up a minimum of 75% attendance to be declared satisfactory in each mandatory non-credit course. The B.Tech degree shall only be awarded if a student gets satisfactory grade in each of the two mandatory non-credit courses and besides acquiring 160 (120 for Lateral Entry) credits of the B.Tech degree course.

A student whose shortage of attendance is condoned in the case of credit courses in that semester shall also be eligible for condoning shortage of attendance up to 10% in the case of mandatory non-credit courses also.

A student has to repeat the course if he does not get satisfactory grade in each non-credit course for getting the degree awarded.

8.4 Internship / Industrial Training/ Practical Training:

Internship / Industrial Training / Practical training shall be evaluated for a total of 100 marks. Of 100 marks, 40 marks shall be awarded by an internal committee consisting of two faculty members based on the presentation given and work carried out by a student and the remaining 60 marks are for final Viva-Voce examination conducted by the committee consisting of an External Examiner and the Head of the Department at the end of IV B.Tech 1st semester.

8.5 Mini Project / Field Work:

Mini Project / field work shall be evaluated for a total of 100 marks.

- i) Of 100 marks, 40 marks shall be awarded by the project supervisor based on student's involvement in carrying out the project and the remaining 60 marks are based on presentation and viva-voce before a committee consisting of supervisor and a senior faculty of the department.

- ii) There will be no external assessment for mini project / field work.

8.6 Project work:

- i) The final project work shall be carried out during the IV year 2nd semester and will be evaluated for 100 marks.
- ii) Of 100 marks, 40 marks shall be for Internal Evaluation and 60 marks for the project evaluation and semester end viva-voce examination.
- iii) Each student needs to give two seminars on the topic of his project, and each seminar is evaluated for 20 marks by a committee consisting of the supervisor and a senior faculty of the department. The sum of the mark of two seminars is taken as internal marks for 40.
- iv) The project evaluation and semester end Viva–Voce shall be conducted by the committee consisting of an External Examiner, Head of the Department and the supervisor of the project. The evaluation of project work shall be conducted at the end of the fourth year second semester.

9. Criteria for Passing a Course and Award of Grades:

9.1 Criteria for Passing a Course:

- i) A candidate shall be declared to have passed in individual theory / integrated theory and laboratory / project based theory / drawing course if he secures a minimum of 40% aggregate marks (internal & semester end examination marks put together), subject to securing a minimum of 35% marks in the semester end examination.
- ii) A candidate shall be declared to have passed in individual laboratory/project / mini project / field work / industrial internship / practical training course if he secures a minimum of 50% aggregate marks (internal & semester end examination marks put together), subject to securing a minimum of 40% marks in the semester end examination.
- iii) On passing a course of a program, the student shall earn the credits assigned to that course.

9.2 Method of Awarding Letter Grade and Grade Points for a Course:

A letter grade and grade points will be awarded to a student in each course based on his performance, as per the grading system given below.

Theory/ Drawing / Elective / Self Study Course (%)	Laboratory/ Industrial / Practical Training / Mini Project / Project work (%)	Grade Points	Letter Grade
≥ 90	≥ 90	10	O (Outstanding)
≥ 80 & < 90	≥ 80 & < 90	9	A+ (Excellent)
≥ 70 & < 80	≥ 70 & < 80	8	A (Very Good)
≥ 60 & < 70	≥ 60 & < 70	7	B+ (Good)
≥ 50 & < 60	≥ 50 & < 60	6	B (Above Average)
≥ 45 & < 50	-	5	C (Average)
≥ 40 & < 45	-	4	P (Pass)
< 40	< 50	0	F (Fail)

9.3 Calculation of Semester Grade Point Average (SGPA)* for semester:

The performance of each student at the end of the each semester is indicated in terms of SGPA. The SGPA is calculated as given below:



$$\text{SGPA} = \frac{\sum(CR \times GP)}{\sum CR} \text{ for each semester.}$$

where CR = Credits of a course

GP = Grade Points awarded for a course

- * SGPA is calculated for a candidate who passed all the courses in that semester.
- * Performance in optional elective courses shall not be included in calculating the SGPA.

9.4 Eligibility for Award of B.Tech Degree:

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

i) 4 Year B.Tech Course:

- (a) Pursued a course of study for not less than four academic years and not more than eight academic years.
- (b) Registered for prescribed **160** credits and secured **160** credits.
- (c) Students, who fail to complete their Four years Course of study within Eight years or fail to acquire the **160** Credits for the award of the degree within eight academic years from the year of their admission shall forfeit their seat in B. Tech course and their admission shall stand cancelled.

ii) 3 Year B.Tech Course under Lateral Entry:

- (a) Pursued a course of study for not less than three academic years and not more than six academic years.
- (b) Registered for prescribed **120** credits and secured **120** credits.
- (c) Students, who fail to complete their Three years Course of study within Six years or fail to acquire the **120** Credits for the award of the degree within six academic years from the year of their admission shall forfeit their seat in B. Tech course and their admission shall stand cancelled.

9.5 Calculation of Cumulative Grade Point Average (CGPA) for Entire Program:

The CGPA is calculated as given below:

$$\text{CGPA} = \frac{\sum(CR \times GP)}{\sum CR} \text{ for entire program.}$$

where CR = Credits of a course

GP = Grade points awarded for a course

9.6 Award of Division:

After satisfying the requirements prescribed for the completion of the program, the student shall be eligible for the award of B. Tech Degree and shall be placed in one of the following grades:

CGPA	Class
≥ 7.5	First Class with Distinction
≥ 6.5 & < 7.5	First Class
≥ 5.5 & < 6.5	Second Class
≥ 4.5 & < 5.5	Pass Class

9.7 Consolidated Grade Card

A consolidated grade card containing credits & grades obtained by the candidate will be issued after completion of the four year B.Tech program.

10. Supplementary Examinations

- i) Supplementary examinations will be conducted twice in a year at the end of odd and even semesters.
- ii) Semester end supplementary examinations shall be conducted till next regulation comes into force for that semester, after the conduct of the last set of regular examinations under the present regulation.
- iii) Thereafter, supplementary examinations will be conducted in the equivalent courses as decided by the Board of Studies concerned.

11. Conditions for Promotion

- i) A student shall be eligible for promotion to next Semester of B.Tech program, if he satisfies the conditions as stipulated in Regulation 7.
- ii) The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in Regulation 7 for promotion into III Year I semester and IV year I semester.

a) 4 Year B.Tech Program:

- i) A student shall be promoted from II year to III year only if he acquires the academic requirement of a minimum of 50% credits up to second year second semester as shown below.
 1. Two regular and two supplementary examinations of I year I semester,
 2. Two Regular and one supplementary examinations of I year II semester,
 3. One regular and one supplementary examinations of II year I semester
 4. One regular examination of II year II semester,irrespective of whether the candidate takes the examination or not.
- ii) A student shall be promoted from III year to IV year only if he acquires the academic requirement of a minimum of 50% of credits upto third year second semester as shown below.
 1. Three Regular and three supplementary examinations of I year I semester,
 2. Three Regular and two supplementary examinations of I year II semester,
 3. Two Regular and two supplementary examinations of II year I semester,
 4. Two Regular and one supplementary examinations of II Year II semester,
 5. One Regular and one supplementary examinations of III Year I semester,
 6. One regular examination of III Year II semester,irrespective of whether the candidate takes the examination or not.

b) 3 Year B.Tech Program under Lateral Entry Scheme:

- i) A student shall be promoted from III to IV year only if he acquires the academic requirement of a minimum of 50% credits up to third year second semester as shown below.
 1. Two regular and two supplementary examinations of II year I semester,
 2. Two Regular and one supplementary examinations of II year II semester,
 3. One regular and one supplementary examinations of III year I semester
 4. One regular examination of III year II semester,irrespective of whether the candidate takes the examination or not.

11. Revaluation

- i) Students can submit the applications for revaluation, along with the prescribed fee receipt for revaluation of his answer script(s) of theory course(s) as per the notification issued by the Controller of Examinations.
- ii) The Controller of Examinations shall arrange for revaluation of such answer script(s).
- iii) An examiner, other than the first examiner, shall reevaluate the answer script(s).
- iv) If the variation in marks of two evaluations is less than 15% of total marks, the best mark of two evaluations shall be taken into consideration.
- v) If the variation in marks of two evaluations is more than 15% of total marks, there shall be third evaluation by an examiner other than the first two examiners. The best marks of two evaluations (which are nearer) shall be taken into consideration.

12. Readmission Criteria

- i) A candidate, who is detained in a semester due to lack of attendance has to obtain written permission from the Principal for readmission into the same semester after duly fulfilling the required norms stipulated by the college and by paying the required tuition fee and special fee in addition to paying an administrative fee of Rs. 1,000/-.
- ii) A candidate, who is not promoted either to III year or IV year due to lack of required credits can seek admission into III / IV year in subsequent years after obtaining the required credits as stipulated in regulation 12 by paying the required tuition fee and special fee in addition to paying an administrative fee of Rs. 1,000/-.

13. Break in Study

Student, who discontinues the studies for what-so-ever reason, can get readmission into appropriate semester of B.Tech program only with the prior permission of the Principal of the College, provided such candidate shall follow the transitory regulations applicable to the batch he joins. An administrative fee of Rs.2,000/- per each year of break in study in addition to the prescribed tuition and special fees should be paid by the candidate to condone his break in study.

14. Transitory Regulations

A candidate, who is detained or discontinued in a semester, on readmission shall be required to do all the courses in the curriculum prescribed for the batch of students in which the student joins subsequently. However, exemption will be given to those candidates who have already passed such courses in the earlier semester(s) he was originally admitted into and substitute subjects are offered in place of them as decided by the Board of Studies. However, the decision of the Board of Studies will be final.

Transfer candidates (from an autonomous college affiliated to JNTUK):

A student who has secured the required credits up to previous semesters as per the regulations of other autonomous institutions shall only be permitted to be transferred to this college. A student who is transferred from the other autonomous colleges to this college in second year first semester or subsequent semesters shall join with the autonomous batch in the appropriate semester. Such candidates shall be required to pass in all the courses in the program prescribed by the Board of Studies concerned for that batch of students from that semester onwards to be eligible for the award of degree. However, exemption will be given in the courses of the semester(s) of the batch which he had passed earlier and substitute subjects are offered in their place as decided by the Board of Studies. The total number of credits to be secured for the award of the degree will be the sum of the credits up to previous semester as per the regulations of the college from which he is transferred and the credits prescribed for the semester in which a candidate joined after transfer and subsequent semesters under the autonomous stream. The class will be awarded based on the academic performance of a student in the autonomous pattern.

15. Withholding of Results

If the student has not paid the dues, if any, to the College or if any case of indiscipline is pending against him, the result of the student will be withheld. His degree will also be withheld in such cases.

16. Malpractices

- i) The Principal shall refer the cases of malpractices in internal assessment tests and semester end examinations to a malpractice enquiry committee constituted by him for the purpose. Such committee shall follow the approved levels of punishment. The Principal shall take necessary action against the erring students based on the recommendations of the committee.
- ii) Any action by the candidate trying to get undue advantage in the performance or trying to help another, or derive the same through unfair means is punishable according to the provisions contained hereunder.

Malpractice Provisions:

Sl. No.	Nature of Malpractices / Improper conduct	Punishment
1 (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination.)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through Cell phones with any candidates or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester. The hall ticket of the candidate shall be cancelled.
3	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate who has been impersonated shall be cancelled in all the subjects of the

		examination (including practicals and project work) already appeared and shall not be allowed to appear for the examinations of the remaining subjects of that semester. The candidate is also debarred for two consecutive semesters. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the impostor is an outsider, he will be handed over to the police and a case is registered against him.
4	Smuggles in the Answer book or takes out or arranges to send out the question paper during the examination or answer book during or after the examination.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of performance in that subject.
6	Refuses to obey the orders of the Chief Superintendent /Asst.-Superintendent/ any officer on duty or misbehaves or creates disturbance of any kind in or around the examination hall or organizes a walkout or instigates others to walkout or threatens the officer-in-charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the Officer-in-charge or any person on duty in or outside the examination hall of any of his relations or indulges in any other act of misconduct or mischief which results in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the Officer on duty	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester. The candidates also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.

	amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	
7	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
8	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester. The candidate is also debarred and forfeits the seat.
9	If student of the college who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and a police case is registered against them.
10	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester.
11	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester examinations.
12	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the Chief Superintendent of Examinations for future action towards suitable punishment.	

Malpractices identified at spot centre during valuation

The following procedure is to be followed in the case of malpractice cases detected during valuation, scrutiny etc. at spot centre.

- I. A notice is to be served to the candidate(s) involved (i) through the Principal of the college concerned, (ii) to the candidate(s) to his college address and (iii) to the candidate(s) to his permanent address regarding the malpractice.
- II. A committee consisting of the following is to be constituted at spot centre to process such malpractice cases and the recommendations of the malpractice committee are to be sent to the Chief Superintendent of Examinations.
 1. Principal Chairman
 2. Vice Principal - Academics Member
 3. Chief examiner of that subject Member
 4. Controller of Examinations Convener
- iii) The involvement of the staff, who are in charge of conducting examinations, valuing examination papers and preparing / keeping records of documents related to the examinations in such acts (inclusive of providing incorrect or misleading information) that infringe upon the course of natural justice to one and all concerned at the examination shall be viewed seriously and appropriate disciplinary action will be taken after thorough enquiry.

17. Other Matters

- i) Physically challenged candidates who have availed additional examination time and a scribe during their Intermediate/EAMCET examinations will be given similar concessions on production of relevant proof/documents. Students who are suffering from contagious diseases are not allowed to appear either for internal or semester end examinations.
- ii) The students who participated in coaching / tournaments held at State / National / International levels through University / Indian Olympic Association during semester end external examination period will be promoted to subsequent semesters as per the guidelines of University Grants Commission Letter No. F.1-5/88 (SPE/PES), dated 18-08-1994.
- iii) The Principal shall deal in an appropriate manner with any academic problem which is not covered under these rules and regulations, in consultation with the Heads of the Departments and subsequently such actions shall be placed before the Academic Council for ratification. Any emergency modification of regulation, approved in the meetings of the Heads of the Departments shall be reported to the Academic Council for ratification.

18. General

- i) The Academic Council may, from time to time, revise, amend or change the regulations, schemes of examination and /or syllabi.
- ii) The academic regulations should be read as a whole for the purpose of any interpretation.
- iii) In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Chairman of the Academic Council is final.
- iv) Wherever the word he, him or his occurs, it will also include she, her and hers.

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Annexure – I
II, III & IV Year Course Structures of UG – B.Tech Programs

i) Civil Engineering

II Year 1st Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of periods per week.			No. of Credits
				L	T	P	
1	CE2504	Mechanics of Solids	ES	3	1	-	3
2	CE2505	Mechanics of Fluids	ES	3	1	-	3
3	CE2506	Building Materials and Construction	PC	2	1	-	2
4	CE2507	Surveying	PC	3	1	-	3
5	ME2502	Elements of Mechanical and Electrical Engineering	ES	4	-	-	3
6	CE2508	Building Planning and Drawing	PC	2	-	3	3
7	CE2509	Mechanics of Solids Lab	ES	-	-	4	2
8	CE2510	Survey Field Work	PC	-	-	4	2
Total :				17	4	11	21
9	SG2501	Sports and Games / Cultural (Mandatory non-credit course)		-	-	2	-

II Year 2nd Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of periods per week.			No. of Credits
				L	T	P	
1	MA2509	Numerical and Statistical Methods	BS	3	1	0	3
2	CE2511	Structural Analysis	PC	2	1	0	2
3	CE2512	Hydraulics & Hydraulic Machines	PC	2	1	0	2
4	CE2513	Concrete Technology	PC	4	0	0	3
5	CE2514	Engineering Geology & Geomatics*	ES	3	0	2	3
6		Open Elective – I	OE	4	0	0	3
7	CE2517	Fluid Mechanics & Hydraulic Machines Lab	ES	0	0	4	2
8	CE2518	Concrete Technology Lab	PC	0	0	4	2
Total :				18	3	10	20
9	NS2501	NSS / Fine Arts / Self Defense / Yoga (Mandatory Non-Credit Course)		-	-	2	-
10	CE2519 CE2520 CT2505	Optional Elective – I i) Interior Design ii) Building bye Laws and Scientific Planning iii) Data Structures	OPE	0	0	0	3
11	CE2521	Optional Elective – II MOOCs	OPE	0	0	0	2

* Integrated course with theory & practice

III Year 1st Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of periods per week.			No. of Credits
				L	T	P	
1	CE2522	Theory of Structures	PC	3	1	-	3
2	CE2523	Geotechnical Engineering	PC	2	1	-	2
3	CE2524	Hydrology and Water Resources Engineering	PC	4	-	-	3
4	CE2525	Water and Wastewater Engineering	PC	3	1	-	3
5	CE2526	Professional Elective – I i) Advanced Strength of Materials	PE	4	-	0	3
	CE2527	ii) GIS and GPS					
	CE2528	iii) Green Buildings					
	CE2529	iv) Construction Management					
6		Open Elective – II	OE	4	-	-	3
7	CE2532	Geotechnical Engineering Lab	PC	-	-	4	2
8	CE2533	Water and Wastewater Engineering Lab	PC	-	-	4	2
Total :				20	3	08	21
9	CE2534	Optional Elective – III i) Infrastructure Development	OPE	-	-	-	3
	ME2509	ii) Basics of Power Plant Engineering					
	CT2507	iii) Object Oriented Programming through Java					
10	CE2535	Optional Elective – IV (MOOCs)	OPE	0	0	0	2

III Year 2nd Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of periods per week.			No. of Credits
				L	T	P	
1	CE2536	Foundation Engineering	PC	3	-	-	2
2	CE2537	Highway Engineering	PC	4	-	-	3
3	CE2538	Design of RC Structures	PC	3	1	-	3
4	CE2539	Professional Elective – II i) Advanced structural analysis	PE	4			3
	CE2540	ii) Environmental Pollution and its control					
	CE2541	iii) Ground water development and Management					
	CE2542	iv) Ground improvement Techniques					
5		Open Elective – III	OE	4	-	-	3
6	CE2545	Structural Engineering Lab	PC	-	-	4	2
7	CE2546	Highway Engineering Lab	PC	-	-	4	2
8	CE2547	Mini Project / Survey Camp				4	2
Total :				18	1	12	20
9	CE2548	Optional Elective – V i) Smart Buildings and Automation	OPE	-	-	-	3
	CE2549	ii) Building Information Modeling					
	CT2513	iii) Database Management Systems					
10	CE2550	Optional Elective – VII MOOCs	OPE	0	0	0	2

IV Year 1st Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of contact periods per week.			No. of Credits
				L	T	P	
1	CE2551	Project Management and Finance	HSS	4	-	-	3
2	CE2552	Estimation, Costing and Valuation	PC	3	1	-	3
3	CE2553	Design of Steel Structures	PC	4	-	-	3
4	CE2554	Professional Elective – III i) Pre-stressed Concrete	PE	4	-	-	3
	CE2555	ii) Advanced Foundation Engineering					
	CE2556	iii) Traffic Engineering					
	CE2557	iv) Industrial Waste Water Management					
5	CE2558	Professional Elective – IV i) Advanced Design of RC Structures	PE	4	-	-	3
	CE2559	ii) Hydraulic Structures					
	CE2560	iii) Geosynthetics					
	CE2561	iv) Disaster Preparedness and Planning					
6		Open Elective -IV	OE	4	0	0	3
7	CE2564	Computer Applications in Civil Engineering Lab	PC	-	-	4	2
8	CE2565	Internship / Industrial Training / Practical Training	P	-	-	4	2
Total :				23	1	8	22
9	CE2566	Optional Elective - VII i) Project Scheduling and Contracts	OPE	-	-	-	3
	MA2515	ii) Optimization Techniques					
	BA2504	iii) Entrepreneurship					
10	CE2567	Optional Elective – VIII (MOOCs)	OPE	0	0	0	2

IV Year 2nd Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of periods per week.			No. of Credits
				L	T	P	
1	CE2568	Professional Elective – V i) Earthquake Resistant Design of Structures	PE	4	-	-	3
	CE2569	ii) Logistics Infrastructure Engineering					
	CE2570	iii) Finite Element Methods					
	CE2571	iv) Design and Drawing of irrigation Structures					
2	CE2572	Professional Elective – VI i) Pre Engineered Buildings	PE	4	-	-	3
	CE2573	ii) Urban and Regional Planning					
	CE2574	iii) Soil dynamics and Machine foundations					
	CE2575	iv) Environmental Impact Assessment					
3	CE2576	Project Work	P	-	-	20	10
Total :				8	-	20	16

ii) Electrical and Electronics Engineering

II Year 1st Semester

Sl. No.	Course code	Name of the Course / Laboratory		No. of periods per week			Total Credits
				L	T	P	
1	EE 2508	DC Machines and Transformers	PC	3	1	-	3
2	EE 2509	Electric Circuit Analysis	ES	3	1	-	3
3	EC2503	Analog Electronics	PC	3	1	-	3
4	EE 2510	Power Systems – I	PC	3	1	-	3
5	MA2507	Numerical Methods with Computer Applications	BS	3	-	2	3
6	ME2504	Mechanical Engineering Lab	ES	-	-	4	2
7	EE 2511	Electric Circuits Lab	ES	-	-	4	2
8	EC2504	Analog Electronics Lab	PC	-	-	4	2
Total:				15	4	14	21
9	NS2501	NSS / Fine Arts / Self Defense / Yoga (Mandatory Non-Credit Course)		-	-	2	-

II Year 2nd Semester

Sl. No.	Course code	Name of the Course / Laboratory		No. of periods per week			Total Credits
				L	T	P	
1	EC2505	Digital Circuit Design	PC	3	1	-	3
2	EE 2512	Control Systems	PC	3	1	-	3
3	BA2501	Engineering Economics and Project Management	HSS	3	-	-	2
4	EE 2513	Induction and Synchronous Machines	PC	3	1	-	3
5	EE 2514	Electromagnetic Fields	PC	3	1	-	3
6		Open Elective-I	OE	4	-	-	3
7	EC2506	Digital Circuit Design Lab	PC	-	-	4	2
8	EE 2517	Electrical Machines-1 Lab	PC	-	-	4	2
Total:				19	4	8	21
9	SG2501	Sports and Games / Cultural (Mandatory non-credit course)		-	-	2	-
10		Optional Elective – I	OPE	-	-	-	3
	EC2507	i) Biomedical Engineering					
	CT2512	ii) Computer Organization and Architecture					
	EE 2518	iii) Introduction to Quantum Mechanics for Engineers					
11	EE 2519	Optional Elective – II (MOOCS)	OPE	-	-	-	2

III Year 1st Semester

Sl. No.	Course code	Name of the Course / Laboratory	No. of periods per week			Total Credits	
			L	T	P		
1	EE 2520	Electrical Measurements & Instrumentation	PC	4	-	-	3
2	EC2508	Signals and Systems	PC	3	1	-	3
3	EE 2521	Power Systems-II	PC	3	1	-	3
4	EE 2522	Professional Elective – I i) Switch Gear and Protection	PE	4	-	-	3
	CT 2519	ii) Computer Networks					
	EC2509	iii) Pulse and Integrated Circuits					
	CT 2505	iv) Data Structures					
5		Open Elective – II	OE	4	-	-	3
6	EE 2525	Control Systems Lab	PC	-	-	4	2
7	EE 2526	Electrical Machines– II Lab	PC	-	-	4	2
8	EE 2527	Mini Project	P	-	-	4	2
Total:				18	2	12	21
9	ME2549	Optional Elective – III i) Mechatronics	OPE	-	-	-	3
	CT2507	ii) Object Oriented Programming through Java					
	EE 2528	iii) Control System Design					
10	EE 2529	Optional Elective – IV (MOOCS)	OPE	-	-	-	2

III Year 2nd Semester

Sl. No.	Course code	Name of the Course / Laboratory	No. of periods per week			Total Credits	
			L	T	P		
1	EE 2530	Power Electronics	PC	3	1	-	3
2	MA2511	Probability and Fuzzy Mathematics	BS	3	1	-	3
3	EC2510	Microprocessors, Microcontrollers and Applications **	PC	3	1	-	3
4	EC2511	Professional Elective – II i) Digital Signal Processing	PE	4	-	-	3
	EC2512	ii) Embedded System Design					
	EC2513	iii) Principles of VLSI Design					
	EC2514	iv) DSP Processors and Architecture					
5		Open Elective – III	OE	4	-	-	3
6	EE 2533	Electrical Systems Simulation Lab	PC	-	-	4	2
7	EE 2534	Electrical Measurements and Instrumentation lab	PC	-	-	4	2
8	EC2515	Microprocessor and Microcontroller Interfacing Lab	PC	-	-	4	2
Total:				17	3	12	21
9	CT2513	Optional Elective – V i) Database Management Systems	OPE	-	-	-	3
	EC2516	ii) Nano Electronics					
	EE 2535	iii) Solar and Wind Energy Systems					
10	EE 2536	Optional Elective – VI (MOOCS)	OPE	-	-	-	2

** Project based theory course

IV Year 1st Semester

Sl. No.	Course code	Name of the Course / Laboratory	No. of periods per week			Total Credits	
			L	T	P		
1	EE 2537	Power System Analysis	PC	3	1	-	3
2	CT2534	Professional Elective - III (i) Big Data Analytics	PE	3	1	-	3
	EC2517	(ii) CMOS Digital IC Design					
	EE 2538	(iii) Power Semiconductor Drives					
	EE 2539	iv) Flexible AC Transmission Systems					
3	CS2513	Professional Elective - IV i) Cyber Security	PE	3	1	-	3
	EC2518	ii) Digital Image Processing					
	EE 2540	iii) Power System Operation and Control					
	EE 2541	iv) High Voltage Engineering					
4		Open Elective – IV	OE	4	-	-	3
5	MA2512	Engineering Optimization	BS	2	1	-	2
6	EE 2544	Power Electronics Lab	PC	-	-	4	2
7	EE 2545	Power Systems Lab	PC	-	-	4	2
8	EE 2546	Internship / Industrial Training / Practical Training	P	-	-	4	2
Total :				15	4	12	20
9	EC2519	Optional Elective – VII i) Analog and Digital Communication	OPE	-	-	-	3
	CS2502	ii) Introduction to Python Programming					
	EE 2547	iii) Integration of Renewable Energy Sources					
10	EE 2548	Optional Elective – VIII (MOOCS)	OPE	-	-	-	2

IV Year 2nd Semester

Sl. No.	Course code	Name of the Course / Laboratory	No. of periods per week			Total Credits	
			L	T	P		
1	EE 2549	Professional Elective – V i) Electrical Distribution System	PE	3	1	-	3
	EE 2550	ii) Artificial Intelligence Techniques					
	EE 2551	iii) Advanced Control Systems					
	EE 2552	iv) Energy Audit, Conservation And Management					
2	EE 2553	Professional Elective – VI i) Special Electrical Machines	PE	3	1	-	3
	EE 2554	ii) Digital Control Systems					
	EE 2555	iii) Utilization of Electrical Energy					
	EE 2556	iv) HVDC Transmission Systems					
3	EE 2557	Project	P	-	-	20	10
Total:				-	-	20	16

iii) Mechanical Engineering

II Year 1st Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of periods per week			No. of Credits
				L	T	P	
1	EE2501	Elements of Electrical and Electronics Engineering	ES	3	1	-	3
2	ME2510	Engineering Thermodynamics	ES	3	1	-	3
3	ME2511	Kinematics of Machines	PC	3	1	-	3
4	ME2512	Solid Mechanics	ES	3	1	-	3
5	ME2513	Engineering Metallurgy	ES	4	-	-	3
6	EE2502	Electrical and Electronics Engineering Lab	ES	-	-	2	1
7	ME2514	Solid Mechanics and Metallurgy Lab	ES	-	-	4	2
8	ME2515	Computer Aided Modeling Lab	PC	-	-	2	1
Total:				16	4	8	19
9	SG2501	Sports and Games / Cultural (Mandatory non-credit course)		-	-	2	-

II Year 2nd Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of periods per week			No. of Credits
				L	T	P	
1	ME2516	Manufacturing Processes	PC	4	-	-	3
2	ME2517	Applied Thermodynamics	PC	3	1	-	3
3	ME2518	Dynamics of Machines	PC	3	1	-	3
4	ME2519	Fluid Mechanics	ES	3	1	-	3
5	Open Elective – I		OE	4	-	-	3
6	ME2522	Thermal Engineering Lab	PC	-	-	4	2
7	ME2523	Manufacturing Processes Lab	PC	-	-	4	2
8	ME2524	Machine Dynamics Lab	PC	-	-	2	1
Total:				17	3	10	20
9	NS2501	NSS / Fine Arts / Self Defense / Yoga (Mandatory Non-Credit Course)		-	-	2	-
10	Optional Elective-I		OPE	-	-	-	3
	EE2512	Control Systems					
	ME2525	Nano Technology					
	CT2506	Digital Logic Design					
11	ME2526	Optional Elective-II (MOOCs)	OPE	-	-	-	2

III Year 1st Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of periods per week			No. of Credits
				L	T	P	
1	MA2509	Numerical and Statistical Methods	BS	3	1	-	3
2	ME2527	Metal Cutting and Machine Tools	PC	4	-	-	3
3	ME2528	Turbo Machinery	PC	3	1	-	3
4	Professional Elective – I		PE	4	-	-	3
	ME2529	a) Non Conventional Sources of Energy					
	ME2530	b) Mechanical Vibrations					
	ME2531	c) Mechanics of Composite Materials					
	CT2505	d) Data Structures					
5	Open Elective – II		OE	4	-	-	3
6	ME2534	Fluid Mechanics and Turbo machinery Lab	PC	-	-	4	2
7	ME2535	Machine Tools Lab	PC	-	-	4	2
8	ME2536	Computer aided Machine Drawing Lab	PC	-	-	4	2
Total :				18	2	12	21
9	Optional Elective – III		OPE	-	-	-	3
	CT2534	Computer Graphics					
	EE2503	Fuzzy Logic Systems					
	EC2520	Micro Processors and Interfacing					
10	ME2537	Optional Elective – IV (MOOCs)	OPE	-	-	-	2

III Year 2nd Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of periods per week			No. of Credits
				L	T	P	
1	BA2503	Engineering Economics and Accountancy	HSS	4	-	-	3
2	ME2538	Metrology and Instrumentation	PC	3	1	-	3
3	ME2539	Design of Machine Members	PC	3	1	-	3
4	ME2540	Heat Transfer	PC	3	1	-	3
5	Open Elective – III		OE	4	-	-	3
6	Professional Elective – II		PE	4	-	-	3
	ME2543	a) Principles of Finite Element Method					
	ME2544	b) Robotics					
	ME2545	c) Automobile Engineering					
	CT2513	d) Database Management Systems					
7	ME2546	Heat Transfer Lab	PC	-	-	4	2
8	ME2547	Metrology and Instrumentation Lab	PC	-	-	4	2
9	ME2548	Computer Aided Engineering Analysis Lab	PC	-	-	2	1
Total:				21	3	10	23
10	Optional Elective – V		OPE	-	-	-	3
	CT2507	Object Oriented Programming through Java					
	ME2549	Mechatronics					
	EC2512	Embedded System Design					
11	ME2550	Optional Elective-VI (MOOCs)	OPE	-	-	-	2

IV Year 1st Semester

S. No.	Course Code	Name of the Course / Laboratory	No. of periods per week			No. of Credits	
			L	T	P		
1	ME2551	Industrial Engineering and Management	PC	3	1	-	3
2	ME2552	CAD / CAM	PC	3	1	-	3
3	Open Elective – IV		OE	4	-	-	3
4	Professional Elective – III		PE	4	-	-	3
	MA2515	a) Optimization Techniques					
	ME2555	b) Refrigeration and Air Conditioning					
	ME2556	c) Unconventional Machining Processes					
	ME2557	d) Tribology					
5	Professional Elective – IV		PE	4	-	-	3
	ME2558	a) Total Quality Management					
	ME2559	b) Computational Fluid Dynamics					
	ME2560	c) Condition Monitoring					
	ME2561	d) Design of Transmission Elements					
6	ME2562	Simulation Lab	PC	-	-	4	2
7	ME2563	Mini Project	P	-	-	4	2
8	ME2564	Internship / Industrial Training/ Practical Training	P	-	-	-	2
Total:				18	2	8	21
9	Optional Elective – VII		OPE	-	-	-	3
	CT2534	i) Big Data Analytics					
	CT2512	ii) Computer Organization and Architecture					
	ME2565	iii) Cryogenics					
10	ME2566	Optional Elective-VIII (MOOCs)	OPE	-	-	-	2

IV Year 2nd Semester

S. No.	Course Code	Name of the Course / Laboratory	No. of periods per week			No. of Credits	
			L	T	P		
1	Professional Elective – V		PE	4	-	-	3
	ME2567	i) Design for manufacturing and Assembly					
	ME2568	ii) Production Planning and Control					
	ME2569	iii) Power plant Engineering					
	ME2570	iv) Theory of Elasticity					
2	Professional Elective – VI		PE	4	-	-	3
	ME2571	i) Rapid Prototyping					
	ME2572	ii) Gas Dynamics and Jet propulsion					
	ME2573	iii) Automation in Manufacturing					
	ME2574	iv) Non Destructive Techniques					
3	ME2575	Project Work	P	-	-	20	10
Total:				8	-	20	16

iv) **Electronics and Communication Engineering**

II Year 1st Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			No. of Credits
				L	T	P	
1	EC2524	Probability Theory and Stochastic Process	BS	3	1	-	3
2	EC2525	Electronic Devices	PC	4	-	-	3
3	EC2508	Signals and Systems	PC	3	1	-	3
4	BA2501	Engineering Economics and Project Management	HSS	3	-	-	2
5	EC2526	Electromagnetic Field Theory	ES	4	-	-	3
6	EE2505	Elements of Electrical Engineering	ES	3	-	-	2
7	EC2527	Electronic Devices Lab	PC	-	-	4	2
8	EE2507	Networks and Electrical Technology Lab	ES	-	-	2	1
Total :				20	2	6	19
9	NS2501	NSS /Fine Arts / Self Defense/ Yoga (Mandatory Non-Credit Course)		-	-	2	-

II Year 2nd Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			No. of Credits
				L	T	P	
1	EC2528	Transmission Lines and Waveguides	ES	4	-	-	3
2	EC2529	Analog Circuits	PC	4	-	-	3
3	EC2530	Analog Communications	PC	3	-	-	2
4	EC2505	Digital Circuit Design	PC	3	1	-	3
5	CS2501	Fundamentals of Data Structures	ES	3	-	-	2
6		Open Elective – I	OE	4	-	-	3
7	EC2533	Analog Circuits Lab	PC	-	-	4	2
8	EC2506	Digital Circuit Design Lab	PC	-	-	4	2
Total :				21	1	8	20
9	SG2501	Sports and Games / Cultural (Mandatory non-credit course)		-	-	2	-
10	CS2502 CT2513 EC2534	Optional Elective – I		OPE	-	-	3
		i) Introduction to Python Programming					
		ii) Database Management Systems					
11	EC2535	Optional Elective – II (MOOCs)		OPE			2

III Year 1st Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			No. of Credits
				L	T	P	
1	EC2536	Linear Integrated Circuits Applications	PC	3	1	-	3
2	EC2537	Digital Communications	PC	3	-	-	2
3	EC2538	Antennas and Wave Propagation	PC	4	-	-	3
4	EC2539	Principles of VLSI Design	PC	3	-	-	2
5	EC2540	Professional Elective – I i)CAD for VLSI	PE	4	-	-	3
	EC2541	ii)Computer Organization					
	EC2542	iii)Computer and Communication Networks					
	EC2507	iv)Biomedical Engineering					
6		Open Elective – II	OE	4	-	-	3
7	EC2545	Linear Integrated Circuits Applications Lab	PC	-	-	4	2
8	EC2546	Analog and Digital Communications Lab	PC	-	-	4	2
			Total :	21	1	8	20
9	CT2528	Optional Elective-III i) Data Warehousing and Data Mining	OPE	-	-	-	3
	ME2549	ii) Mechatronics					
	EC2544	iii) Introduction to MEMS					
10	EC2547	Optional Elective – V (MOOCs)	OPE				2

III Year 2nd Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			No. of Credits
				L	T	P	
1	EC2511	Digital Signal Processing	PC	4	-	-	3
2	EE2512	Control Systems	ES	3	1	-	3
3	EC2510	Microprocessor, Microcontroller and Applications *	PC	3	-	1	3
4	EC2548	Microwave and Optical Communications	PC	3	-	-	2
5		Open Elective – III	OE	4	-	-	3
6	EC2548	Professional Elective – II i)Analog IC Design	PE	4	-	-	3
	EC2516	ii)Nano Electronics					
	EC2549	iii)Smart Antennas					
	EC2550	iv)Coding Theory					
7	EC2515	Microprocessor and Microcontroller Interfacing Lab	PC	-	-	4	2
8	EC2552	Digital Signal Processing Lab	PC	-	-	4	2
9	EC2553	VLSI Lab	PC	-	-	4	2
			Total :	21	1	13	23
10	CT2534	Optional Elective – IV i) Big Data Analytics	OPE	-	-	-	3
	EC2554	ii) Cognitive Radio Networks					
	CT2533	iii) Cryptography and Network Security					
11	EC2555	Optional Elective – V (MOOCs)	OPE				2

* Project based theory course (one star only)

IV Year 1st Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			No. of Credits
				L	T	P	
1	EC2517	CMOS Digital IC Design	PC	4	-	-	3
2	EC2512	Embedded System Design	PC	3	-	-	2
3	EC2556	Electronic Measurements and Instrumentation	PC	3	-		2
4	EC2557	Professional Elective – III i) Mixed Signal IC Design	PE	4	-	-	3
	EC2558	ii) Cellular and Mobile Communications					
	EC2559	iii) Digital TV Engineering					
	EC2514	iv) DSP Processors and Architectures					
5	EC2560	Professional Elective – IV i) System on Chip Design	PE	4	-	-	3
	EC2561	ii) Wireless Sensor Networks					
	EC2562	iii) Satellite Communication					
	EC2518	iv) Digital Image Processing					
6		Open Elective –IV	OE	4	-	-	3
7	EC2564	Microwave and Optical Communications Lab	PC	-	-	4	2
8	EC2565	Mini Project on Smart Applications	P	-	-	4	2
9	EC2566	Internship/Industry Training/Practical Training [#]	P	-	-	-	2
Total :				22	-	8	22
10	EE2554	Optional Elective – VI i) Digital Control Systems	OPE	-	-	-	3
	CT2521	ii) Artificial Intelligence					
	EC2567	iii) Transform Techniques					
11	EC2568	Optional Elective – VII (MOOCs)	OPE				2

Internship between III –II & IV-I semesters and evaluation at the end of IV-I semester

IV Year 2nd Semester

S. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			No. of Credits
				L	T	P	
1	EC2569	Professional Elective – V i) Low Power VLSI Circuits	PE	4	-	-	3
	EC2570	ii) Real Time Operating Systems					
	EC2571	iii) Speech Processing					
	EC2572	iv) Adaptive Signal Processing					
2	EC2573	Professional Elective – VI i) ASIC Design	PE	4	-	-	3
	EC2574	ii) Embedded C					
	EC2575	iii) RADAR Engineering					
	EC2576	iv) Multi Rate Signal Processing					
3	EC2577	Main Project	P	-	-	24	10
Total :				8	-	24	16

v) **Computer Science and Engineering**

II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			Total Credits
				L	T	P	
1	BA2502	Managerial Economics and Financial Analysis	HSS	3	-	-	2
2	MA2508	Discrete Mathematical Structures	BS	3	1	-	3
3	CT2505	Data Structures	PC	3	1	-	3
4	CT2506	Digital Logic Design	ES	3	1	-	3
5	CT2507	Object Oriented Programming through JAVA	ES	4	-	-	3
6	CT2508	Data Structures Lab	PC	-	-	4	2
7	CT2509	Object Oriented Programming Lab	ES	-	-	4	2
8	CS2503	UNIX Programming Lab	ES	-	-	4	2
Total :				16	3	12	20
9	SG2501	Sports and Games/Cultural (Mandatory Non-credit course)	MC	-	-	2	-

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of Periods per week			Total Credits
				L	T	P	
1	MA2510	Probability and Statistics	BS	3	1	-	3
2	CT2510	Operating Systems	PC	3	1	-	3
3	CT2511	Formal Languages and Automata Theory	PC	3	1	-	3
4	CT2512	Computer Organization and Architecture	PC	3	1	-	3
5	CT2513	Database Management Systems	PC	3	1	-	3
6		Open Elective – I	OE	4	-	-	3
7	CS2504	Operating Systems Lab	PC	-	-	4	2
8	CT2516	Database Management Systems Lab	PC	-	-	4	2
Total :				19	5	8	22
9	NS2501	NSS / Fine Arts / Self Defense / Yoga (Mandatory Non-Credit Course)	MC	-	-	2	0
10	CT2575 EC2508 MA2514	Optional Elective – I i) Environmental Impact Assessment ii) Signals and Systems iii) Fuzzy Logic	OPE	-	-	-	3
11	CS2505	Optional Elective - II: MOOCs	OPE	-	-	-	2

III Year - I Semester

Sl. No.	Course code	Name of the Course / Laboratory	No. of Periods per week			Total Credits	
			L	T	P		
1	CT2517	Software Engineering	PC	3	1	-	3
2	CT2518	Compiler Design	PC	3	1	-	3
3	CT2519	Computer Networks	PC	3	1	-	3
4	CT2520	Web Technologies	PC	4	-	-	3
5	CS2506	Professional Elective – I i) C#.NET ii) Advanced Data Structures iii) Software Testing Methodologies iv) Principles of Programming Languages	PE	4	-	-	3
	CT2522						
	CT2523						
	CS2507						
6		Open Elective – II	OE	4	-	-	3
7	CS2509	Computer Networks and Compiler Design Lab	PC	-	-	4	2
8	CT2525	Web Technologies Lab	PC	-	-	4	2
Total :				21	3	8	22
9	CT2526	Optional Elective – III i) Human Computer Interaction ii) Digital Signal Processing iii) Control Systems	OPE	-	-	-	3
	EC2511						
	EE2512						
10	CS2510	Optional Elective - IV : MOOCs	OPE	-	-	-	2
Total :							5

III Year - II Semester

Sl. No.	Course code	Name of the Course / Laboratory	No. of Periods per week			Total Credits	
			L	T	P		
1	CT2527	Design and Analysis of Algorithms	PC	3	1	-	3
2	CT2528	Data Warehousing and Data Mining	PC	4	-	-	3
3	CS2511	UML and Design Patterns*	PC	3	-	2	3
4	CT2521	Professional Elective-II i) Artificial Intelligence ii) Scripting Languages iii) Microprocessors and Interfacing iv) Software Project Management	PE	4	-	-	3
	CT2529						
	EC2520						
	CT2531						
5		Open Elective – III	OE	4	-	-	3
6	CS2514	Data Mining Lab	PC	-	-	4	2
7	CS2515	Mini Project	P	-	-	4	2
Total :				18	1	10	19
8	CS2516	Optional Elective - V i) Graph Theory ii) Embedded System Design iii) Digital Control systems	OPE	-	-	-	3
	EC2512						
	EE2554						
9	CS2517	Optional Elective - VI : MOOCs	OPE	-	-	-	2

* Integrated theory and practice course

IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			Total Credits	
			L	T	P		
1	CT2533	Cryptography and Network Security	ES	4	-	-	3
2	CT2534	Big Data Analytics	PC	4	-	-	3
3	CS2518	Professional Elective – III i) Machine Learning ii) Internet of Things iii) NoSQL Databases iv) Software Requirements Engineering and Estimation	PE	4	-	-	3
	CT2535						
	CS2519						
	CS2520						
4	CT2536	Professional Elective – IV i) Mobile Computing ii) Image Processing iii) Information Retrieval Systems iv) Optimization Techniques	PE	4	-	-	3
	CT2530						
	CT2537						
	MA2515						
5		Open Elective - IV	OE	4	-	-	3
6	CT2538	Big Data Analytics Lab	PC	-	-	4	2
7	CS2523	Cryptography and Network Security Lab	ES	-	-	4	2
8	CS2524	Internship/Industrial Training/Practical Training	P	-	-	-	2
				20	0	8	21
9	CS2525	Optional Elective – VII i) Network Programming ii) Environmental Impact Assessment iii) Robotics	OPE	-	-	-	3
	CE2575						
	ME2544						
10	CS2526	Optional Elective - VIII : MOOCs	OPE	-	-	-	2
				Total :			5

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			Total Credits	
			L	T	P		
1	CS2527	Professional Elective – V i) Web Mining ii) Cloud Computing iii) Agile Software Development Process iv) Blockchain Technologies	PE	4	-	-	3
	CT2540						
	CT2532						
	CT2541						
2	CS2528	Professional Elective – VI i) Distributed Systems ii) Social Networks iii) Web Services iv) Deep Learning	PE	4	-	-	3
	CT2539						
	CS2529						
	CS2530						
3	CS2531	Project Work	P	-	-	20	10
				Total :			16

vi) Information Technology

II Year I Semester

Sl. No.	Course Codes	Name of the Course / Laboratory		No. of periods per week			No. of Credits
				L	T	P	
1	MA2508	Discrete Mathematical Structures	BS	3	1	-	3
2	CT2505	Data Structures	PC	3	1	-	3
3	CT2506	Digital Logic Design	ES	3	1	-	3
4	CT2507	Object Oriented Programming through	ES	4	-	-	3
5	IT2501	UNIX and Shell Programming*	ES	4	-	2	4
6	CT2508	Data Structures Lab	PC	-	-	4	2
7	CT2509	Object Oriented Programming Lab	ES	-	-	4	2
Total				17	3	10	20
8	NS2501	NSS / Fine Arts / Self Defense / Yoga (Mandatory Non-Credit Course)	MC	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year II Semester

Sl. No.	Course Codes	Name of the Course / Laboratory		No. of periods per week			No. of Credits
				L	T	P	
1	MA2510	Probability and Statistics	BS	3	1	-	3
2	EC2521	Microprocessors and Microcontrollers*	ES	4	-	2	4
3	CT2511	Formal Languages and Automata Theory	PC	3	1	-	3
4	CT2512	Computer Organization and Architecture	PC	3	1	-	3
5	CT2513	Database Management Systems	PC	3	1	-	3
6		Open Elective-I	OE	4	-	-	3
7	CT2516	Database Management Systems Lab	PC	-	-	4	2
Total :				20	4	6	21
8	SG2501	Sports and Games / Cultural (Mandatory Non-credit Course)	MC	-	-	2	-
9	IT2503	Optional Elective – I i) Information and Communication Technology	OPE	-	-	-	3
	EC2508	ii) Signals and Systems					
	EE2506	iii) Basic Electrical Engineering					
10	IT2504	Optional Elective – II (MOOCs)	OPE	-	-	-	2

* Integrated Course with Theory and Laboratory

III Year I Semester

Sl. No.	Course Codes	Name of the Course / Laboratory	No. of periods per week			No. of Credits	
			L	T	P		
1	CT2517	Software Engineering	PC	3	1	-	3
2	CT2518	Compiler Design	PC	3	1	-	3
3	CT2510	Operating Systems	PC	3	1	-	3
4	CT2520	Web Technologies	PC	4	-	-	3
5	CT2521 EC2512 CT2514 CT2522	Professional Elective-I	PE	4	-	-	3
		i) Artificial Intelligence					
		ii) Embedded System Design					
		iii) Computer Graphics					
iv) Advanced Data Structures							
6		Open Elective – II	OE	4	-	-	3
7	IT2507	Operating Systems and Compiler Design	PC	-	-	4	2
8	CT2525	Web Technologies Lab	PC	-	-	4	2
TOTAL				21	3	8	22
10	IT2508 EC2522 EE2524	Optional Elective – III	OPE	-	-	-	3
		i) Object Oriented Programming through C++					
		ii) Data Communication					
iii) Power Systems Engineering							
11	IT2509	Optional Elective – IV: MOOCs	OPE	-	-	-	2

III Year II Semester

Sl. No.	Course Codes	Name of the Course / Laboratory	No. of periods per week			No. of Credits	
			L	T	P		
1	CT2527	Design and Analysis of Algorithms	PC	3	1	-	3
2	CT2528	Data Warehousing and Data Mining	PC	4	-	-	3
3	IT2510	Object Oriented Analysis and Design*	PC	4	-	2	4
4	CT2519	Computer Networks	PC	3	1	-	3
5	IT2511 IT2512 CT2530 CT2532	Professional Elective – II	PE	4	-	-	3
		i) Soft Computing Techniques					
		ii) Real Time Systems					
		iii) Image Processing					
iv) Agile Software Development Process							
6		Open Elective – III	OE	4	-	-	3
7	IT2513	Computer Networks and Data Mining Lab	PC	-	-	4	2
Total :				22	2	6	21
8	IT2514 IT2515 ME2544	Optional Elective – V	OPE	-	-	-	3
		i) Secure Web Technologies					
		ii) Management Information Systems					
iii) Robotics							
9	IT2516	Optional Elective – VI: MOOCs	OPE	-	-	-	2

* Integrated Course with Theory and Laboratory

IV Year I Semester

Sl. No.	Course Codes	Name of the Course / Laboratory	No. of periods per week			No. of Credits	
			L	T	P		
1	BA2502	Managerial Economics and Financial Analysis	HS	3	-	-	2
2	CT2534	Big Data Analytics	PC	4	-	-	3
3	IT2517	Professional Elective – III i) Machine Learning and Pattern Recognition	PE	4	-	-	3
	IT2518	ii) Distributed Operating Systems					
	CT2526	iii) Human Computer Interaction					
	CT2523	iv) Software Testing Methodologies					
4	IT2519	Professional Elective – IV i) Business Intelligence	PE	4	-	-	3
	CT2536	ii) Mobile Computing					
	IT2520	iii) Multimedia Tools					
	CT2533	iv) Cryptography and Network Security					
5		Open Elective – IV	OE	4	-	-	3
6	CT2538	Big Data Analytics Lab	PC	-	-	4	2
7	IT2522	Mini Project	P	-	-	4	2
8	IT2523	Internship / Industrial Training / Practical training [#]	P	-	-	-	2
Total				19	-	8	20
9	CT2539	Optional Elective – VII i) Social Networks	OPE	-	-	-	3
	EC2523	ii) Assistive Technologies					
	ME2542	iii) Renewable Energy Sources					
10	IT2524	Optional Elective – VIII (MOOCs)	OPE	-	-	-	2

[#] Internship between III-II & IV-I Semesters and evaluation at the end of IV-I Semester.

IV Year II Semester

Sl. No.	Course Codes	Name of the Course / Laboratory	No. of periods per week			No. of Credits	
			L	T	P		
1	IT2525	Professional Elective – V i) Steganography and Biometrics	PE	4	-	-	3
	IT2526	ii) Parallel Computing					
	CT2524	iii) Virtual and Augmented Reality					
	IT2527	iv) E-Commerce					
2	CT2535	Professional Elective – VI i) Internet of Things	PE	4	-	-	3
	CT2540	ii) Cloud Computing					
	CT2541	iii) Blockchain Technologies					
	IT2528	iv) Design Patterns					
3	IT2529	Project Work	P	-	-	20	10
Total				8	-	20	16

Open Elective – I

Sl. No.	Course Code	Title of the Subject	Dept. offering the Subject	No. of periods per week			No. of Credits
				L	T	P	
1	CE2515	Elements of Civil Engineering (other than CE)	CE	4	-	-	3
2	CE2516	Building Services	CE	4	-	-	3
3	EE2515	Electrical Materials	EEE	4	-	-	3
4	EE2516	Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520	Elements of Manufacturing processes (other than ME)	ME	4	-	-	3
6	ME2521	Automotive Engineering (other than ME)	ME	4	-	-	3
7	EC2531	Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532	Fundamentals of Communications (other than ECE)	ECE	4	-	-	3
9	CT2514	Computer Graphics (other than IT)	CSE	4	-	-	3
10	CT2507	Object Oriented Programming through JAVA (other than CSE and IT)	CSE	4	-	-	3
11	CT2515	Systems Software	IT	4	-	-	3
12	IT2502	Web Programming (other than CSE and IT)	IT	4	-	-	3
13	MA2516	Mathematical Cryptography (other than CSE)	BS&H	4	-	-	3
14	PH2508	Semiconductor Physics (other than ECE)	BS&H	4	-	-	3

Open Elective – II

Sl. No.	Course Code	Title of the Subject	Dept. offering the Subject	No. of periods per week			No. of Credits
				L	T	P	
1	CE2530	Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531	Environmental Sanitation	CE	4	-	-	3
3	EE2523	Modeling and Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524	Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532	Elements of Mechanical Transmission	ME	4	-	-	3
6	ME2533	Material Handling Equipment	ME	4	-	-	3
7	EC2543	Automotive Electronics	ECE	4	-	-	3
8	EC2544	Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508	Data Sciences	CSE	4	-	-	3
10	CT2524	Virtual and Augmented Reality	CSE	4	-	-	3
11	IT2505	Open Source Software	IT	4	-	-	3
12	IT2506	Cyber Laws	IT	4	-	-	3
13	MA2517	Quality, Reliability and Operations Research	BS&H	4	-	-	3

Open Elective – III

Sl. No.	Course Code	Title of the Subject	Dept. offering the Subject	No. of periods per week			No. of Credits
				L	T	P	
1	CE2543	Hydrology (other than CE)	CE	4	-	-	3
2	CE2544	Planning for Sustainable Development	CE	4	-	-	3
3	EE2531	Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532	Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541	Material Science	ME	4	-	-	3
6	ME2542	Renewable Energy Sources	ME	4	-	-	3
7	EC2523	Assistive Technologies (other than ECE)	ECE	4	-	-	3
8	EC2507	Bio-Medical Engineering (other than ECE and EEE)	ECE	4	-	-	3
9	CS2512	Node and Angular JS	CSE	4	-	-	3
10	CS2513	Cyber Security	CSE	4	-	-	3
11	CT2529	Scripting Languages (other than CSE)	IT	4	-	-	3
12	CT2531	Software Project Management (other than CSE)	IT	4	-	-	3
13	MA2518	Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505	Academic Communication	ENGLISH	4	-	-	3

Open Elective – IV

Sl. No.	Course Code	Title of the Subject	Dept. offering the Subject	No. of periods per week			No. of Credits
				L	T	P	
1	CE2562	Disaster Management (other than CE)	CE	4	-	-	3
2	CE2563	Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542	Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543	Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553	Green Engineering	ME	4	-	-	3
6	ME2554	Non Destructive Evaluation	ME	4	-	-	3
7	EC2563	Cyber Physical Systems	ECE	4	-	-	3
8	EC2508	Signals and Systems (other than ECE and EEE)	ECE	4	-	-	3
9	CS2521	Digital Forensics	CSE	4	-	-	3
10	CS2522	Business Intelligence and Decision Support Systems	CSE	4	-	-	3
11	IT2521	Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537	Information Retrieval Systems (other than CSE)	IT	4	-	-	3
13	MA2514	Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3