



# **K.S.R. COLLEGE OF ENGINEERING**

(An Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to Anna University)

**K.S.R. Kalvi Nagar, Tiruchengode – 637 215,  
Namakkal District, Tamil Nadu**

## **UG REGULATIONS 2020**

(Choice Based Credit System)

(B.E./B.Tech.)

**Note:** The regulations here under are subject to amendments as may be made by the Academic Council of the College from time to time. 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.



## K.S.R. COLLEGE OF ENGINEERING

(An Autonomous Institution, Approved by AICTE, Accredited by NAAC with A grade & Affiliated to Anna University)

**K.S.R. Kalvi Nagar, Tiruchengode – 637 215, Tamil Nadu, India**

Phone: 04288-274213

Fax: 04288-274757

E - mail: principal@ksrce.ac.in

### UG (B.E. / B. Tech.) REGULATIONS- 2020

Choice Based Credit System

**(For the students admitted to B.E. / B.Tech. Programme from the Academic year 2020 - 2021)**

#### 1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires:

- I). **“Programme”** means Degree Programme that is B.E./B.Tech. Degree Programme.
- II). **“Discipline”** means specialization or branch of B.E./B.Tech. Degree Programme, like Civil Engineering, Computer Science and Engineering, etc.
- III). **“Course”** means a theory or practical subject that is normally studied in a semester, like Mathematics, Physics, etc.
- IV). **“Head of the Institution”** means the Principal of a College / Institution who is responsible for all academic activities of that College / Institution and for implementation of relevant Rules and Regulations.
- V). **“Head of the Department”** means Head of the Department concerned.
- VI). **“Chairman”** means the Head of the Department / Senior Professor of the Department concerned.
- VII). **“Controller of Examinations”** means the authority of the College who is responsible for all activities of the End Semester Examination.
- VIII). **“University”** means ANNA UNIVERSITY.

#### 2. ADMISSION PROCEDURE

- 2.1 Candidates seeking admission to the first semester of the eight semester B.E. / B.Tech. Degree Programme:

Should have passed the Higher Secondary Examinations of (10 +2) Curriculum (Academic Stream) prescribed by the state Government with Mathematics, Physics and Chemistry as three of the four courses of study under Part-III or any examination of any other University or authority accepted by the Syndicate of University as equivalent thereto.

(OR)

Should have passed the Higher Secondary Examination of Vocational stream (Vocational groups in Engineering / Technology) as prescribed by the Government of Tamil Nadu.

#### 2.2 LATERAL ENTRY ADMISSION

- (i) The candidates who possess the Diploma in Engineering / Technology awarded by the State Board of Technical Education, Tamilnadu or its equivalent are eligible to apply for Lateral entry admission to the III semester of B.E. / B.Tech. in the branch corresponding to the branch of study.

(OR)

- (ii) The candidates who possess the Degree in Science (B.Sc.,) (10+2+3 stream) with Mathematics as a subject at the B.Sc. Level are eligible to apply for Lateral entry admission to the III semester of B.E. / B.Tech.

Such candidates shall undergo two additional Engineering subject(s) in the III and IV semesters respectively as decided by Admission committee and approved by Academic Council.

### 3. PROGRAMMES OFFERED

A candidate may select any one of the Programme offered by the college which are approved by AICTE and Affiliated by the Anna University.

Details of programmes currently being offered by the college are given below

SI.No	Name of the Programme	Credits to be earned
1.	B.E. Automobile Engineering	160
2.	B.E. Civil Engineering	160
3.	B.E. Computer Science and Engineering	160
4.	B.E. Electrical and Electronics Engineering	160
5.	B.E. Electronics and Communication Engineering	160
6.	B. Tech. Information Technology	161
7.	B.E. Mechanical Engineering	160
8.	B.E. Safety and Fire Engineering	160

### 4. STRUCTURE OF PROGRAMMES

#### 4.1 CATEGORIZATION OF COURSES

Every B.E. / B.Tech. Programme will have curricula with syllabi consisting of theory and practical course that shall be categorized as follows:

- i. **Humanities and Social Sciences including Management Courses (HSMC)** include Technical English, Employability Skills, Engineering Ethics and Human Values, Communication Skills, Principles of Management and Total Quality Management.
- ii. **Basic Science Courses (BSC)** include Mathematics, Physics, Chemistry, Biology, etc.
- iii. **Engineering Science Courses (ESC)** include Workshop Practice/Workshop Manufacturing for Practice, Engineering Graphics/Drawing, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.
- iv. **Professional Core Courses (PCC)** include the core courses relevant to the chosen specialization/branch.
- v. **Professional Elective Courses (PEC)** include the elective courses relevant to the chosen specialization / branch.
- vi. **Open Elective Courses (OEC)** give the opportunity to study a course from any discipline that includes the courses relevant to the chosen specialization, the courses that enhance soft and managerial skills, courses a student can choose from the curriculum of other B.E. / B. Tech. programmes and courses offered by the Departments under the Faculty of Science and Humanities.
- vii. **Mandatory Courses (MC)** enable to know something about the Environment Sciences, Indian Constitution, Essence of Indian Traditional Knowledge and Induction Program, whose scores will have no bearing on their final credits.
- viii. **Employability Enhancement Courses (EEC)** include Project Work and/or Internship, Career Development skills, seminar, Professional Practices, Case Study and Industrial/Practical Training.

There shall be a certain minimum number of core courses and sufficient number of elective courses that can be opted by the students. The blend of different courses shall be so designed that the student, at the end of the programme, would have been trained not only in his / her relevant professional field but also would have developed as a socially conscious human being.

#### 4.2 PERSONALITY AND CHARACTER DEVELOPMENT

Interested students may enroll their names in one or more personality and character development programmes (NCC/NSS/NSO/YRC/RRC) and undergo the related training specified by the relevant authority of State and Central Government. The training shall include classes on hygiene and health awareness and also training in first-aid.

**National Cadet Corps (NCC)** will have about 90 parades.

**National Service Scheme (NSS)** will have social service activities in and around the College/Institution and neighboring villages.

**National Sports Organization (NSO)** will have sports, games, drills and physical exercises.

**Youth Red Cross/Red Ribbon Club (YRC/RRC)** will have activities related to social services in and around College/Institutions.

While the training activities will normally be during weekends, the camp will normally be during the vacation period.

#### 4.3 NUMBER OF COURSES PER SEMESTER

Curriculum of a semester shall normally have a blend of 4 to 6 lecture courses including Mandatory courses except the final semester and laboratory courses not exceeding 3. In Addition, Employability Enhancement Course(s) may also be included. Each course may have credits assigned as per clause 4.4. However, the total number of courses per semester shall not exceed 10 (including EEC). Final semester may have a blend of 3 or 4 lecture courses, project work and 1 or 2 laboratory courses.

#### 4.4 CREDIT ASSIGNMENT

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

CONTACT PERIOD PER WEEK	CREDITS
1 Lecture / Tutorial Period	1
3 Practical Periods (Laboratory / Seminar / Project Work / etc.)	1

#### 4.5 INDUSTRIAL TRAINING / INTERNSHIP

4.5.1 The students may undergo Industrial training for a period as specified in the Curriculum during summer / winter vacation. In this case, the training has to be undergone continuously for the entire period. The Students may undergo internship at research organizations after due approval from their Head of the Department for the period prescribed in the curriculum during summer/winter vacation, in lieu of Industrial training.

4.5.2 If Industrial Training / Internship is not prescribed in the curriculum, the student may undergo Industrial Training / Internship optionally and the credits earned will be indicated in the Grade Sheet. If the student earns three credits in Industrial Training / Internship, the student may drop one elective. In such cases, Industrial Training / Internship needs to be undergone continuously from one organization only. However, if the number of credits earned is 1 or 2, these credits shall not be considered for classification of the degree. The student is allowed to undergo a maximum of 6 weeks Industrial Training / Internship during the entire duration of study.

DURATION OF TRAINING / INTERNSHIP	CREDITS
2 Weeks	1
4 Weeks	2
6 Weeks	3

4.5.3 The students who have more than CGPA of 7.5 and above with no standing arrears may be permitted on request to avail the option of advancing 8<sup>th</sup> semester courses to the previous semester to go for project Internship/ Industrial Training.

#### 4.6 INDUSTRIAL VISIT

Every student is required to go for at least two Industrial visits from the first year to final year of the Programme. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

#### 4.7 Value Added Courses

Students shall be allowed to take a value added course offered by a department with the approval from their respective Board of Studies and Academic Council. The credits earned through the Value Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. One / Two credit courses shall be offered by a Department of an institution with the prior approval from the Board of Studies. Students can take a maximum of three credits either by one credit and/or two credit courses during the entire duration of the Programme. The Students are also allowed to take the value added courses offered in other departments with the permission of the Head of the Department offering the course.

#### 4.8 ONLINE COURSES AND SELF STUDY COURSES

4.8.1 The interested students who have no standing arrears are permitted to gain credit through one online courses offered by NPTEL, NMEICT, QEEE, MOOC and etc subject to a maximum of three credits. The Student needs to obtain certification to become eligible for writing End Semester Examination to be conducted by the Institution under autonomous scheme. Assignments and tutorial marks obtained through the online courses shall be added to the internal marks in case students do not opt for examination conducted by the NPTEL / NMEICT / QEEE / MOOC and etc. In case of credits earned through online mode from the NPTEL / NMEICT / QEEE / MOOC and etc with approval of Board of Studies and Academic Council, the credit may be transferred with the due approval procedures from the concern Department.

DURATION OF THE ONLINE COURSE	CREDITS
4 Weeks	1
8 Weeks	2
12 Weeks and above	3

#### 4.8.2 Self Study Courses

A student can choose one self study course each in III and IV year provided the student does not have any standing arrears and with a CGPA of 7.5 and above.

The purpose of the course is to permit the student to study a course / a topic of the student's choice. The students shall study on their own under the guidance of a faculty member. No formal lectures need to be delivered. The syllabus of the course and mode of assessments shall be approved by the Board of Studies and Academic Council. One Faculty member approved by the Head of the Department shall be responsible for the periodic monitoring and evaluation of the student performance before the commencement of the End Semester Examination.

#### 4.9 COURSE COMPENSATION

Value added course/ self study course / online course of 3 credits can be considered instead of one elective course in 7<sup>th</sup> and 8<sup>th</sup> semester. Students can avail exemption for maximum of two elective courses in 7<sup>th</sup> and 8<sup>th</sup> semester. However, if the number of credits earned is 1 or 2, these credits shall not be considered for classification of the degree.

#### **4.10 MEDIUM OF INSTRUCTION**

The medium of instruction shall be English for all courses, examinations, seminar presentations and project reports.

#### **5. DURATION OF THE PROGRAMMES**

**5.1** A student is ordinarily expected to complete the B.E. / B.Tech. Programme in 8 semesters (four academic years) but in any case not more than 14 Semesters for HSC (or equivalent) candidates and not more than 12 semesters for Lateral Entry Candidates.

**5.2** Each semester shall normally consist of 90 working days or 450 periods of 50 minutes each. The Head of the Institution shall ensure that every faculty imparts instruction as per the number of periods specified in the syllabus and that the faculty teaches the full content of the specified syllabus for the course being taught.

**5.3** The Head of the Institution may conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. But for the purpose of calculation of attendance requirement for appearing the End Semester Examination (as per clause 6), following method shall be used.

$$\text{Percentage of Attendance} = \frac{A}{B} \times 100$$

**A** - Total no. of periods attended in all the courses per semester

**B** - (No. of periods / week as prescribed in the curriculum taken together for all courses of the semester) x 15

The End Semester Examination will ordinarily follow immediately after the last working day of the semester as per the academic schedule prescribed from time to time.

**5.4** The total period for completion of the programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of Break of Study (vide clause 17.1) in order that he/she may be eligible for the award of the degree (vide clause 13).

**5.5** All the above will subject to change from time to time based on the norms of the Affiliated University (Anna University, Chennai).

#### **6. REQUIREMENTS FOR APPEARING THE END SEMESTER EXAMINATION OF A COURSE**

A student who has fulfilled the following conditions (vide clause 6.1 and 6.2) shall be deemed to have satisfied the attendance requirements for appearing the End Semester Examination of a particular course.

**6.1** A candidate who has fulfilled the following conditions shall be deemed to have satisfied the attendance requirements for completion of a semester.

Ideally every student is expected to attend all classes and earn 100% attendance. However in order to allow provision for certain unavoidable reasons such as prolonged hospitalization / accident / specific illness the student is expected to earn a minimum of 75% attendance to become eligible to appear for the End Semester Examination.

Therefore, every student shall secure not less than 75% of overall attendance in that semester taking into account the total number of periods in all courses attended by the candidate as against the total number of periods in all courses offered during that semester.

- 6.2** However, a candidate who secures overall attendance between 65% and 74% in that current semester due to medical reasons (prolonged hospitalization / accident / specific illness / participation in sports events) may be permitted to appear for the current semester examinations subject to the condition that the candidate shall submit the medical certificate / sports participation certificate to the Head of the Institution.

Candidates who secure less than 65% overall attendance and who do not satisfy the clauses 6.1 & 6.2 will not be permitted to appear for the End Semester Examination of that current semester and are not permitted to go to next semester. They are required to repeat the same semester in the next academic year. However they are eligible to appear for only arrears courses in the previous semesters if any.

However the candidates who secure less than 65% and above 55% of overall attendance may apply for condonation of shortage of attendance on genuine grounds. Application for condonation of shortage of attendance along with the prescribed fee should be forwarded so as to be received in the office of the Controller of Examinations along with the final attendance statement within 7 working days, before the commencement of the End Semester Examination. Candidate can seek condonation of shortage of attendance only once in the entire duration of a course.

## **7 CLASS ADVISOR**

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department of the students will attach a certain number of students to a faculty of the department who shall function as class advisor for those students throughout their period of study. The class advisor shall advise the students, monitor their attendance, progress and counsel them periodically. If necessary, the faculty advisor may also discuss with or inform the parents about the progress / performance of the students concerned.

The responsibilities for the class advisor shall be:

- Develop a strong working relationship with students to ensure academic success.
- To inform the students about the various facilities and activities available to enhance the student's curricular and co-curricular activities.
- To monitor the academic and general performance of the students including attendance and to counsel them accordingly.
- To monitor and provide the academic guidance, rules and regulations for EEC courses.

## **8 COURSE COMMITTEES**

### **8.1 COMMON COURSE COMMITTEE**

- A theory course handled by more than one faculty shall have a "Common Course Committee" comprising of all faculty teaching that course and some students who have appeared for that course. There shall be two student representatives from each batch of that course. One of the faculty shall be nominated as Course Coordinator by the Head of the Institution.
- The first meeting of the Common Course Committee shall be held within seven working days from the date of commencement of the semester. The nature and weightage of the continuous assessments shall be decided in the first meeting, within the framework of the Regulations. Two or three subsequent meetings in a semester may be held at suitable intervals. During these meetings, the student members shall actively interact and express their opinions and suggestions of all the students to improve the effectiveness of the teaching-learning process. It is the responsibility of the student representatives to convey the proceedings of these meetings to the entire batch.
- The "Common Course Committee" (without the student representatives) shall meet to

ensure uniform evaluation of continuous assessments after arriving at a common scheme of evaluation for the assessments (vide clause 9).

- In addition, the Common Course Committee should decide the mark distribution for Laboratory courses.

Wherever feasible, the common course committee (without the student representatives) shall prepare a common question paper for the continuous assessment tests also. The question paper for the Internal Assessment is common and shall be set by the Course Coordinator in consultation with all the faculty.

## **8.2 CLASS COMMITTEE**

A Class Committee consists of all faculty handling courses of the concerned class, student representatives - cross section of students (academically good, average, poor) and a chairperson who is a faculty not handling any course for the class. The overall goal of the Class Committee is to improve the teaching-learning process. The functions of the Class Committee include:

- Addressing the problems experienced by students in the classroom and in the laboratories.
- Clarifying the regulations of the degree programme and the details of rules therein.
- Informing the student representatives about the academic schedule including the date of assessments (Tests & Assignments) and the syllabus coverage for each assessment.
- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any
- Identifying the weak students, if any, and requesting the faculty concerned to provide some additional help or guidance or coaching to such weak students.

**8.2.1** The class committee for a class under a particular programme is normally constituted by the Head of the Department. However, if the students of different programmes are mixed in a class (like the I semester which is generally common to all programmes), the class committee is to be constituted by the Head of the Department concerned.

**8.2.2** The class committee shall be constituted in the first week of commencement of any semester.

**8.2.3** At least 6 student representatives (usually 3 boys and 3 girls) shall be included in the class committee.

**8.2.4** The chairperson of the class committee may invite the Tutor(s) and the Head of the Department to the meeting of the class committee.

**8.2.5** The Head of the Institution may participate in any class committee meeting.

**8.2.6** The chairperson is required to prepare the minutes of every meeting, submit the same to Head of the Department within two working days after the meeting and arrange to circulate among the concerned students and faculty. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the management by the Head of the Institution.

**8.2.7** The class committee shall meet at least twice in a semester:



- The first meeting of the class committee shall be held within seven working days from the date of commencement of the semester.
- The nature and weightage of the continuous assessments shall be discussed in the first meeting, within the framework of the Regulations.
- The second meeting shall be held a week before the second assessment and Third meeting shall be held a week before the model examination. During these meetings, the student members shall actively interact and express their opinions and suggestions of all the students to improve the effectiveness of the teaching-learning process. It is the responsibility of the student representatives to convey the proceedings of these meetings to the entire class.

**8.2.8** During these meetings, the student members representing the entire class, shall actively interact and express the opinions and suggestions of other students of the class to improve the effectiveness of the teaching-learning process

### **8.3 OVERALL MONITORING COMMITTEE**

**8.3.1** In addition, there shall be a overall monitoring committee for each semester of a programme which comprises of (i) The Course Coordinators / Course faculty (as applicable), (ii) The Faculty-in charge/ Advisor for the particular year of the programme and (iii) Head of the Department. This overall monitoring committee shall meet periodically to discuss academic related matters, progress and status of the students of the semester concerned.

**8.3.2** The overall monitoring committee can invite the Faculty Advisors or students for any of the committee meetings if necessary.

## **9 ASSESSMENT PROCEDURES FOR AWARDING MARKS**

All B.E. / B.Tech. Programmes consist of Theory Courses, Laboratory Courses and Employability Enhancement Courses. Employability Enhancement Courses include Project Work, Seminar, Professional Practices, Case Study and Industrial/Practical Training. Appearance in End Semester Examination is mandatory for all courses that are specified in the curriculum.

Performance in each course of study shall be evaluated based on (i) Continuous assessments throughout the semester and (ii) End Semester Examination at the end of the semester. For theory courses out of 100 marks, the maximum marks for continuous assessment is fixed as 30 marks and the End Semester Examination carries 70 marks. For laboratory courses out of 100 marks, the maximum marks for continuous assessment is fixed as 50 marks and the End Semester Examination carries 50 marks. For project work continuous assessment carries 50 marks and End Semester Examination carries 50 marks (Project work, Project report evaluation and Viva voce). Each course shall be evaluated for a maximum of 100 marks as shown below:

<b>S.No</b>	<b>Category of course</b>	<b>Continuous Assessments</b>	<b>End Semester Examination</b>
1.	Theory Courses *	30 Marks	70 Marks
2.	Laboratory Courses	50 Marks	50 Marks
3.	Project Work	50 Marks	50 Marks
4.	All other EECs (other than Theory EEC)	50 Marks	50 Marks
5.	Mandatory Courses (MC)	100 Marks	-

*\* including Theory EEC specified in curriculum.*

Every faculty is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' for every semester which consists of attendance marked in each theory/ Laboratory/ EEC

class, the assessment marks and the record of class work (topics covered), separately for each course handled by the faculty. This should be submitted to the Head of the Department periodically (atleast three times in a semester) for checking the syllabus coverage and the records of assessment marks and attendance. The Head of the Department will affix his/her signature with date after due verification. At the end of the semester, the record should be verified by the Head of the Department who shall keep this document in safe custody (for five years). The records of attendance and assessment of both current and previous semesters should be available for inspection.

### 9.1 ASSESSMENT FOR THEORY COURSES:

For theory courses including Theory EEC specified in curriculum out of 100 marks, the maximum marks for continuous assessment is fixed as 30 marks and the End Semester Examination carries 70 marks.

The End Semester Examination for theory and laboratory courses will be of 3 hours duration and shall normally be conducted between October and December during the odd semesters and between April and June during the even semesters. End Semester Examination is mandatory requirement for passing the course and every student should appear for the examination for theory, laboratory courses and project work.

Internal Assessment tests are conducted by the exam cell. Continuous Assessment comprises internal assessments test and Assignment its weightages are given below.

	Syllabus	Duration	Maximum Mark	Internal Mark
<b>Internal Assessment 1</b>	Unit I & II	2 hours	50 marks	10
<b>Internal Assessment 2</b>	Unit III & IV	2 hours	50 marks	10
<b>Internal Assessment 3</b>	Unit V	1 ½ hours	25 marks	05
<b>Assignment Test / Assignment</b>	One Assignment per unit			05
<b>Total</b>				<b>30</b>

In case a student has not appeared for the assessment due to medical reasons (hospitalization/ accident /specific illness) or due to participation in the College /University / State/ National /International level Sports events with prior permission from the HOD/ Principal, a **Reassessment** may be given at the end of the semester after getting approval from the Head of the Department through the concerned faculty member handling the course.

### 9.2 ASSESSMENT FOR LABORATORY COURSES:

For Laboratory Course, out of 100 marks, the maximum marks for continuous assessment is fixed as 50 marks and the End Semester Examination carries 50 marks. Every laboratory exercise / experiment shall be evaluated based on the student performance during the laboratory class and the student's laboratory records are maintained. There shall be at least one assessment test. The criteria for arriving at the observation mark (25 marks) shall be decided in the respective course committee meeting. Mark of each test should be rounded to the nearest higher integer for assessment of internal marks. The End Semester Examination for laboratory courses will be of 3 hours duration and shall normally be conducted between October and December during the odd semesters and between April and June during the even semesters.

The student who fails in the laboratory course shall reappear for the same in the subsequent end semester exams.

**Laboratory course:**

	Internal Mark
Observation Mark	25
Record Mark	10
Model Practical Examination	15
<b>Total</b>	<b>50</b>

**Career Development Skills**

	Syllabus	Duration	Exam will be conducted for	Internal Mark
Internal Assessment 1	Unit I & II	2 hours	50 marks	20
Internal Assessment 2	Unit III & IV	2 hours	50 marks	20
Internal Assessment 3	Unit V	1 ½ hours	25 marks	10
	Total			50

Examination mode for Internal Assessment and End semester is physical mode / online. End Semester Examination may be conducted for 100 marks for duration of 2 hours and evaluation will be done by internal mode. Question pattern comprising of Part A and Part B. Part A objective type questions (20x2=40 marks), Part B objective type questions (60x1=60 marks).

**Comprehension**

	Syllabus	Duration	Exam will be conducted for	Internal Mark
Internal Assessment 1	Module 1	2 hours	50 marks	20
Internal Assessment 2	Module 2	2 hours	50 marks	20
Internal Assessment 3	Module 3	1 ½ hours	25 marks	10
	Total			50

Examination mode for Internal Assessment and End semester is physical mode / online. End Semester Examination may be conducted for 100 marks for duration of 2 hours evaluation will be done by internal mode. Question pattern may be similar to GATE Exam (or any Competitive Examination) comprising of Part A and Part B. Part A objective type questions (25x2=50 marks), Part B objective type questions (50x1=50 marks).

**9.3 ASSESSMENT FOR PROJECT WORK:**

For project work in the total of 100 marks, the maximum marks for continuous assessment carries 50 marks and the End Semester Examination (Project Report Evaluation and Viva-Voce Examination) carries 50 marks. Project work may be assigned to a single student or to a group of students not exceeding 4 per group.

The student(s) is expected to submit the project report on or before the last working day of the semester. The End Semester Examination for project work shall consist of evaluation of the final project report submitted by the student(s) evaluated by an examiners followed by a Viva-Voce Examination conducted separately for each student by a committee consisting of the external examiner and an internal examiner. The continuous assessment marks for Project Work Phase I/II will be distributed as indicated below.

### Mini Project

	Internal Mark
Model / Coding Development*	25
Review (Three Reviews Compulsory using ICT tools)	15
Report	05
Project Contest Participation	05
Total	50

\* Distribution may be decided by the respective department

### Project Work Phase I

Review I (10 Marks)		Review II (10 Marks)		Review III (10 Marks)		Report Evaluation (20 Marks)	
Review Committee (excluding guide)	Guide	Review Committee (excluding guide)	Guide	Review Committee (excluding guide)	Guide	Guide	Project Coordinator / HoD
7	3	7	3	7	3	10	10

### Project Work Phase II

Review I (10 Marks)		Review II (10 Marks)		Review III (10 Marks)		Patents / Publications	Report Evaluation (15 Marks)	
Review Committee (excluding guide)	Guide	Review Committee (excluding guide)	Guide	Review Committee (excluding guide)	Guide	Participation in Project Contest*	Guide	Project Coordinator / HoD
7	3	7	3	7	3	5	10	5

\*Participation and Publications in Conference – 4 marks, Won Prizes/Publications in Journal - 5 marks

The Mark distribution for End Semester Examination (Viva-Voce) is decided by the respective internal and external examiners.

If the project report is not submitted on or before the specified deadline, an extension of the time up to a maximum limit of 10 days may be given for the submission of project work by paying additional fee to conduct separate Viva-Voce Examination with due approval obtained from the Head of the Department. If the project report is not submitted even beyond the extended time then the student(s) is deemed to have failed in the Project Work. The failed student(s) shall reappear for the same in the subsequent semester.

## 9.4 ASSESSMENT FOR INDUSTRIAL TRAINING / INTERNSHIP / INDUSTRIAL LECTURES

Continuous assessment procedure for the Industrial Training / Internship / Industrial Lectures specified in curriculum is described in syllabus of the concerned courses and reappearance is mandatory, in case of failure.

The assessment procedure for End Semester Examination of all EEC is given below.

#### 9.4.1 Industrial Training

1.	Pre-requisites /Eligibility Conditions	After completion of the III semester, the student may undergo industrial training in reputed organization after getting prior permission from HOD.
2.	Detail of Course Content / Syllabus	In-plant training in any organization like BSNL, TTPS, BHEL, NLC, etc., related to their programmes.
3.	Duration of the Course	Two weeks per credit.
4.	Assessment Procedure and Criteria for allocation of grade	Proof for the participation along with satisfactory completion certificate obtained from the organization concerned is mandatory. In addition 1.Student has to submit a report. 2.Evaluation Committee will be constituted by the respective Head of the Department to assess the report based on the following criteria. <ul style="list-style-type: none"> <li>• Evaluation of report given by the student (40%)</li> <li>• Student's presentation (40%)</li> <li>• Oral Examination (20%)</li> </ul>
5.	In case of failure	Reappearance is mandatory, if the course is specified in curriculum.

#### 9.4.2 Internship

1.	Pre-requisites /Eligibility Conditions	After completion of the III semester, the student may undergo intensive training after getting prior permission from Head of the Department.
2.	Detail of Course Content /Syllabus	Internship Training in R&D organization like CSIR, DRDO, IITs and IISC, etc., related to their programmes.
3.	Duration of the Course	Two weeks per credit.
4.	Assessment Procedure and Criteria for allocation of grade	Proof for the participation along with satisfactory completion certificate obtained from the organization concerned is mandatory. In addition 1.Student has to submit a report. 2.Evaluation Committee will be constituted by the respective Head of the Department to assess the report based on the following criteria. <ul style="list-style-type: none"> <li>• Evaluation of report given by the student (40%)</li> <li>• Student's presentation (40%)</li> <li>• Oral Examination (20%)</li> </ul>
5.	In case of failure	Reappearance is mandatory, if the course is specified in curriculum.

#### 9.4.3 Industrial Lectures

1.	Pre-requisites /Eligibility Conditions	Student should obtain prior approval from the HoD of his/her department & HoD of the Department who organizes the programme.
2.	Detail of Course Content / Syllabus	As prescribed by the organizing Institutions
3.	Duration of the Course	15 hours per credit.(5 hours per day)
4.	Assessment Procedure and Criteria for allocation of grade	Proof for the participation in industrial guest lecture arranged by the industry /other Institute/ our faculty along with satisfactory completion certificate issued by the organization/Institution concerned is mandatory. 1. Student has to submit a report for each industrial lecture/group of lectures. 2. Evaluation Committee will be constituted by the respective Head of the Department to assess the report.
5.	In case of failure	Reappearance is mandatory, if the course is specified in curriculum.

## 9.5 ASSESSMENT FOR VALUE ADDED COURSE

This course shall carry 100 marks and shall be evaluated only through Continuous Assessments. The evaluation procedure and criteria for allocation of credit may be decided by the certifying authority / Course coordinator with the approval of Head of the Department. The Head of the Department may identify a faculty member as a coordinator for the course. A committee consists of the Head of the Department, faculty handling the course and course coordinator. The grades shall be assigned to the students by the above committee based on their relative performance. In addition to the one credit courses offered by the department, the following common courses are also considered.

### a. English Proficiency Certification

1.	Pre – requisites/Eligibility Conditions	As prescribed by the certifying authority
2.	Detail of Course Content/ Syllabus	
3.	Duration of the Course	
4.	Assessment Procedure	
5.	Criteria for allocation of credit	A certificate for attending BEC course/ Minimum score in TOFEL iBT / GRE/ IELTS
6.	In case of failure	Repeat the course

### b. Soft Skills

1.	Pre – requisites /Eligibility Conditions	As prescribed by Placement Cell
2.	Detail of Course Content / Syllabus	
3.	Duration of the Course	
4.	Assessment Procedure	As per the procedure described for CDS (as per clause. 9.2)
5.	Criteria for allocation of credit	Successful completion of Soft skill Training Certificate with minimum 20 contact hours
6.	In case of failure	-

### c. Foreign/Vernacular Languages

1.	Pre–requisites /Eligibility Conditions	-
2.	Detail of Course Content / Syllabus	As prescribed by the course conducting Universities / Schools
3.	Duration of the Course	
4.	Assessment Procedure	
5.	Criteria for allocation of credit	
6.	In case of failure	Repeat the course

### d. Aptitude Proficiency Certification

1.	Pre – requisites/Eligibility Conditions	As prescribed by the course coordinator
2.	Detail of Course Content/Syllabus	
3.	Duration of the Course	40 periods with minimum 70% of attendance
4.	Assessment Procedure	As prescribed by the course coordinator
5.	Criteria for allocation of credit	Pass in End Semester Examination/ Minimum score in GMAT / CAT / NAC / MAT
6.	In case of failure	Repeat the course

### e. Globally Accepted Certification Course

1.	Pre –requisites /Eligibility Conditions	Prior permission from the HoD is mandatory
2.	Detail of Course Content / Syllabus	As prescribed by the certifying authority
3.	Duration of the Course	
4.	Assessment Procedure	
5.	Criteria for allocation of credit	
6.	In case of failure	Proof for the successful completion of the course provided by the globally accepted

		certifying agencies like HPATA / Microsoft / National Instruments (Lab View) / Oracle / IBM / CISCO Networking Academy / ADOBE / REDHAT / Sun Micro systems / JAVA / Software related to Mechanical and Civil Engineering
6.	In case of failure	-

#### f. One/Two Credit Courses

1.	Pre-requisites/Eligibility Conditions	Student has to fulfill the necessary Pre-requisites of the course being offered by the department
2.	Detail of Course Content/ Syllabus	As prescribed by the course coordinator on approval with HOD of the respective department
3.	Duration of the Course	
4.	Assessment Procedure	
5.	Criteria for allocation of credit	Certificate issued by the HOD for the successful completion of the course with 80% attendance
6.	In case of failure	-

#### 9.6 ONLINE COURSE

Students need to obtain certification to become eligible for appearing the End Semester Examination to be conducted by the Institution under autonomous scheme. Assignments and Tutorial marks obtained through the online courses shall be added to the internal marks in case students do not opt for examination conducted by the NPTEL / NMEICT / QEEE / MOOC and etc. In case of credits earned through online mode from the NPTEL / NMEICT / QEEE/ MOOC and etc., with approval of Board of Studies and Academic Council, the credit may be transferred with the due approval procedures from the department.

#### 9.7 ASSESSMENT FOR SELF STUDY COURSE

Faculty members approved by the Head of the Department shall be responsible for periodic monitoring and evaluation of the course. The course shall be evaluated through Continuous Assessment (as decided by the Departmental Consultative Committee) and End Semester Examination. The evaluation methodology shall be the same as that of a theory course. (vide clause 9.1).

#### 9.8 ASSESSMENT FOR MANDATORY COURSES (MC)

For mandatory courses specified in curriculum, the 50 marks will be awarded based on the continuous assessment and 50 marks will be awarded based on the End Semester examination.

#### 10 PASSING REQUIREMENTS

**10.1** A candidate who secures not less than 50% of total marks prescribed for the course [Internal Assessment + End Semester Examination] with a minimum of 50% prescribed for the End Semester Examination shall be declared to have passed the course and acquired the relevant number of credits. For non credit courses there is no minimum mark for pass.

**10.2** If a candidate fails to secure a pass in a particular course, it is mandatory that he/she shall reappear for the examination in that course during the subsequent semester when examination is conducted in that course.

**10.3** The internal assessment marks obtained by the candidate in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secure a pass. However, from the 3<sup>rd</sup> attempt if a candidate fails to obtain pass marks (IA + End Semester

Examination) as per clause 10.1 then the passing requirement shall be as follows: The candidate should secure 50% and above the maximum marks prescribed for course in the End Semester Examinations irrespective of Internal Assessment marks obtained.

## 11 AWARD OF LETTER GRADES

11.1 For awarding the grades UGC/ affiliating university guidelines is followed. It will be changed from time to time based on the guidelines of above affiliating authorities.

11.2 The performance of a student will be reported using letter grades, each carrying certain points as detailed below:

Letter Grade	Grade Points	Marks Range
O (Outstanding)	10	91 - 100
A + (Excellent)	9	81 - 90
A (Very Good)	8	71 - 80
B + (Good)	7	61 - 70
B (Average)	6	50 - 60
RF (Fail)	0	< 50
RA (Absent)	0	
W (Withdrawal)	0	

A student is deemed to have passed and acquired the corresponding credits in a particular course if he/she obtains any one of the following grades: "O", "A+", "A", "B+", "B".

"RF" denotes Fail, "RA" denotes absent and Reappearance required for the examination for the particular course. "W" denotes withdrawal from the exam for the particular course. (The grades RF, RA and W will figure both in Grade Sheet as well as in Result Sheet)

11.3 The grades O, A+, A, B+, B obtained for the Value Added Courses shall figure in the Grade sheet under the title 'Value Added Courses'. The other grades RF, RA and W will not figure in Grade sheet.

11.4 For Career Development Skills and Mandatory courses the result shall be assigned to the students based on their relative performance like Excellent, Very Good, above Average and Average.

## 12 GPA AND CGPA CALCULATION

Grade Sheets will be issued to each student which will contain the following details:

- The list of courses registered during the semester and the grades scored.
- The Grade Point Average (GPA) for the semester and
- The Cumulative Grade Point Average (CGPA) of all courses registered from I semester.

During each semester, the list of courses registered and the grades scored in each course are used to compute the GPA. GPA is the ratio of the sum of the products of the number of credits of courses registered and the grade points corresponding to the grades scored in those courses, taken for all the courses, to the sum of the number of credits of all the courses in the semester.

$$GPA = \frac{\text{Sum of [Credits Acquired x Grade Points]}}{\text{Sum of Credits Acquired}}$$



$$GPA = \frac{\sum_{i=1}^n C_i GP_i}{\sum^n C_i}$$

Where,

- $C_i$  - is the Credits assigned to the course
- $GP_i$  - is the grade point corresponding to the letter grade obtained for each course
- $n$  - is number of all Courses successfully cleared during the particular semester in the case of GPA and during all the semesters in the case of CGPA.

CGPA will be calculated in a similar manner, considering all the courses enrolled from first semester. "RF", "RA" and "W" grades will be excluded for calculating GPA and CGPA.

- 12.1** The credits earned through value added courses shall not be considered for calculating GPA and CGPA. However completion of three credits through value added courses can be considered as one elective course during 7<sup>th</sup> and/or 8<sup>th</sup> semesters and can be considered for GPA and CGPA calculation.
- 12.2** If a student studies more number of electives (PEC/OEC) than required as per the student's programme curriculum, the courses with higher grades alone will be considered for calculation of CGPA.
- 12.3** The grades O, A+, A, B+, B obtained for the one/two credit course shall figure in the Grade sheet under the title 'Value Added Courses'. The Courses for which the grade RF will not figure in the Grade sheet.

### **13 ELIGIBILITY FOR THE AWARD OF DEGREE**

- 13.1** A student shall be declared to be eligible for the award of the B.E. / B.Tech. Degree provided the student has
  - i. Successfully gained the required number of total credits as specified in the curriculum corresponding to the student's programme within the stipulated time.
  - ii. Successfully completed the course requirements, appeared for the End Semester Examination and passed all the courses prescribed in all the eight semesters within a maximum period of 7 years and 6 years in the case of Lateral Entry reckoned from the commencement of the first semester (third in the case of Lateral Entry) to which the candidate was admitted.
  - iii. Successfully passed any additional courses prescribed by the Re-Admission Committee whenever Re-admitted under Regulation 2018. (vide clause 17.2)
  - iv. No disciplinary action pending against the student.
  - v. The award of Degree must have been approved by the Affiliating University.

### **13.2 CLASSIFICATION OF THE DEGREE AWARDED**

#### **13.2.1 First Class with Distinction**

A candidate who satisfies the following conditions shall be declared to have passed the examination in First Class with Distinction.

- Should have passed the End Semester Examination in all the courses of all the eight semesters (six semesters in the case of lateral entry) in his/her first appearance **within 5 years** (4 years in the case of lateral entry). Withdrawal from examination (vide Clause 16) will not be considered as an appearance. One year authorized Break of Study (if availed of) is permitted in addition to 5 years (4 years in the case of lateral entry) for award of **First Class with Distinction**.
- Should have secured a **CGPA** of not less than **8.50**.

### **13.2.2 First Class**

A candidate who satisfies the following conditions shall be declared to have passed the examination in **First Class**.

- Should have passed the End Semester Examination in all the courses of all the VIII semesters (VI semesters in the case of lateral entry) **within 6 years** (5 years in the case of lateral entry). One year authorized Break of Study (if availed) or prevention from writing the End Semester Examination due to lack of attendance (if applicable) is included in the duration of 6 years (5 years in the case of lateral entry) for award of First class.
- Should have secured a **CGPA** of not less than **7.00**.

### **13.2.3 Second Class**

- All other students (not covered in clauses 13.2.1 and 13.2.2) who qualify for the award of the degree (vide Clause 13.1) shall be declared to have passed the examination in **Second Class**.

**13.2.4** A student who is absent in End Semester Examination in a course / project work after registering for the same shall be considered to have appeared in that examination (except approved withdrawal from End Semester Examination as per clause 16) for the purpose of classification.

## **14 PHOTOCOPY / REVALUATION**

A candidate can apply for photocopy of his/her semester examination answer script in a theory course, within a week from the declaration of results, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of Institution. The answer script is to be valued and justified by a faculty member, who handled the course and recommend for revaluation with breakup of marks for each question. Based on the recommendation, the candidate can apply for the revaluation through proper application to the Controller of Examinations. The Controller of Examinations will arrange for the revaluation and the results will be intimated to the candidate concerned through the Head of the Institution. Revaluation is not permitted for practical courses and for project work. A candidate can apply for revaluation of answer scripts for not exceeding 5 courses at a time. Candidates applying for Photocopy alone are eligible to apply for Revaluation.

## **15 REVIEW**

Candidates not satisfied with Revaluation can apply for Review of his/ her examination answer paper in a theory course, within the prescribed date on payment of a prescribed fee through proper application to Controller of Examinations through the Head of the Institution. Candidates applying for Revaluation alone are eligible to apply for Review.

## **16 PROVISION FOR WITHDRAWAL FROM EXAMINATION**

**16.1** A student may, for valid reasons, (medically unfit/ unexpected family situations / sports approved by BoS Chairman/ Sports Board, HOD and Head of the Institution) be granted permission to withdraw from appearing for the End Semester Examination in any course or courses in ANY ONE of the semester examinations during the entire duration of the degree programme. Withdrawal essentially requires the student to register for the course/courses, fulfill the attendance requirements (vide clause 6.1), earn continuous assessment marks and eligible to attend the End Semester Examination.

**16.2** Withdrawal of application is valid only if it is made within 10 days prior to the commencement of the examination in that course or courses and recommended by the Head of the Institution and approved by the Controller of Examinations.

**16.3** Even though the requirement of mandatory is 10 days notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

- 16.4** Withdrawal shall not be construed as an appearance for the eligibility of a candidate for First Class with Distinction.
- 16.5** Withdrawal from the End Semester Examination is NOT applicable to arrear courses of previous semesters.
- 16.6** The candidate shall reappear for the withdrawn courses during the examination conducted in the immediate semester.
- 16.7** Withdrawal shall not be permitted in the final (Eighth) semester examinations.
- 16.8** Withdrawal shall not be permitted for all courses in a semester. He/she has to appear at least for one course in a semester. Otherwise he/she shall be considered as Break of Study.

## **17 PROVISION FOR AUTHORISED BREAK OF STUDY**

- 17.1** Break of Study shall be granted only once for valid reasons for a maximum of one year during the entire period of study of the degree programme. However, in extraordinary situation the candidate may apply for additional Break of Study not exceeding another one year by paying prescribed fee for Break of Study. If a candidate intends to temporarily discontinue the programme in the middle of the semester for valid reasons, and to rejoin the programme in a subsequent year, permission may be granted based on the merits of the case provided he / she applies to the Director, DOTE and Students Affairs in advance, but not later than the last date for registering for the End Semester Examination of the semester, through the Head of the Institution stating the reasons and the probable date of rejoining the programme. However, if the candidate has not completed the first semester of the programme, Break of Study will be considered only on valid medical reasons.
- 17.2** The candidates permitted to rejoin the programme after Break of Study / prevention due to lack of attendance, shall be governed by the Curriculum and Regulations in force at the time of rejoining. Students rejoining in new Regulations should appear in additional courses if any, as prescribed by admission committee from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.
- 17.3** One year authorized Break of Study will not be counted towards the duration specified for passing all the courses for the purpose of classification (vide Clause 12 and 13).
- 17.4** The total period for completion of the Programme reckoned from, the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of Break of Study in order that he/she may be eligible for the award of the degree.
- 17.5** If any student is detained for want of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted 'Break of Study' and Clause 17.3 is not applicable for this case.
- 17.6** All the norms may liable to change upon the terms of affiliated university.

## **18 DISCIPLINE**

- 18.1** Every student is required to observe disciplined and decorous behavior both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the college. The Head of the Institution shall constitute a disciplinary committee consisting of Head of the Institution, Head of the Departments to which the student concerned belongs, and the Head of another Department to enquire into acts of indiscipline

and notify the University about the disciplinary action recommended for approval. In case of any serious disciplinary action which leads to suspension or dismissal, then a committee shall be constituted by the Head of the Institution for taking final decision.

**18.2** If a student indulges in malpractice in any of the examinations, the student shall be liable for punitive action as prescribed in the regulations from time to time.

**19 REVISION OF REGULATIONS, CURRICULUM AND SYLLABI**

The college may from time to time revise, amend or change the Regulations, Curriculum, Syllabus and Scheme of examinations through the Board of Studies with the approval of Academic Council and Governing Council of the college.

\*\*\*\*\*