Contents

1. SHORT TITLE AND COMMENCEMENT

(a) The regulations listed under this head are common for all degree level undergraduate programs (B. Tech.) offered by the college with effect from the academic year 2014-15 and they are called as "VR14" regulations.

(b) The regulations here under are subject to amendments as may be made by the Academic Council of the college from time to time, keeping the recommendations of the Board of Studies in view. Any or all such amendments will be effective from such date and to such batches of candidates including those already undergoing the program, as may be decided by the Academic Council.

2. DEFINITIONS

(a) "Commission" means University Grants Commission (UGC)

(b) "Council" means All India Council for Technical Education (AICTE)

(c) "University" means Jawaharlal Nehru Technological University Kakinada (JNTUK)

(d) "College" means Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada

(e) "Program" means any combination of courses and/or requirements leading to award of a degree

(f) "Course" means a subject either theory or practical identified by its course title and code number and which is normally studied in a semester. For example, Data Structures is a course offered at third semester of B. Tech. (CSE) and its code is 14CS3304

(g) "Degree" means an academic degree conferred by the university upon those who complete the undergraduate curriculum

(h) "Regular Students" means student enrolled into the four year programme in the first year

(i) "Lateral entry Students" means student enrolled into the four year programme in the second year

3. ACADEMIC PROGRAMS

3.1 Nomenclature of Programs

3.1.1 The nomenclature and its abbreviation given below, shall continue to be used for the degree programs under the University, as required by the Council and the Commission

Bachelor of Technology (B. Tech.) Besides, the name of specialization shall be indicated in brackets after the abbreviation. For example UG engineering degree in Mechanical Engineering program is abbreviated as B.Tech. (Mechanical Engineering).

3.1.2 Bachelor of Technology (B. Tech.) degree program offered in:

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

4. DURATION OF THE PROGRAMS

4.1 Normal Duration

4.1.1 The duration of program for regular students shall be four years consisting of eight semesters.

4.1.2 The duration of the program for lateral entry students who are admitted in second year shall be three years consisting of six semesters.

4.2 Maximum Duration

4.2.1 The maximum period which a student can take to complete a full time program shall be double the normal duration of the program, i.e., for regular students eight years. For lateral entry students the maximum duration is six years.

4.3 Minimum Duration of a Semester

Each semester consists of a minimum of 90 instruction days with about minimum 25 and maximum 35 contact periods per week.

5. ADMISSION CRITERIA

The eligibility criteria for admission into UG engineering programs is as per the norms approved by Government of Andhra Pradesh from time to time. The sanctioned seats in each program in the college are classified into CATEGORY-A and CATEGORY-B at first year level and Lateral Entry at second year level.

5.1 CATEGORY - A Seats

These seats will be filled as per the norms approved by the Government of Andhra Pradesh.

5.2 CATEGORY - B Seats

These seats will be filled by the College as per the norms approved by the Government of Andhra Pradesh.

5.3 CATEGORY - Lateral Entry Seats

Lateral entry candidates shall be admitted into the Third semester directly as per the norms approved by government of Andhra Pradesh. The percentages of Category-A, Category-B and Lateral Entry Seats are decided time to time by the Government of Andhra Pradesh.

6. CREDIT SYSTEM AND GRADE POINTS

6.1 Credit Definition

Credit means quantifying and recognizing learning. Credit is measured in terms of contact hours per week in a semester. Typically one credit is given to:

(a) Theory course conducted for one contact period.

(b) Laboratory course or Tutorials conducted for two contact periods.

However some courses may be prescribed with fixed number of credits depending on the complexity of the course and relative significance, irrespective of number of contact periods.

6.2 Credit Structure

6.2.1 A typical Credit Structure for course work (B.Tech Program) based on the above definition is given in the Table 1.

Table 1: Typical Credit Allocation Scheme for Courses

Lectures(L)	**Tutorials(T)**	**Practical(P)**	**Total periods**	**Total Credits**
4	1	0	5	4
4	0	0	4	4
3	1	0	4	3
3	0	0	3	3
2	0	0	2	2
0	0	3	3	2

6.3 Semester Course Load

The average course load shall be fixed at 25 credits per semester with its minimum and maximum limits being set at 20 and 30 credits,respectively.

6.4 Grade Points and Letter Grade for a Course

The grade points and letter grade will be awarded to student in each course based on his/her performance as per the grading system shown in the Table 2.

Table 2: Grade points and letter grade scheme for a course

Theory/Drawing "%" of Marks	Lab/Project"%" of Marks	Grade Points	Letter Grade
>= 90	>= 90	10	Ex
80 - 89	80 - 89	9	A+
70 - 79	70 - 79	8	A
60 - 69	60 - 69	7	B
50 - 59	55 -59	6	C
45 - 49	50 - 54	5	D
40 - 44	-	4	E
< 40	< 50	Fail	F

6.5 Semester Grade Points Average (SGPA)

The performance of each student at the end of the each semester is indicated in terms of SGPA. The SGPA is calculated as shown in eq.1

$$SGPA = \frac{\sum (\text{CR X GP})}{\sum \textit{CR(for all courses Offered in semester)}} \quad (1)$$

Where CR= Credits of a course
GP = Grade points awarded for a course

SGPA is calculated for the candidates who passed all the courses in that semester.

6.6 Cumulative Grade Point Average (CGPA)

The Cumulative Grade Point Average is a calculation of the average of all courses required for obtaining the degree.
The CGPA is calculated as shown in eq.2

$$CGPA = \frac{\sum (\text{CR X GP})}{\sum CR(\textit{for entire programme})} \quad (2)$$

Where CR= Credits of a course
GP = Grade points awarded for a course

7. CURRICULUM FRAMEWORK

7.1 General Issues

7.1.1 Curriculum framework is important in setting the right direction for a Degree program as it takes into account the type and quantum of knowledge necessary to be acquired by a student to qualify for a award in his/her chosen branch or specialization.

7.1.2 Besides, this also helps in assigning the credits for each course, sequencing the courses semester-wise and finally arriving at the total number of courses to be studied and the total number of credits to be earned by a student to fulfil the requirements for conferment of degree.

7.1.3 Each theory course shall consist of four units.

7.2 Curriculum Structure

The curriculum structure is designed in such a way that it facilitates the courses required to attain the expected knowledge, skills and attitude by the time of their graduation as per the needs of the stakeholders. The curriculum structure consists of various course categories (as described in 7.2.1 to7.2.8) to cover the depth and breadth required for

the program and for the attainment of program outcomes of the corresponding program.

7.2.1 Institutional Core

Institutional Core courses give the knowledge, skills and attitude expected in UG engineering graduates of all programs.The courses offered under this category are:

1. Basic Sciences and Mathematics:
   Basic Science courses shall include Engineering Physics, Engineering Chemistry, Engineering Physics Lab, Engineering Chemistry Lab and Mathematics courses that include Linear Algebra and Differential Equations, Calculus and Complex Analysis and Numerical Methods
2. Basic Engineering Sciences:
   Basic Engineering Science courses shall include Introduction to Computing, Programming in C, Basics of Electrical Engineering, Basics of Electronics Engineering, Basics of Mechanical Engineering, Basics of Civil Engineering, Mechanics for Engineers, Basic Computing Lab, C Programming Lab, Engineering Graphics and Workshop Practice.
3. Humanities and Social Sciences:
   Humanities and Social Science Courses shall include Technical English and Communication Skills, Professional Ethics, Environmental Studies, Engineering Economics and Finance and Communication Skills Lab.

7.2.2 Institutional Electives

Institutional Electives are offered across the programs to enhance the knowledge breadth and professional competency of the students. The student should register the courses offered by other departments

as an elective. The courses offered under this category cover the interdisciplinary knowledge in the following areas:

(a) Engineering Sciences

(b) Humanities / Social Sciences

Each department shall offer minimum four courses to choose. Departments may indicate the maximum number of students allowed to register against each course.

7.2.3 Program Core

The Program core consists of set of courses considered necessary for the students of the specific program. The courses under this category should satisfy the program specific criteria prescribed by the appropriate professional societies.

7.2.4 Program Electives

The program electives are set of courses offered in the program which covers depth and breadth to further strengthen their knowledge. The students may register for appropriate electives offered in the program based on their area of interest.

7.2.5 Independent Learning

The students are expected to learn the courses offered under this category on their own. The courses offered under this category include:

(a) Self-Learning Course:

The self-learning courses will be recommended by the department from the available open courseware. The course under this category carries two Credits.

(b) Term Paper, Mini Project and Major Project:

The term paper and Mini Project courses carry two credits each and Major Project carries 10 credits.

7.2.6 Industry Interaction

The students may register for one of the following:

(a) Internships:

The students are expected to do internship of minimum 3 weeks duration in the industry approved by respective Head of the Department. It carries two credits.

(b) Industry offered courses:

The courses under this category shall be offered by the Industry experts whose minimum academic qualification is Bachelor of Engineering or equivalent. The courses under this category carry two credits.

It is mandatory to pass either 7.2.6(a) or 7.2.6(b). It is mandatory to acquire minimum two credits for the award of degree.

7.2.7 Personality Development

The courses offered under this category are to improve employability skills of the students. One course in each semester of 3^{rd} year will be offered.

7.2.8 Student Practice

Student Practice Courses are aimed at improving their professional competency. Student will have to participate successfully in the activities listed below. Student shall participate in any two events from (a) or any one activity from [b - e], before completion of 6^{th} semester:

(a) Co-curricular participation:
Student should have participated in Technical Quizzes/Student paper contest/Seminars/Conferences etc., approved by the department.

(b) National Service Scheme (NSS):
Student should have enrolled as a member of NSS at least for one year.

(c) National Cadet Corps (NCC):
Cadet of NCC for a minimum period of one year.

(d) Games and Sports:
Participation in the university level and above competitions.

(e) Art and Cultural:
Participation in the university level and above competitions.

7.3 **Course Numbering Scheme**

The Course number consists of eight digits/alphabets. A typical course number is illustrated in the following figure 1.

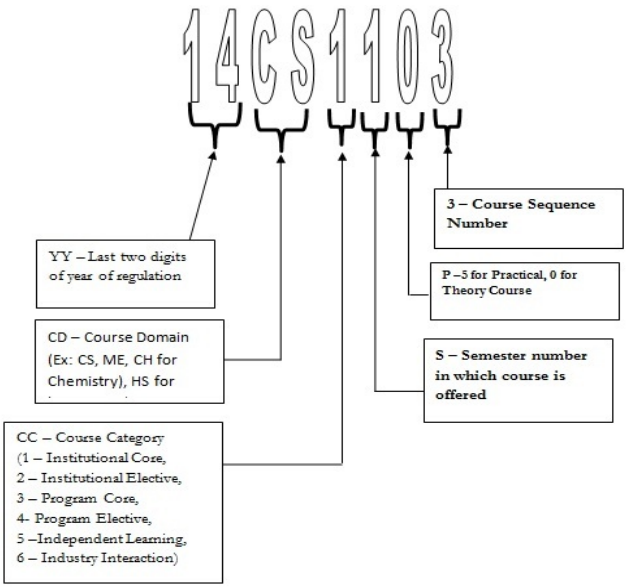

Figure 1: Course Numbering Scheme

7.4 Scheme of Instruction and Examination

The scheme of instruction and examination of all B. Tech programs are given in Annexure I.

7.5 Medium of Instruction and Examination

The medium of instruction and examination is English.

8. EXAMINATIONS AND SCHEME OF EVALUATION

8.1 Description

8.1.1 **Continuous Evaluation (CE)**, to be conducted by the course faculty/course coordinator all through the semester; and, to include mid-term tests, assignments, seminar, project and other means covering the entire syllabus of the course.

8.1.2 **Semester End Examination (SE)**, to be conducted by chief controller of examinations at the end of a semester, as per the academic calendar and to include a written examination for theory courses and practical/project examination with built-in oral part for laboratory/project courses.

8.2 Continuous Evaluation(CE)

8.2.1 Theory Courses

For each theory course there shall be continuous evaluation for 30 marks. Continuous evaluation for theory courses consists of three components, namely, home assignment, mid-term examination and assignment.

(a) 5 marks in each theory course shall be allotted for home assignments. The home assignments are to be decided by the course coordinators. There shall not be an overlap or repetition of questions/problems of home assignments with those of assignment tests. Separate problems are to be given for the home assignments for five marks to provide broadened exposure to the subject.

(b) Two midterm examinations each for 15 marks will be conducted for **90 minutes** duration. The midterm marks shall be awarded giving a weightage of 2/3rd in the midterm examination in which the student scores more marks and 1/3rd for the

midterm examination in which the student scores less marks.

The question paper shall be given in the following pattern:
Part A: Shall contain 'five' questions of one mark each.
Part B: Shall contain 'three' questions of 5 marks each out of which student must answer two questions.

(c) Two assignment tests each for 10 marks are to be conducted for **50 minutes**. The assignment marks shall be awarded giving a weightage of 2/3rd in the assignment examination in which the student scores more marks and 1/3rd for the assignment examination in which the student scores less marks.

The question paper shall contain two comprehensive questions, each five marks.

8.2.2 Laboratory Courses

For Laboratory courses there shall be continuous evaluation during the semester for 30 marks and semester end examination for 70 marks. The distribution of continuous evaluation is given in the Table 3:

Table 3: Continuous Evaluation for laboratory courses

S.No	Criteria	Marks
1	Day to Day Work	10
2	Record	05
3	Internal Examination	15

8.2.3 Term Paper and Mini Project

For Term Paper / Mini Project there shall be continuous evaluation during the semester for 30 marks and semester end evaluation for

70 marks. The distribution of continuous evaluation is given in the Table 4:

Table 4: Continuous Evaluation

S.No	Criteria	Marks
1	Day to Day Assessment	10
2	Two Seminars	10+10

8.2.4 Major Project

For Major Project there shall be continuous evaluation during the semester for 30 marks and semester end evaluation for 70 marks. The continuous evaluation for the Major Project shall be on the basis of two seminars by each student on the topic of his/her project. These seminars are evaluated by project review committee. In addition to this, the project guide will evaluate for day to day performance.

The project review committee shall consists of Head of Department, program coordinator and one senior faculty member of department. The distribution of marks is given in the Table 5:

Table 5: Continuous Evaluation for major project

S.No	Criteria	Marks
1	Two Seminars	10+10
2	Day to Day Assessment	10

8.2.5 Self-Learning Courses

For the courses under this category there shall be continuous evaluation for 30 marks and semester end examination for 70 marks. The

distribution of marks for continuous evaluation is given in the Table 6:

Table 6: Continuous evaluation for self-learning courses

S.No	Criteria	Marks
1	As per section 8.2.1(a)	5
2	As per section 8.2.1(b)	15
3	As per section 8.2.1(c)	10

8.3 **Semester End Examinations**

8.3.1 Theory Courses

The Semester end examinations shall be conducted for 3 hours duration at the end of the semester. The question paper shall be given in the following pattern :

1. **Part-A**: Shall contain 10 questions of one mark each. A minimum of two Questions will be given from each unit of the syllabus out of four units.
2. **Part-B**: There shall be two questions from each unit with internal choice. Each question carries 15 marks. Each course shall consist of four units of syllabus.

8.3.2 Laboratory Courses

(i) The semester end examination for laboratory courses shall be conducted for three hour duration at the end of semester for 70 marks. The distribution of marks shall be as shown in Table 7.

Table 7: Scheme of Evaluation of laboratory

S.No	Criteria	Marks
1	Procedure	20
2	Experiment/Program Execution	30
3	Result Analysis	10
4	Viva-Voce	10

(ii) Each semester end lab examination shall be evaluated by an external examiner along with an internal examiner. The average of the marks awarded by internal and external examiners shall be taken in to consideration.

8.3.3 Term Paper and Mini Project

The distribution of Semester end examination marks for Term Paper and Mini Project is given in the Table 8.

Table 8: Semester end evaluation of Term Paper and Mini Project

S.No	Criteria	Marks
1	Report	40
2	Seminar \ Project Demonstration	30

The semester end examination shall be evaluated by program coordinator and senior faculty nominated by chief controller of examinations.

8.3.4 Major Project

The semester end examination for major project work shall be evaluated for 70 marks by a committee consisting of an external examiner, Head of the Department and Program coordinator. The evaluation of project work shall be conducted at the end of the VIII

Semester.
The average of the marks awarded by the committee members shall be taken into consideration in case of variation among the members. The evaluation of 70 marks is distributed as given in Table 9:

Table 9: Semester end evaluation of Major Project

S.No	Criteria	Marks
1	Report	30
2	Presentation	20
3	Project Demonstration/Execution	20

8.3.5 Self-Learning Courses

The semester end examinations for courses under this category are evaluated for 70 marks. The question paper shall be set as described in 8.3.1 by course coordinator and same is to be given to the controller of examinations. The evaluation of the semester end examination will be carried by the course coordinator.

8.3.6 Industry Interaction

(a) Internships:
The candidate shall submit the comprehensive report to the department. The report will be evaluated for 100 marks by the project review committee constituted as given in sec.8.2.4

(b) Industry Offered Courses:
The semester end examination for courses under this category is evaluated for 100 marks and it shall be conducted and evaluated by the industry expert who has delivered the lecture or by faculty nominated by the head of the department in consultation with the industry expert. The question paper pattern shall be decided by the industry expert at the beginning of the course and same is to be approved by

the head of the department.
There will not be continuous evaluation for the courses under this category.

8.3.7 Personality Development

To complete this course the candidate should get either 75 percentage of attendance or 50 percentage of marks in the semester end examination in both courses offered in third year under this category. If the candidate fails, he/she can repeat the semester end examination after one month. The semester end examination will be conducted and evaluated by the course coordinator.

There will not be continuous evaluation for the courses under this category.

8.3.8 Student Practice Courses

Student can complete this course by participating in any two events from (a) or any one activity from [b - e].

(a) **Co-curricular participation**:
Student should have participated in Technical Quizzes/Student paper contest/Seminars/Conferences etc., approved by the department.

(b) **National Service Scheme (NSS)**: Student should have enrolled as a member of NSS at least for one year.

(c) **National Cadet Corps (NCC)**: Cadet of NCC for a minimum period of one year.

(d) **Games and Sports**: Participation in the university level and above competitions.

(e) **Art and Cultural**:
Participation in the university level and above competitions.

8.4 Conditions for Pass

8.4.1 A candidate shall be declared to have passed in individual theory/drawing course if he/she secures a minimum of 40% aggregate marks (Continuous Evaluation and semester end examination marks put together), subject to a minimum of 35% marks in semester end examination.

8.4.2 A candidate shall be declared to have passed in individual lab/project course if he/she secures a minimum of 50% aggregate marks (Continuous Evaluation and semester end examination marks put together), subject to a minimum of 40% marks in semester end examination.

8.4.3 The student has to pass the failed course by appearing the supplementary examination as per the requirement for the award of degree.

8.4.4 On passing a course of a program, the student shall earn assigned credits for that Course.

8.5 Revaluation

8.5.1 Continuous Evaluation

The continuous evaluation scripts shall be shown to the student before finalizing the marks. However, if the student has any concern, not addressed before finalization of marks, he/she may submit the application for revaluation to the concerned head of the department.

The Head of the Department may constitute a two member com-

mittee for reevaluating the script. The evaluation of the committee is final and binding.

8.5.2 Semester end Examinations

1. As per the notification issued by the Chief Controller of Examinations, the students can submit the applications for revaluation, along with the requisite fee receipt for revaluation of his/her answer script(s) of theory course(s), if he/she is not satisfied with marks obtained.
2. The Controller of Examinations shall arrange for re-evaluation of those answer script(s).
3. A new external examiner, other than the first examiner, shall revaluate the answer script(s).
4. Better marks of the two will be taken into consideration.

8.6 **Withholding of Results**

If the student has not paid any dues to the college or if any case of malpractice or indiscipline is pending against him, the result of the student will be withheld and he will not be allowed into the next semester. His/Her degree will be withheld in such cases.

9. CRITERIA TO ATTEND SEMESTER END EXAMINATION AND PROMOTION TO HIGHER SEMESTER

9.1 **Eligibility for Semester End Examinations**

9.1.1 Attendance

Regular course of study means a minimum average attendance of 75% in all the courses computed by totalling the number of periods

of lectures, tutorials, drawing, practical, Personality development courses and project work as the case may be, held in every course as the denominator and the total number of periods attended by the student in all the courses put together as the numerator.

Condonation of shortage in attendance may be recommended by respective Heads of Departments on genuine medical grounds, provided the student puts in at least 65% attendance as calculated above and provided the Principal is satisfied with the genuineness of the reasons and the conduct of the student.

Students, having more than 65% and less than 75% of attendance, shall have to pay requisite fee towards condonation.

9.1.2 Marks

Minimum of 50% aggregate marks must be secured by the candidates in the internal examinations conducted for theory, practice and lab courses, to be eligible to write semester end examinations.

However, if the student is eligible to write the semester end examinations based on the attendance, in case necessary, a shortage of internal marks up to a maximum of 10% may be condoned by the Principal based on the recommendations of the Heads of the Departments.

Students having shortage of internal marks up to a maximum of 10% shall have to pay requisite fee towards condonation.

9.2 Conditions for Promotion

9.2.1 A student shall be eligible for promotion to next Semester of B.Tech program, if he/she satisfies the conditions as stipulated in Regulations 9.1.1 and 9.1.2.

9.2.2 Eligible candidate who failed to register for the semester-end examinations shall not be permitted to continue the subsequent semester, and has to repeat the semester for which he/she has not registered for semester end examinations.

9.2.3 Promotion to V Semester

A regular student shall be promoted from semester - IV to semester - V only if he fulfils the academic requirements of 38 credits (up to III semester) from the following Examinations, whether the candidate takes the examinations or not.

(a) One Regular and Two subsequent Supplementary Examinations of Semester - I

(b) One Regular and One subsequent Supplementary Examinations of Semester - II

(c) One Regular Examination of Semester - III

9.2.4 Promotion to VII Semester

1. Regular students

A Student shall be promoted from Semester - VI to Semester - VII only if he fulfils the academic requirements of 64 credits (up to V Semester) from the following Examinations, whether the candidate takes the examination or not.

(a) One Regular and Four subsequent Supplementary Examinations of Semester - I

(b) One Regular and Three subsequent Supplementary Examinations of Semester - II

(c) One Regular and Two subsequent Supplementary Examinations of Semester - III

(d) One Regular and One subsequent Supplementary Examinations of Semester - IV

(e) One Regular Examinations of Semester - V

2. Lateral Entry students:
   A Student shall be promoted from Semester - VI to Semester - VII only if he fulfills the academic requirements of 39 credits from the following Examinations, whether the candidate takes the examination or not.

   (a) One Regular and Two subsequent Supplementary Examinations of Semester - III

   (b) One Regular and One subsequent Supplementary Examinations of Semester - IV

   (c) One Regular Examinations of Semester - V

Table 10: Promotion Criteria

For Admission into	Regular students	Lateral Entry students
V Semester	38 out of 76	-
VII Semester	64 out of 128	39 out of 78

10. SUPPLEMENTARY EXAMINATIONS

10.1 General

10.1.1 Supplementary examinations will be conducted along with regular semester end examinations.

10.1.2 Semester end supplementary Examinations shall be conducted in courses of each semester four times after the conduct of the last set of regular examinations (i.e. IV/IV B.Tech., Second Semester Examinations) under the present regulation.

10.1.3 Thereafter supplementary examinations will be conducted in the equivalent courses as prescribed by concerned BOS.

10.2 Advance Supplementary Exams

Candidate(s), who failed in Theory or Lab courses of 8^{th} semester, can appear for advanced supplementary examination conducted within one month after declaration of the revaluation results. However, those candidates that fail in this advanced supplementary examinations of 8^{th} shall appear for subsequent examination along with regular candidates in the examinations conducted at the end of the respective academic year.

11. READMISSION CRITERIA

A candidate, who is detained in a semester due to lack of attendance / marks /credits, has to obtain written permission from the Principal for readmission into the same semester after duly fulfilling all the required norms stipulated by the college in addition to paying an administrative fee of Rs. 1,000/-

11.1 Rules for Calculation of Attendance for Re-Admitted students:

(a) No.of classes conducted will be counted from the day 1 of the semester concerned, irrespective of the date of payment of tuition fee.

(b) They should submit a written request to the principal of the college, along with a challan paid towards tuition and other fee, for re-admission before the commencement of class-work.

(c) Student should come to know about the date of commencement of class-work of the semester in to which he/she wishes to get re-admission. The information regarding date of commencement of class-work for each semester is available in the college notice boards / website.

12. BREAK IN STUDY

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

13. TRANSITORY REGULATIONS

For the candidates,who are detained or discontinued in the semester, on readmission "VR14" rules and regulations shall apply. The candidates shall pass all the courses in the curriculum of "VR14". However, Board of studies may prescribe equivalent courses if it deems necessary and same shall be approved/ ratified by academic council.

14. ELIGIBILITY FOR AWARD OF B.Tech. DEGREE

14.1 The B.Tech Degree shall be conferred on a candidate who has satisfied the following requirements.

14.1.1 Regular Students

(a) A Regular student (four year programme) should register himself/herself for 200 Credits from the categories 7.2.1 to 7.2.6, and shall secure 200 credits.

(b) Student shall register for courses categories 7.2.7 and 7.2.8 and successfully complete as given in 8.3.7 and 8.3.8.

14.1.2 Lateral Entry Students

(a) A lateral entry student (three year programme) should register himself for 150 Credits from the categories 7.2.1 to 7.2.6, and shall secure 150 credits.

(b) A lateral entry Student shall register for courses categories 7.2.7 and 7.2.8 and successfully complete as given in 8.3.7 and 8.3.8.

14.2 **Award of Division**

The criteria for award of division, after completion of program as per section 14.1, is as shown in Table 11.

Table 11: Criteria for award of division

CGPA	DIVISION
>= 7.75	First class With Distinction
>= 6.5-< 7.75	First Class
>= 5.5-< 6.5	Second Class
>= 4-<5.5	Pass Class
< 4	Fail

For the purpose of awarding First Class with Distinction CGPA obtained

(a) **within 4 years** - in case of candidates admitted through EAMCET and Management Quota

(b) **within 3 years** - in case of Lateral Entry candidates admitted through ECET.

Detained and break-in study candidates are not eligible for the award of First Class with Distinction.
For the purpose of awarding First, Second and pass Class. CGPA obtained in the examinations appeared within the maximum period allowed for the completion of course shall be considered.

14.3 Consolidated Grade Card

A consolidated grade card containing credits and grades obtained by the candidates and the average semester attendance will be issued after completion of the four year B.Tech Program.

15. IMPROVEMENT OF CUMULATIVE GRADE POINT AVERAGE

15.1 A candidate, after becoming eligible for the award of the Degree, may reappear for the semester end Examination in any of the theory courses as and when conducted, for the purpose of improving the aggregate and the class. But this reappearance shall be within a period of two academic years after becoming eligible for the award of the Degree subject to fulfilment of section 14.

15.2 However, this facility shall not be availed of by a candidate who has taken the Provisional Certificate. Candidate shall be permitted to reappear for semester end examinations only for theory courses.

15.3 Modified Grade Cards and New Consolidated Grade Card will be issued after incorporating new Grades and Credits.

16. CONDUCT AND DISCIPLINE

16.1 Students shall conduct themselves within and outside the premises of the Institute in a manner befitting the students of our Institution.

16.2 As per the order of Honorable Supreme Court of India, ragging in any form is considered a criminal offence and is banned. Any form of ragging will be severely dealt with.

16.3 The following acts of omission and/or commission shall constitute gross violation of the code of conduct and are liable to invoke disciplinary measures with regard to ragging.

(a) Lack of courtesy and decorum; indecent behavior anywhere within or outside the campus.

(b) Willful distribution of alcoholic drinks or any kind of narcotics to fellow students/citizens.

16.4 The following activities are not allowed within the campus

(a) Possession, consumption or distribution of alcoholic drinks or any kind of narcotics or hallucinogenic drugs.

(b) Mutilation or unauthorized possession of library books.

(c) Noisy and unseemly behavior, disturbing studies of fellow students.

(d) Hacking computer systems such as entering into other person's areas without prior permission, manipulation and/or damage of computer hardware and software or any other cybercrime etc.

(e) Use of cell phones in the campus.

(f) Plagiarism of any nature.

(g) Any other act of gross indiscipline as decided by the college from time to time.

16.5 Commensurate with the gravity of offense, the punishment may be reprimand, fine, expulsion from the institute / hostel, debarment from an examination, disallowing the use of certain facilities of the Institute, rustication for a specified period or even outright expulsion from the Institute, or even handing over the case to appropriate law enforcement authorities or the judiciary, as required by the circumstances.

16.6 For an offence committed in (i) a hostel (ii) a department or in a class room and (iii) elsewhere, the Chief Warden, the Head of the Department and the Principal, respectively, shall have the authority to reprimand or impose fine.

16.7 Cases of adoption of unfair means and/or any malpractice in an examination shall be reported to the Principal for taking appropriate action.

16.8 Un-authorized collection of money in any form is strictly prohibited.

16.9 Detained and Break-in-Study candidates are allowed into the campus for academic purposes only with permission from Authorities.

16.10 Misconduct committed by a student outside the college campus but having the effect of damaging, undermining and tarnishing the image and reputation of the institution will make the student concerned liable for disciplinary action commensurate with the nature and gravity of such misconduct.

16.11 The Disciplinary Action Committee constituted by the Principal, shall be the authority to investigate the details of the offence, and recommend disciplinary action based on the nature and extent of the offence committed.

16.12 "Grievance Appeal Committee" (General) constituted by the Principal shall deal with all grievances pertaining to the academic / administrative /disciplinary matters.

16.13 All the students must abide by the code and conduct rules of the college.

17. MALPRACTICES

17.1 The Principal shall refer the cases of malpractices in Continuous Evaluation and Semester-End Examinations, to a Malpractice Enquiry Committee, constituted by him/her for the purpose. Such committee shall follow the approved scales of punishment. The Principal shall take necessary action, against the erring students based on the recommendations of the committee.

17.2 Any action on the part of student at an examination 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.The involvement of the Staff, who are in charge of conducting examinations, valuing examination papers and preparing/keeping records of documents relating 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 recommended for award of appropriate punishment after thorough enquiry.

18. OTHER MATTERS

18.1 The 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.

18.2 Students who are suffering from contagious diseases are not allowed to appear either internal or semester end examinations.

18.3 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 till the entire course is completed as per the guidelines of University Grants Commission Letter No. F.1-5/88 (SPE/PES), dated 18-08-1994.

18.4 The Principal shall deal with any academic problem, which is not covered under these rules and regulations, in consultation with the administrative colleagues and Heads of the Departments in an appropriate manner, and subsequently such actions shall be placed before the academic council for ratification.

19. AMENDMENTS TO REGULATIONS

The Academic Council may, from time to time, revise, amend or change the regulations, schemes of examination and/or syllabi.

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Civil Engineering(CE)

Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14CH1102	Engineering Chemistry	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14CE1104	Basics of Civil Engineering	2			2	30	70	100
5	14HS1105	Professional Ethics	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1107	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1151	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1152	Basic Computing Lab			3	2	30	70	100
10	14ME1153	Workshop Practice			3	2	30	70	100
			19	3	9	25	300	700	1000

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1201	Calculus	4	1		4	30	70	100
2	14PH1202	Engineering Physics	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14HS1204	Technical English and Communication Skills	2		2	2	30	70	100
5	14ME1205	Advanced Mechanics for Engineers	4			4	30	70	100
6	14ME1251	Engineering Graphics	2		6	5	30	70	100
7	14CS1252	C Programming Lab			3	2	30	70	100
8	14PH1253	Engineering Physics Lab			3	2	30	70	100
			18	3	14	25	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Civil Engineering(CE)

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14CE3302	Mechanics for Materials	4	1		4	30	70	100
3	14CE3303	Engineering Geology	3			3	30	70	100
4	14CE3304	Concrete Technology	3			3	30	70	100
5	14EC1305	Basics of Electronics Engineering	2			2	30	70	100
6	14CE3306	Fluid Mechanics	4	1		4	30	70	100
7	14CE3351	Engineering Geology Lab			3	2	30	70	100
8	14CE3352	Concrete Lab			3	2	30	70	100
9	14HS1353	Comunication skills Lab			3	2	30	70	100
			20	3	9	26	270	630	900

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14CE3401	Surveying	4			4	30	70	100
2	14CE3402	Advanced Mechanics of Materials	4	1		4	30	70	100
3	14CE3403	Building Materials and Building Constructions	3			3	30	70	100
4	14HS1404	Environmental Studies	3			3	30	70	100
5	14EE1405	Basics of Electrical Engineering	2			2	30	70	100
6	14CE3406	Hydraulics and Hydraulic Machines	4			4	30	70	100
7	14CE3451	Fluid Mechanics and Hydraulic Machines Lab			3	2	30	70	100
8	14CE3452	Survey Lab			3	2	30	70	100
9	14CE3453	Strength of Materials Lab			3	2	30	70	100
			20	1	9	26	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Civil Engineering

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14CE3501	Structural Analysis I	4	1		3	30	70	100
2	14CE3502	Water Resources Engineering I	3	1		3	30	70	100
3	14CE3503	Design of Concrete Structures I	4	1		3	30	70	100
4	14CE3504	Environmental Engineering I	3	1		3	30	70	100
5	14CE2505	Institutional Elective	4			4	30	70	100
6	14CE5506	Independent Learning				3	30	70	100
7	14CE3507	Geotechnical Engineering	4	1		4	30	70	100
8	14CE3551	Building Planning and Design Lab	1		3	2	30	70	100
9	14CE3552	Geotechnical Engineering Lab			3	2	30	70	100
			23	5	6	27	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14CE3601	Structure Analysis II	4	1		4	30	70	100
2	14CE3602	Water Resources Engineering II	3	1		3	30	70	100
3	14CE3603	Design of Concrete Structures II	3	1		3	30	70	100
4	14HS1604	Engineering Economics and Finance	4			3	30	70	100
5	14CE3605	Environmental Engineering II	4			3	30	70	100
6	14CE3651	Computer Application in Civil Engineering Lab I			3	2	30	70	100
7	14CE3652	Environmental Engineering Lab			3	2	30	70	100
8	14CE5653	Term Paper		1		2	30	70	100
			18	4	6	22	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Civil Engineering(CE)

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14CE3701	Transportation Engineering I	3			3	30	70	100
2	14CE3702	Foundation Engineering	3			3	30	70	100
3	14CE3703	Estimation,Costing and Valuation	3	1		3	30	70	100
4	14CE3704	Design of steel Structures	4	1		4	30	70	100
5	14CE4705	Program Elective I	4			3	30	70	100
6	14CE4706	Program Elective II	4			3	30	70	100
7	14CE3751	Transportation Engineering Lab			3	2	30	70	100
8	14CE3752	Survey Field Work			3	2	30	70	100
9	14CE6753 \ 14CE6754	Internship \ Industry Offered Course			2	2	-	100	100
10	14CE5755	Mini Project		1		2	30	70	100
			21	3	8	27	270	730	1000

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14CE3801	Transportation Engineering II	4			4	30	70	100
2	14CE4802	Program Elective III	4			3	30	70	100
3	14CE4803	Program Elective IV	4			3	30	70	100
4	14CE3851	Computer Applications in Civil Engineering Lab II			3	2	30	70	100
5	14CE5852	Major Project			9	10	30	70	100
			12		12	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

VELAGAPUDI RAMAKRISHNA

Siddhartha Engineering College: Vijayawada-7

Computer Science and Engineering

Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14PH1102	Engineering Physics	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14HS1104	Technical English and Communication Skills	2		2	2	30	70	100
5	14EE1105	Basics of Electrical Engineering	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1151	Engineering Graphics	2		6	5	30	70	100
8	14CS1152	Basic Computing Lab			3	2	30	70	100
9	14PH1153	Engineering Physics Lab			3	2	30	70	100
			17	2	14	24	270	630	900

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14MA1201	Calculus	4	1		4	30	70	100
2	14CH1202	Engineering Chemistry	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14CE1204	Basics of Civil Engineering	2			2	30	70	100
5	14HS1205	Professional Ethics	2			2	30	70	100
6	14EC1206	Basics of Electronics Engineering	2			2	30	70	100
7	14ME1207	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1251	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1252	C Programming Lab			3	2	30	70	100
10	14ME1253	Workshop Practice			3	2	30	70	100
			20	4	9	26	300	700	1000

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, T-Total Marks

VELAGAPUDI RAMAKRISHNA

Siddhartha Engineering College: Vijayawada-7

Computer Science and Engineering

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14CS3302	Discrete Mathematical Structures	3	1		3	30	70	100
3	14CS3303	Digital Logic Design	3	1		3	30	70	100
4	14CS3304	Data Structures	4	1		4	30	70	100
5	14CS3305	Operating Systems	3			3	30	70	100
6	14CS3306	Computer Organization	3	1		3	30	70	100
7	14CS3351	DLD Lab			3	2	30	70	100
8	14CS3352	Data Structures Lab			3	2	30	70	100
9	14HS1353	Communication Skills Lab			2	2	30	70	100
			20	5	8	26	270	630	900

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14MA1401	Probability and Statistics	4	1		4	30	70	100
2	14CS3402	Microprocessor and Multicore Systems	4			4	30	70	100
3	14CS3403	Advanced Data Structures	4			4	30	70	100
4	14HS1404	Environmental Studies	2			2	30	70	100
5	14CS3405	OOPS using Java	4	1		4	30	70	100
6	14CS3406	Data Communications	4			4	30	70	100
7	14CS3451	Microprocessor Lab			3	2	30	70	100
8	14CS3452	Java Programming Lab			3	2	30	70	100
			22	2	6	26	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, T-Total Marks

VELAGAPUDI RAMAKRISHNA

Siddhartha Engineering College: Vijayawada-7

Computer Science and Engineering

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14CS3501	Theory of Computation	3	1		3	30	70	100
2	14CS3502	Database Management Systems	3			3	30	70	100
3	14CS3503	Computer Networks	3	1		3	30	70	100
4	14CS3504	Design and Analysis of Algorithms	4			4	30	70	100
5	14XX2505	Institutional Elective	4			4	30	70	100
6	14CS5506	Independent Learning(MOOCS)	2			2	30	70	100
7	14CS3507	Web technologies	3	1		3	30	70	100
8	14CS3551	DBMS Lab			3	2	30	70	100
9	14CS3552	Web Technologies Lab			3	2	30	70	100
			22	3	6	26	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14CS3601	Software Engineering	4	1		4	30	70	100
2	14CS3602	Data Mining	4	1		4	30	70	100
3	14CS3603	Advanced Java Programming	3	1		3	30	70	100
4	14CS3604	Compiler Design	4	1		4	30	70	100
5	14CS3605	Cryptography and Network Security	4			4	30	70	100
6	14CS3651	CASE Tools Lab			3	2	30	70	100
7	14CS3652	Advanced Java Programming Lab			3	2	30	70	100
8	14CS5653	Term Paper		1		2	30	70	100
			19	4	6	25	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, T-Total Marks

VELAGAPUDI RAMAKRISHNA

Siddhartha Engineering College: Vijayawada-7

Computer Science and Engineering

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14CS3701	Mobile Application Development	3	1		3	30	70	100
2	14CS3702	Embedded Systems	3	1		3	30	70	100
3	14CS3703	Mobile Computing	3	1		3	30	70	100
4	14CS1704	Engineering Economics and Finance	4			4	30	70	100
5	14CS4705	Program Elective I	3			3	30	70	100
6	14CS4706	Program Elective II	3			3	30	70	100
7	14CS3751	Mobile Applications Development Lab			3	2	30	70	100
8	14CS3752	Embedded Systems Lab			3	2	30	70	100
9	14CS6753 \ 14CS6754	Internship \ Industry Offered Course			2	2	-	100	100
10	14CS5755	Mini Project Lab			3	1	30	70	100
			19	3	9	26	270	730	1000

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	T
1	14CS3801	Big Data Analytics	4			4	30	70	100
2	14CS4802	Program Elective III	3			3	30	70	100
3	14CS4803	Program Elective IV	3			3	30	70	100
4	14CS3851	Big Data Analytics Lab			3	2	30	70	100
5	14CS5852	Major Project		6	6	10	30	70	100
			10	6	9	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, T-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Communications Engineering(ECE)

Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14PH1102	Engineering Physics	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14HS1104	Technical English and Communication Skills	2		2	2	30	70	100
5	14EE1105	Basics of Electrical Engineering	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1151	Engineering Graphics	2		6	5	30	70	100
8	14CS1152	Basic Computing Lab			3	2	30	70	100
9	14PH1153	Engineering Physics Lab			3	2	30	70	100
			17	2	14	24	270	630	900

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1201	Calculus	4	1		4	30	70	100
2	14CH1202	Engineering Chemistry	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14CE1204	Basics of Civil Engineering	2			2	30	70	100
5	14HS1205	Professional Ethics	2			2	30	70	100
6	14EC1206	Basics of Electronics Engineering	2			2	30	70	100
7	14ME1207	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1251	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1252	C Programming Lab			3	2	30	70	100
10	14ME1253	Workshop Practice			3	2	30	70	100
			20	4	9	26	300	700	1000

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Communications Engineering(ECE)

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14EC3302	Electronic Devices	4			4	30	70	100
3	14EC3303	Network Theory	3	1		3	30	70	100
4	14EC3304	Digital Circuits and Systems	4	1		4	30	70	100
5	14EC3305	Signals and Systems	3			3	30	70	100
6	14EC3306	Electrical Technology	2			2	30	70	100
7	14EC3351	Electronic Devices and Digital Circuits Lab			3	2	30	70	100
8	14EC3352	Electrical Technology Lab			3	2	30	70	100
9	14HS1353	Communication Skills Lab				2	30	70	100
			20	3	6	26	270	630	900

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EC3401	Probability Theory and Random Processes	4	1		4	30	70	100
2	14EC3402	Electronic Circuits	4			4	30	70	100
3	14EC3403	Electromagnetic Field Theory	4	1		4	30	70	100
4	14HS1404	Environmental Studies	3			3	30	70	100
5	14EC3405	Computer Architecture and Organization	3			3	30	70	100
6	14EC3406	Analog Communications	4			4	30	70	100
7	14EC3451	Electronic Circuits Lab			3	2	30	70	100
8	14EC3452	Analog Communications Lab			3	2	30	70	100
			22	2	6	26	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Communications Engineering(ECE)

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EC3501	Linear Control Systems	4			4	30	70	100
2	14EC3502	Pulse and Switching Circuits	3	1		3	30	70	100
3	14EC3503	Microprocessors and Microcontrollers	3	1		3	30	70	100
4	14EC3504	Digital Communications	3	1		3	30	70	100
5	14EC2505	Institutional Elective	4			4	30	70	100
6	14EC5506	Independent Learning(MOOCS)				2	30	70	100
7	14EC3507	Transmission lines and Wave guides	3	1		3	30	70	100
8	14EC3551	Pulse and Switching Circuits Lab			3	2	30	70	100
9	14EC3552	Digital Communications Lab			3	2	30	70	100
			20	4	6	26	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EC3601	Linear Integrated Circuits and Applications	4			4	30	70	100
2	14EC3602	Computer Networks	3			3	30	70	100
3	14EC3603	Antennas and Wave Propagation	3			3	30	70	100
4	14EC3604	VLSI Design	4			4	30	70	100
5	14EC3605	Digital Signal Processing	3			3	30	70	100
6	14EC3651	Linear Integrated Circuits and Applications Lab			3	2	30	70	100
7	14EC3652	VLSI Design Lab			3	2	30	70	100
8	14EC5653	Term Paper		1		2	30	70	100
			17	1	6	23	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Communications Engineering(ECE)

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EC3701	Electronic Measurements and Instrumentation	3			3	30	70	100
2	14EC3702	Cellular and Mobile Communications	3			3	30	70	100
3	14EC3703	DSP Processors and Architectures	4			4	30	70	100
4	14HS1704	Engineering Economics and Finance	3			3	30	70	100
5	14EC4705	Program Elective I	4			3	30	70	100
6	14EC4706	Program Elective II	4			3	30	70	100
7	14EC3751	DSP Lab			3	2	30	70	100
8	14EC3752	Microprocessors and Microcontrollers Lab			3	2	30	70	100
9	14EC6753 \ 14EC6754	Internship Industry Offered Course			2	2	-	100	100
10	14EC5755	Mini Project		1		2	30	70	100
			21	1	8	27	270	730	1000

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EC3801	Microwave Engineering	4			4	30	70	100
2	14EC4802	Program Elective III	4			3	30	70	100
3	14EC4803	Program Elective IV	4			3	30	70	100
4	14EC3851	Microwave Engineering Lab			3	2	30	70	100
5	14EC5852	Major Project		6	6	10	30	70	100
			12	6	9	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electrical and Electronics Engineering(EEE)
Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14CH1102	Engineering Chemistry	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14CE1104	Basics of Civil Engineering	2			2	30	70	100
5	14HS1105	Professional Ethics	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1107	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1151	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1152	Basic Computing Lab			3	2	30	70	100
10	14ME1153	Workshop Practice			3	2	30	70	100
			19	3	9	25	300	700	1000

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1201	Calculus	4	1		4	30	70	100
2	14PH1202	Engineering Physics	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14HS1204	Technical English and Communication Skills	2		2	2	30	70	100
5	14EE1205	Basics of Electrical Engineering	2			2	30	70	100
6	14EC1206	Basics of Electronics Engineering	2			2	30	70	100
7	14ME1251	Engineering Graphics	2		6	5	30	70	100
8	14CS1252	C Programming Lab			3		30	70	100
9	14PH1253	Engineering Physics Lab			3	2	30	70	100
			18	3	14	25	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electrical and Electronics Engineering(EEE)

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14EE3302	Electronic Devices and Circuits	4			4	30	70	100
3	14EE3303	Network Analysis I	4	1		4	30	70	100
4	14HS1304	Environmental Studies	3			3	30	70	100
5	14EE3305	Electrical Machines I	4	1		4	30	70	100
6	14EE3306	Digital Circuits and Systems	3			3	30	70	100
7	14EE3351	Electrical Networks and Machines Lab I			3	2	30	70	100
8	14EE3352	Electronics Lab I			3	2	30	70	100
			22	3	6	26	240	560	800

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1401	Transformations and Probability Distribution	4	1		4	30	70	100
2	14EE3402	Electronic Circuits	3			3	30	70	100
3	14EE3403	EMF Theory	3			3	30	70	100
4	14EE3404	Network Analysis II	4	1		4	30	70	100
5	14EE3405	Electrical Machines II	3	1		3	30	70	100
6	14EE3406	Electrical Measurements	3	1		3	30	70	100
7	14EE3451	Electrical Networks and Machines Lab II			3	2	30	70	100
8	14EE3452	Electrical Measurements Lab			3	2	30	70	100
9	14HS1453	Communication skills Lab			2	2	30	70	100
			20	4	8	26	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electrical and Electronics Engineering(EEE)

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EE3501	Linear Control Systems	3	1		3	30	70	100
2	14EE3502	Integrated Circuits and Applications	3	1		3	30	70	100
3	14EE3503	Microcontrollers and Digital Signal Processors	3	1		3	30	70	100
4	14EE3504	Electrical Machines III	3	1		3	30	70	100
5	14EE2505	Institutional Elective	4			4	30	70	100
6	14EE5506	Independent Learning	3			3	30	70	100
7	14EE3507	Generation of Electrical Power	3			3	30	70	100
8	14EE3551	AC Machines Lab			3	2	30	70	100
9	14EE3552	Electronics and Workshop Lab II			3	2	30	70	100
			22	4	6	26	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EE3601	Fundamental of Digital Signal Processing	4	1		4	30	70	100
2	14EE3602	Power Electronics	4	1		4	30	70	100
3	14EE3603	Advanced Control Systems	3	1		3	30	70	100
4	14HS1604	Engineering Economics and Finance	3			3	30	70	100
5	14EE3605	Transmission and Distribution	3	1		3	30	70	100
6	14EE3651	DSP Lab			3	2	30	70	100
7	14EE3652	Control Systems and Microprocessors Lab			3	2	30	70	100
8	14EE5653	Term Paper		1		2	30	70	100
			17	5	6	23	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electrical and Electronics Engineering(EEE)

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EE3701	Utilization of Electric Power	3			3	30	70	100
2	14EE3702	Switch Gear and Production	3	1		3	30	70	100
3	14EE3703	Power System Analysis	3	1		3	30	70	100
4	14EE3704	Industrial Drives	4	1		4	30	70	100
5	14EE4705	Program Elective I	3	1		3	30	70	100
6	14EE4706	Program Elective II	3	1		3	30	70	100
7	14EE3751	Power System Lab			3	2	30	70	100
8	14EE3752	Power Electronics Lab			3	2	30	70	100
9	14EE6753 \ 14EE6754	Internship \ Industry Offered Course			2	2	-	100	100
10	14EE5755	Mini Project			1	2	30	70	100
			19	5	9	27	270	730	1000

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EE3801	Power System Operation and Control	4	1		4	30	70	100
2	14EE4802	Program Elective III	3	1		3	30	70	100
3	14EE4803	Program Elective IV	3	1		3	30	70	100
4	14EE3851	Simulation of Electrical Systems Lab			3	2	30	70	100
5	14EE5852	Major Project		3	9	10	30	70	100
			10	6	12	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Instrumentation Engineering(EIE)

Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14CH1102	Engineering Chemistry	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14CE1104	Basics of Civil Engineering	2			2	30	70	100
5	14HS1105	Professional Ethics	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1107	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1151	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1152	Basic Computing Lab			3	2	30	70	100
10	14ME1153	Workshop Practice			3	2	30	70	100
			19	3	9	25	300	700	1000

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1201	Calculus	4	1		4	30	70	100
2	14PH1202	Engineering Physics	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14HS1204	Technical English and Communication Skills	2		2	2	30	70	100
5	14EE1205	Basics of Electrical Engineering	2			2	30	70	100
6	14EC1206	Basics of Electronics Engineering	2			2	30	70	100
9	14ME1251	Engineering Graphics	2		6	5	30	70	100
8	14CS1252	C Programming Lab			3	2	30	70	100
7	14PH1253	Engineering Physics Lab			3	2	30	70	100
			18	3	14	25	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Instrumentation Engineering(EIE)

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14EI3302	Electronic Devices and Circuits	4			4	30	70	100
3	14EI3303	Network Theory	3	1		3	30	70	100
4	14EI1304	Environmental Studies	3			3	30	70	100
5	14EI3305	Sensors and Transducers	4			4	30	70	100
6	14HS3306	Digital Circuits and Systems	4	1		4	30	70	100
7	14EI3351	Electronic Devices and Digital Electronics Lab			3	2	30	70	100
8	14EI3352	Transducers Lab			3	2	30	70	100
			22	3	6	26	240	560	800

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1401	Complex Analysis and Probability Distribution	4	1		4	30	70	100
2	14EI3402	Analog Electronic Circuits	3	1		3	30	70	100
3	14EI3403	Electrical and Electronic Measurements	3	1		3	30	70	100
4	14EI3404	Industrial Instrumentation	4			4	30	70	100
5	14EI3405	Signals and Systems	3	1		3	30	70	100
6	14EI3406	Electrical Technology	3	1		3	30	70	100
7	14EI3451	Measurements Lab			3	2	30	70	100
8	14EI3452	Electrical Engineering Lab			3	2	30	70	100
9	14HS1453	Communication skills Lab			2	2	30	70	100
			20	5	8	26	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Instrumentation Engineering(EIE)

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EI3501	Linear Control Systems	3	1		3	30	70	100
2	14EI3502	Integrated Circuits and Applications	3	1		3	30	70	100
3	14EI3503	Microprocessors and Microcontrollers	3	1		3	30	70	100
4	14EI3504	Digital Signal Processing	3	1		3	30	70	100
5	14EI2505	Institutional Elective	4			4	30	70	100
6	14EI5506	Independent Learning	3			3	30	70	100
7	14EI3507	Analytical Instrumentation	3			3	30	70	100
8	14EI3551	Linear Integrated Circuits Lab			3	2	30	70	100
9	14EI3552	Microprocessors and Microcontrollers Lab			3	2	30	70	100
			22	4	6	26	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EI3601	Virtual Instrumentation	4			4	30	70	100
2	14EI3602	Industrial Electronics	3	1		3	30	70	100
3	14EI3603	Industrial Communication Networks	3			3	30	70	100
4	14HS1604	Engineering Economics and Finance	3			3	30	70	100
5	14HS3605	Process Control	4	1		4	30	70	100
6	14EI3651	Virtual Instrumentation Lab			3	2	30	70	100
7	14EI3652	Process Control Lab			3	2	30	70	100
8	14EI5653	Term Paper		1		2	30	70	100
			17	3	6	23	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Electronics and Instrumentation Engineering(EIE)

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EI3701	Robotics and Automation	3			3	30	70	100
2	14EI3702	Computer Control of Processes	3			3	30	70	100
3	14EI3703	Logic and Distributed Control Systems	4			4	30	70	100
4	14EI3704	Embedded Systems	3			3	30	70	100
5	14EI4705	Program Elective I	4			3	30	70	100
6	14EI4706	Program Elective II	4			3	30	70	100
7	14EI3751	PLC's Lab			3	2	30	70	100
8	14EI3752	Embedded Systems Lab			3	2	30	70	100
9	14EI6753 \ 14EI6754	Internship \ Industry Offered Course			2	2	-	100	100
10	14EI5755	Mini Project			1	2	30	70	100
			21		9	27	270	730	1000

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14EI3801	Bio-Medical Instrumentation	4			4	30	70	100
2	14EI4802	Program Elective III	4			3	30	70	100
3	14EI4803	Program Elective IV	4			3	30	70	100
4	14EI3851	Advanced Instrumentation Lab			3	2	30	70	100
5	14EI5852	Major Project	2	4	12	10	30	70	100
			14	4	15	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Information Technology(IT)

Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14PH1102	Engineering Physics	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14HS1104	Technical English and Communication Skills	2		2	2	30	70	100
5	14EE1105	Basics of Electrical Engineering	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1151	Engineering Graphics	2		6	5	30	70	100
8	14CS1152	Basic Computing Lab			3	2	30	70	100
9	14PH1153	Engineering Physics Lab			3	2	30	70	100
			17	2	14	24	270	630	900

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1201	Calculus	4	1		4	30	70	100
2	14CH1202	Engineering Chemistry	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14CE1204	Basics of Civil Engineering	2			2	30	70	100
5	14HS1205	Professional Ethics	2			2	30	70	100
6	14EC1206	Basics of Electronics Engineering	2			2	30	70	100
7	14ME1207	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1251	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1252	C Programming Lab			3	2	30	70	100
10	14ME1253	Workshop Practice			3	2	30	70	100
			20	4	9	26	300	700	1000

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Information Technology(IT)

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14IT3302	Discrete Mathematical Structures	3	1		3	30	70	100
3	14IT3303	Internet Programming	2	2		3	30	70	100
4	14IT3304	Data Structures	4			4	30	70	100
5	14IT3305	Operating Systems	3	1		3	30	70	100
6	14IT3306	Computer Organization	3	1		3	30	70	100
7	14IT3351	Operating Systems Lab			3	2	30	70	100
8	14IT3352	Data Structures Lab			3	2	30	70	100
9	14HS1353	Communication Skills Lab			2	2	30	70	100
			19	6	8	26	270	630	900

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1401	Probability and Statistics	4			4	30	70	100
2	14IT3402	Database Management Systems	4			4	30	70	100
3	14IT3403	Design Analysis and Algorithms	3	1		3	30	70	100
4	14HS1404	Environmental Studies	3			3	30	70	100
5	14IT3405	OOPS using Java	4	1		4	30	70	100
6	14IT3406	Theory of Computation	4	1		4	30	70	100
7	14IT3451	Database Management Systems Lab			3	2	30	70	100
8	14IT3452	Java Programming Lab			3	2	30	70	100
			22	3	6	26	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Information Technology(IT)

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14IT3501	Embedded MicroControllers	3	1		3	30	70	100
2	14IT3502	Advanced Database Management Systems	3	2		4	30	70	100
3	14IT3503	Computer Networks	3	1		3	30	70	100
4	14IT3504	Web Programming and Development	4			4	30	70	100
5	14IT2505	Institutional Elective	4			4	30	70	100
6	14IT5506	Independent Learning(MOOCS)		4		2	30	70	100
7	14IT3551	Computer Networks Lab			3	2	30	70	100
8	14IT3552	Web Programming and Development Lab			3	2	30	70	100
9	14IT3553	Embedded MicroControllers Lab			3	2	30	70	100
			17	8	9	26	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14IT3601	Software Engineering	3	1		3	30	70	100
2	14IT3602	Data Warehousing	4			4	30	70	100
3	14IT3603	Computer Vision	4			4	30	70	100
4	14IT3604	Wireless Networks	3	1		3	30	70	100
5	14IT4605	Program Elective I	3			3	30	70	100
6	14IT3651	Data Warehousing Lab			3	2	30	70	100
7	14IT3652	Computer Vision Lab			3	2	30	70	100
8	14IT3653	Wireless Networks Lab			3	2	30	70	100
9	14IT5654	Term Paper		1		2	30	70	100
			17	3	9	25	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Information Technology(IT)

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14IT3701	Parallel Computing	3	1		3	30	70	100
2	14IT3702	Data Analytics	4			4	30	70	100
3	14IT3703	Network Security	4	1		4	30	70	100
4	14HS1704	Engineering Economics and Finance	4			3	30	70	100
5	14IT4705	Program Elective II	3			3	30	70	100
6	14IT3751	Parallel Computing Lab			3	2	30	70	100
7	14IT3752	Data Analytics Lab			3	2	30	70	100
8	14IT6753 \ 14IT6754	Internship \ Industry Offered Course				2	-	100	100
9	14IT5755	Mini Project				2	30	70	100
			18	2	6	25	240	660	900

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14IT3801	Software Testing Methodologies	4			4	30	70	100
2	14IT4802	Program Elective III	3			3	30	70	100
3	14IT4803	Program Elective IV	3			3	30	70	100
4	14IT3851	Software Testing Tools Lab			3	2	30	70	100
5	14IT5852	Major Project		3	9	10	30	70	100
			10	3	12	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Mechanical Engineering(ME)

Scheme of Instruction and Examination-VR14

Semester I

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1101	Linear Algebra and Differential Equations	4	1		4	30	70	100
2	14CH1102	Engineering Chemistry	3	1		3	30	70	100
3	14CS1103	Introduction to Computing	2			2	30	70	100
4	14CE1104	Basics of Civil Engineering	2			2	30	70	100
5	14HS1105	Professional Ethics	2			2	30	70	100
6	14ME1106	Basics of Mechanical Engineering	2			2	30	70	100
7	14ME1107	Mechanics for Engineers	4	1		4	30	70	100
8	14CH1151	Engineering Chemistry Lab			3	2	30	70	100
9	14CS1152	Basic Computing Lab			3	2	30	70	100
10	14ME1153	Workshop Practice			3	2	30	70	100
			19	3	9	25	300	700	1000

Semester II

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1201	Calculus	4	1		4	30	70	100
2	14PH1202	Engineering Physics	3	1		3	30	70	100
3	14CS1203	Programming in C	3	1		3	30	70	100
4	14HS1204	Technical English and Communication Skills	2		2	2	30	70	100
5	14ME1205	Advanced Mechanics for Engineers	4			4	30	70	100
6	14ME1251	Engineering Graphics	2		6	5	30	70	100
7	14CS1252	Programming in C Lab			3	2	30	70	100
8	14PH1253	Engineering Physics Lab			3	2	30	70	100
			18	3	14	25	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Mechanical Engineering(ME)

Scheme of Instruction and Examination-VR14

Semester III

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14MA1301	Complex Analysis and Numerical Methods	4	1		4	30	70	100
2	14ME3302	Mechanics of Materials	4	1		4	30	70	100
3	14ME3303	Basic Thermodynamics	3	1		3	30	70	100
4	14HS1304	Environmental Studies	3			3	30	70	100
5	14EC1305	Basics of Electronics Engineering	2			2	30	70	100
6	14ME3306	Kinematics of Machines	3	1		3	30	70	100
7	14ME3307	Manufacturing Processes	3	1		3	30	70	100
8	14ME3351	Computer aided Drafting Lab			3	2	30	70	100
9	14ME3352	Workshop Practice			3	2	30	70	100
			22	4	6	26	270	630	900

Semester IV

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14ME3401	Fourier Transforms and Statistical Techniques	3	1		3	30	70	100
2	14ME3402	Advanced Mechanics of Materials	4	1		4	30	70	100
3	14ME3403	Fluid Mechanics	3	1		3	30	70	100
4	14EE3404	Applied Thermodynamics	4	1		4	30	70	100
5	14EE1405	Basics of Electrical Engineering	2			2	30	70	100
6	14ME3406	Material Science and Metallurgy	3			3	30	70	100
7	14ME3451	Computational Methods Lab			3	2	30	70	100
8	14ME3452	Electrical and Electronics Lab			3	2	30	70	100
9	14HS1453	Communication Skills Lab			2	2	30	70	100
			19	4	8	25	270	630	900

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Mechanical Engineering(ME)

Scheme of Instruction and Examination-VR14

Semester V

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14ME3501	Hydraulic Machines	2	1		2	30	70	100
2	14ME3502	Design of Machine Elements	4	1		4	30	70	100
3	14ME3503	Machine Dynamics	4	1		4	30	70	100
4	14ME3504	IC Engines and Gas Turbines	4	1		4	30	70	100
5	14ME2505	Institutional Elective	4			4	30	70	100
6	14ME5506	Independent Learning				2	30	70	100
7	14ME3507	Metal Cutting and Machine Tools	3	1		3	30	70	100
8	14ME3551	Modelling and Simulation Lab			3	2	30	70	100
9	14ME3552	SM and FM Lab			3	2	30	70	100
			21	5	6	27	270	630	900

Semester VI

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14ME3601	Heat Transfer	4	1		4	30	70	100
2	14ME3602	Design of Transmission Elements	4	1		4	30	70	100
3	14ME3603	Operations Research	4	1		4	30	70	100
4	14HS1604	Engineering Economics and Finance	3			3	30	70	100
5	14HS1605	Engineering Metrology and Measurements	3		1	3	30	70	100
6	14ME3651	Fuels and IC Engines Lab			3	2	30	70	100
7	14ME3652	Machine Tools Lab			3	2	30	70	100
8	14ME5653	Term Paper		1		2	30	70	100
			22	5	6	24	240	560	800

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks

Velagapudi Ramakrishna

Siddhartha Engineering College: Vijayawada-7

Mechanical Engineering(ME)

Scheme of Instruction and Examination-VR14

Semester VII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14ME3701	Finite Element Method	4	1		4	30	70	100
2	14ME3702	Adbanced Manufacturing Processes	4			4	30	70	100
3	14ME3703	Refrigeration and Air Conditioning	4			4	30	70	100
4	14ME4704	Program Elective I	4			3	30	70	100
5	14ME4705	Program Elective II	4			3	30	70	100
6	14ME3751	Heat Transfer Lab			3	2	30	70	100
7	14ME3752	Design and Metrology Lab			3	2	30	70	100
8	14ME6753 \ 14ME6754	Internship \ Industry Offered Course			2	2	-	100	100
9	14ME5755	Mini Project		1		2	30	70	100
			20	2	6	26	240	660	900

Semester VIII

S.No	Sub. Code	Subject Title	L	T	P	C	CE	SE	To
1	14ME3801	Manufacturing Management	4			4	30	70	100
2	14ME4802	Program Elective III	4			3	30	70	100
3	14ME4803	Program Elective IV	4			3	30	70	100
4	14ME3851	CAD and CAM Lab			3	2	30	70	100
5	14ME5852	Major Project	2	6	10	10	30	70	100
			14	6	13	22	150	350	500

L-Lecture, T-Tutorial, P-Practical, C-Credits, CE-Continuous Evaluation, SE-Semester-end Evaluation, To-Total Marks