



**(An Autonomous Institution** - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus  
S.P.G.C.Nagar, K.Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

**Accredited by NAAC with “A” Grade**

## **REGULATIONS: R-2020**

### **CHOICE BASED CREDIT SYSTEM (CBCS)**

**[Common to all B.E./B.Tech Degree Programmes]**

#### **Vision of the Institute**

To make this Institution the unique of its kind in the field of research and development activities in this part of the world

#### **Mission of the Institute**

To impart highly innovative and technical knowledge to the urban and unreachable rural student folks through “ Total Quality Education”

#### **Quality Policy**

Kamaraj College of Engineering and Technology is committed to impart Quality Technical Education imbued with proficiency, human values, and continual improvement.

**KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY  
S.P.G.CHIDAMBARA NADAR - C.NAGAMMAL CAMPUS S.P.G.C.NAGAR,  
K.VELLAKULAM - 625 701  
(NEAR VIRUDHUNAGAR), MADURAI DISTRICT, TAMILNADU**

**REGULATIONS: R-2020  
CHOICE BASED CREDIT SYSTEM (CBCS)**

**[Common to all B.E./B.Tech Degree Programmes]**

**DEGREE OF BACHELOR OF ENGINEERING / BACHELOR OF  
TECHNOLOGY**

**[(8 Semesters / 6 Semesters LES) Full-Time Programmes] (with effect from the  
academic year 2020 - 2021)**

**R1. PRELIMINARY DEFINITIONS AND NOMENCLATURE**

In this Regulation, unless the context otherwise specifies:

- i) **“Degree”** means that academic award conferred upon a student on successful completion of a programme designed to achieve the defined attributes. It is referred to as Under Graduate (UG) Degree that is B.E. / B.Tech. Degree.
- ii) **“Programme”** means cohesive arrangement of courses, co-curricular and extracurricular activities to accomplish predetermined objectives leading to the awarding of a degree.
- iii) **“Course”** means a theory / practical / theory cum practical subject studied in a semester, like Mathematics, Engineering Practices Laboratory, Design of Machine Elements, etc.
- iv) **“Head of the Institution”** means the Principal of the Institution.
- v) **“Dean (Academic Courses)”** means the authority of the Institution who is responsible for all academic activities of the Departments for implementation of relevant Rules and Regulations.

- vi) **“Dean (Examinations)”** means the authority of the Institution who is responsible for all activities of the examinations.
- vii) **“HoD”** means the Head of the Department concerned.
- viii) **“Chairperson, BoS”** means Chairperson of Board of Studies of each department.
- ix) **“University”** means affiliating University i.e., Anna University, Chennai.
- x) **“Institution”** means Kamaraj College of Engineering and Technology.

## **R2. ADMISSION PROCEDURE**

As per the norms of the Anna University, Chennai.

## **R3. PROGRAMMES OF STUDY**

The programmes currently being offered by the college, affiliated to Anna University and approved by AICTE, New Delhi are given in ANNEXURE-I. The recommended credit range for each programme is 165 to 170

## **R4. STRUCTURE OF THE PROGRAMMES**

### **R4.1 Categorization of Courses**

Every B.E. / B.Tech. Programme shall have a curriculum with syllabi comprising of Theory, Theory cum Practical and Practical courses The courses shall be categorized as follows:

- i) **Humanities and Social Sciences including Management Courses (HS)** include Technical English, Employability Skills, Engineering

Ethics and Human Values, Communication skills and Management courses.

- ii) Basic Science Courses (BS)** include foundation courses such as Mathematics, Physics, Chemistry, Biology, Environmental Sciences, Coding Techniques etc.
- iii) Engineering Science Courses (ES)** include Engineering Practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.
- iv) Professional Core Courses (PC)** include the core courses relevant to the chosen specialization / branch.
- v) Professional Elective Courses (PE)** include the elective courses relevant to the chosen specialization / branch.
- vi) Open Elective Courses (OE)** shall provide an 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, the courses a student can choose from the curriculum of other B.E. / B. Tech. programmes and the courses offered by the Department of Science and Humanities.
- vii) Employability Enhancement Courses (EEC)** include Project Work, Internship, Career Development Skills, Creative and Innovative Project, Seminar, Professional Practices, Industry and Higher Institute Learning Interaction, Value Education, Case Study and Industrial / Practical Training.
- viii) Online Courses (OL)** allow the students to habituate independent learning through Massive Open Online Courses (MOOCs) restricted to NPTEL and SWAYAM only.
- ix) Audit Courses (AU)** expose the students to Unnat Bharath Abhiyan, Constitution of India, Essence of Indian Knowledge Traditional, Yoga, English for Research Paper Writing,

Pedagogy Studies, Stress Management and Personality Development through Life Enlightenment Skills. **This category is mandatory non-credit course for students.**

There shall be a certain minimum 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 for his/her relevant professional field but also would have developed as a socially conscious human professional.

Every branch of the B.E. / B.Tech. Degree Programme will have a curriculum and syllabi for the courses approved by the Academic Council.

#### **R4.2. Personality and Character Development**

All students shall enroll, on admission, in any one of the personality and character development programmes (NCC / NSS / NSO / YRC) and undergo training for about 80 hours and attend a camp of about seven days. The training shall include classes on hygiene and health awareness and also training in first-aid.

R4.2.1 **National Cadet Corps (NCC)** will have about 20 parades.

R4.2.2 **National Service Scheme (NSS)** will have social service activities in and around the College / Institution. The activities will include practical projects on recycling and reusing biodegradable and dry waste.

R4.2.3 **National Sports Organization (NSO)** will have sports, games, drills and physical exercises.

R4.2.4 **Youth Red Cross (YRC)** will have activities related to social services in and around College / Institution.

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

Apart from the above, the students may enroll for professional Societies / Physical Education/ EDC etc.,

- R4.2.5 Every student shall put in a minimum of 75 percent attendance in the training and attend the camp compulsorily. The training and camp shall be completed during the first year of the programme. However, for valid reasons, the Dean (Academic Courses) may permit a student to complete this requirement in the second year.

### **R4.3 Mandatory Induction Programme**

The students are expected to undergo a mandatory induction programme comprising of physical activity, creative arts, universal human values, proficiency modules, lectures by eminent people, visits to local areas and familiarization to department / branch & innovations immediately after admission.

### **R4.4 Number of courses per semester**

The curriculum of a semester shall normally have a blend of 5 to 7 lecture based courses and laboratory courses not exceeding 4 including Employability Enhancement Course(s). However, the total number of courses per semester shall not exceed 10.

#### **R4.5 Credit Assignment**

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

Table 1

<b>Contact Period per week</b>	<b>Credits</b>
1 Lecture (L) Period	1
1 Tutorial (T) Period	1
2 Practical (P) Periods (Laboratory / EEC Courses like Seminar / Project work / Case Study etc.)	1

The Contact Periods per week for laboratory courses can only be in multiples of 2.

#### **R4.6 Industrial Training / Internship**

R4.6.1 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 a Research organization / University / Industry (after due approval from the Dean Academics) during the summer / winter vacation, in lieu of Industrial training.

R4.6.2 The student is expected to submit a report to the Head of the Department, and the report shall be evaluated by a team of faculty members nominated by the Head of the Department. Based on the recommendations, the student will be awarded credits and the results will be sent to the Dean (Examinations) for further processing. The student is allowed to undergo a maximum of 6 weeks Industrial Training / Internship during the entire duration of study. The credits are distributed as follows:

Table 2

<b>Duration of Industrial training / Internship</b>	<b>Credits</b>
2 weeks	1
4 weeks	2
6 weeks	3

R4.6.3 Credits earned under this category will be over and above the total credit requirement as prescribed in the Employability Enhancement Courses category excluding the actual credits required for project works

#### **R4.7 Industrial Visit**

Every student is expected to undergo one industrial visit every year starting from second year of the programme with the approval of the Head of the Department and Head of the Institution. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

#### **R4.8 Value Added Courses**

The students may optionally undergo value added courses offered by experts from industry / other institutions (Academic / Research) / institution faculty on specialized topics. Every 15 period course will be given 1 credit. If the value added course is a Theory, then the contact hours in a day shall not exceed four periods. The courses shall be conducted without affecting the regular academic schedule.

R4.8.1 Candidates can complete such courses during 3<sup>rd</sup> to 8<sup>th</sup> semesters as and when these courses are offered by departments.



- R4.8.2 A candidate will also be permitted to register such course offered by other departments.
- R4.8.3 The Department / Course in-charge / Faculty / Expert concerned shall conduct one assessment at the end of the course.
- R4.8.4 The Head of the Department shall form a committee to monitor the progress of the course.
- R4.8.5 Candidates can take a maximum of two one-credit courses / one two- credit course during an academic year if offered.
- R4.8.6 Credits earned under this category will be over and above the total credit requirement as prescribed in the Employability Enhancement Courses category excluding the actual credits required for project works.

#### **R4.9 Online Courses**

- R4.9.1 Students will be permitted to credit online courses (which are provided with a certificate/ Grade card) with the approval of BOS and the Dean Academics subject to a maximum of six credits during the entire programme.
- R4.9.2 The Head of the Department shall form a committee to recommend the list of online courses from NPTEL and SWAYAM for approval to the Dean Academics.

#### **R4.10 Audit Courses**

A student may like to acquire more knowledge by attending a course but may not be interested to go through the normal evaluation process. In such cases, the candidate can choose to audit a course.

- R4.10.1 Students are allowed to register for audit courses during third to seventh semester.

R4.10.2 It is mandatory to register at least 2 courses listed in vide Clause R4.1 (ix) during the period of entire programme.

R4.10.3 To audit a course, student should get the approval from the course instructor and from his / her Head of the Department.

R4.10.4 To complete the audit course, student should earn 75 percent attendance.

#### **R4.11 Medium of Instruction**

The medium of instruction is English for all courses, examinations, seminar presentations and project / thesis / dissertation reports.

### **R5. DURATION OF THE PROGRAMME**

**R5.1** A student is ordinarily expected to complete the B.E. / B.Tech. Degree Programme in 8 semesters (four academic years) but in any case not more than 14 Semesters (seven academic years) for HSC (or equivalent) candidates and not more than 12 semesters (six academic years) for lateral entry candidates.

**R5.2** Each semester shall normally consist of 90 working days. The Dean (Academic Courses) shall ensure that every teacher imparts instruction as per the number of periods / hours specified in the syllabus and that the teacher delivers the full content of the specified syllabus for the course being taught.

**R5.3** The Dean (Academic Courses) may conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods.

**R5.4** 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.

**R5.5** 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 R5.1 irrespective of the period of Break of Study (vide Clause R13) or prevention (vide Clause R7.6) in order that he / she may be eligible for the award of the degree (vide Clause R12).

## **R6. COURSE ENROLLMENT AND REGISTRATION**

### **The courses that a student registers in a semester includes**

- i. Courses of the current semester (including Mandatory non-credit courses).
- ii. Course(s) in which he/she has not been permitted to appear for the end semester examinations for want of the minimum required attendance, if such courses are offered in that semester (vide clause 7.3).
- iii. Course(s) in which he/ she has failed and required to reappear for the end semester examinations, carrying forward the continuous assessment marks earned vide clause 6.9.
- iv. Professional or Open elective course(s) opted by the students in lieu of courses in which he/she has failed, if the courses are offered in that semester or the same elective course chosen earlier by the student
- v. The student shall register for the project work in the VIII semester only.
- vi. Any other course(s) the student wishes to register as per norms (vide clause 4.6, 4.8 4.9, and 4.10).

**R6.1** Each student, on admission, shall be assigned to a Faculty Advisor (vide Clause R8), who shall advice and counsel the student about the details of the academic programme and the choice of courses, considering the student's academic background and career objectives.

**R6.2** Each student on admission shall register for all the courses prescribed in the curriculum of the first semester of study.

**R6.3** Except for the first semester, registration of courses for a semester will commence ten days prior to the commencement of classes of the current semester. The candidate makes the choice of electives in consultation with his / her Faculty Advisor. Late registration will be permitted with a fine amount as prescribed by the Institute up to two weeks from the last date specified for registration.

**R6.4** The student shall enroll for the courses with the guidance of the student's Faculty Advisor. If the student wishes, the student may drop or add courses (vide Clause R6.7) within five working days after the commencement of the concerned semester and complete the registration process duly authorized by the Faculty Advisor.

**R6.5** After registering for a course, the student should attend classes, satisfy attendance requirements (vide Clause R7), earn continuous assessment marks and appear for the end semester examinations.

**R6.6** The candidate will be eligible for enrollment only if he / she has cleared all the dues to the Institute such as Hostel fees, Library due, Laboratory breakages etc., of the previous semester and paid all required prescribed fees for the current semester, provided he / she is not debarred from the Institute on account of disciplinary matters.

**R6.7 Flexibility to Add or Drop courses**

R6.7.1 A student has to earn the total number of credits specified in the curriculum of the chosen programme of study in order to be eligible to obtain the degree. However, the student is permitted to earn more than the total number of credits prescribed in the curriculum of the programme. In such

cases, the minimum number of credits required for the completion of the programme would be considered for CGPA calculation.

**R6.7.2** From third semester onwards, each student has to register all courses in the curriculum of a respective semester (with the facility to drop courses to a maximum of 8 credits). The dropping of courses shall be decided as per prerequisite requirements in consultation with the Faculty Advisor.

**R6.7.3** In case, the student fails to secure pass in an elective course, he / she shall be allowed to opt for a change in elective and register for the same and do attend the classes to meet the criteria stated in Clause R7 and the failed elective shall not be listed in the Grade Sheet.

**R6.8** For an elective to be offered, minimum of 15 students should register for that course subject to the approval of Head of the Department.

### **R6.9 Reappearance Registration**

**R6.9.1** If a student fails in a theory / practical / theory cum practical course, the student shall do reappearance registration for all the arrear course in the subsequent semester and appear for the end semester examination. The continuous assessment marks earned by the candidate is valid for first four attempts only.

**R6.9.2** If the course in which the student has failed is a professional elective or an open elective, the student will be permitted to register for the same or any other professional elective or open elective in the subsequent semesters and shall appear for the end semester examination. If a student registers for the same professional / open elective, then the continuous assessment marks are valid as per Clause 6.9.1. If a student registers for any other professional / open elective, he / she has to attend the classes and fulfil the attendance

requirements (vide Clause R7), earn continuous assessment marks and appear for the end semester examination.

**R6.9.3** Students are not eligible to reappear for the course that they have already passed in a semester for improvement of Grade / Marks.

**R6.10 Redoing a Course**

Redoing a course means reregistering for a course, attending all classes, fulfilling the attendance requirements as per Clause R7, earning fresh continuous assessment marks and appearing for end semester examinations. A student has to redo a course in the following conditions.

R6.10.1 If a student is prevented from writing end semester examination due to lack of attendance, the student has to register for the courses of that semester again when offered next and redo the semester.

R6.10.2 If a student is prevented from writing the end semester examination, he / she can opt to register for a different professional / open elective course while rejoining the course and attend classes, fulfill the attendance requirements as per Clause R7, secure continuous assessment marks and appear for end semester examinations.

R6.10.3 If the course in which the student fails to secure a pass even after three arrear attempts is a professional / open elective course, then the student can opt for a different professional / open elective course, register for the same when it is offered, attend classes, fulfill the attendance requirements as per Clause R7, secure continuous assessment marks and appear for end semester examinations.

R6.10.4 The student who fails in any Project work shall register for the course again, when offered next, and redo the course. In this case, the student shall attend the reviews and fulfill the attendance requirements as per Clause R7.

R6.10.5 The student who fails in Seminar / Technical Seminar shall register for the same in the subsequent semester and redo the course.

## **R7. REQUIREMENTS FOR APPEARING FOR THE END SEMESTER EXAMINATIONS**

A student who has fulfilled the conditions, vide Clause R7.3 and Clause R7.4 shall be deemed to have satisfied the attendance requirements for appearing for the end semester examination of a particular course.

**R7.1** All students must attend every lecture, tutorial and practical classes.

**R7.2** Attendance record will be maintained based upon roll calls (or any equivalent operation) in every scheduled lecture, tutorial and practical class. The Class Advisor will maintain and consolidate the attendance record for all the courses (lectures, tutorials and practicals together, as applicable).

**R7.3** Ideally every student is expected to attend all periods and earn 100 percent attendance. However, the student shall secure not less than 75 percent attendance.

$$\% \text{ Attendance} = \frac{\text{Total No. of periods in all courses per semester} \times 100}{\text{No. of } \frac{\text{periods}}{\text{week}} \text{ as prescribed in curriculum} \times 15}$$

**R7.4** If a student secures attendance between 65 percent and less than 75 percent in the current semester, 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 Head of the Department concerned, the student shall be given exemption from the prescribed attendance requirement and the student shall be permitted to appear for the end semester examination. In all such cases, the students should submit the required documents on joining after the absence to the

Head of the Department through the Faculty Advisor and approval by Dean Academics.

- R7.5** A student shall normally be permitted to appear for the end semester examination if the student has satisfied the attendance requirements (Clauses 7.3 and 7.4) and has registered for the examination of that semester by paying the prescribed fee.
- R7.6** Students who do not satisfy Clauses 7.3 and 7.4 or who secure less than 65 percent attendance will not be permitted to write the end semester examination. The student has to register and redo all the course when it is offered next as per Clause R6.10. If the course in which the student has been prevented is a professional / open elective, the student can opt to redo the same course or opt for different professional / open elective course as per Clause 6.10.2.
- R7.7** If a student has shortage of attendance, he / she would not be permitted to move to the higher semester and has to repeat the current semester in the subsequent year.
- R7.8** In the case of reappearance (arrear) registration for a course, the attendance requirement as mentioned in Clauses R7.3 and R7.4 is not applicable. However, the student has to register for the examination in that course by paying the prescribed fee.
- R7.9** If the student needs leave for a short duration (less than two weeks), prior application for the leave shall have to be submitted to the Head of the Department concerned stating the reasons for the leave requested along with supporting documents and such leave may be granted by the Head of the Department.



**R7.10** Absence for the period not exceeding two weeks in a semester due to sickness or any other unavoidable reasons for which prior application could not be made may be permitted by the Head of the Department provided the given explanation is acceptable.

**R7.11** If the period of absence is likely to exceed two weeks, a prior application for grant of leave will have to be submitted through Head of the Department to the Dean (Academic Courses) with supporting documents. In such case the decision to grant leave shall be taken by the Dean (Academic Courses) on the recommendation of the Head of the Department.

**R7.12** A student who is absent due to illness or any other emergency, up to a maximum of two weeks, should approach the Class Advisor / Course Coordinator for assignments and laboratory work.

**R7.13** In case, the period of absence on medical grounds is more than 23 working days during the semester, the student may apply for withdrawal from the semester, i.e. withdrawal from all courses registered in that semester.

**R7.14** If a student is continuously absent from the Institute for more than four weeks without any notification to the Dean (Academic Courses), his / her name will be removed from the Institute rolls.

## **R8. FACULTY ADVISOR & CLASS ADVISOR**

### **R8.1 Class Advisor/Chairperson**

There shall be a Class Advisor for each class. The Class Advisor will be one among the course instructors of the class. He / She will be appointed by the HoD of the department concerned. The Class Advisor is the ex-officio member and the Convener of the class committee.

The responsibilities for the Class Advisor shall be:

- To act as the channel of communication between the HoD and the students of the respective class.
- To collect and maintain various details such as attendance, assessment marks and long leave particulars.
- To conduct the class committee meetings
- To monitor the academic performance of the students including attendance and to inform the class committee.
- To coordinate with each instructor in performing analysis of results of continuous assessments and end semester examinations and in estimating CO – PO attainment.
- To guide in the process of enrollment and registration of the courses
- To attend to the students' welfare activities like awards, medals, scholarships and industrial visits.

## **R8.2 Faculty 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 teacher of the Department, who shall function as Faculty Advisor for those students throughout their period of study. The Faculty Advisor shall advise the students in registering and reappearance (arrear) registering of courses, authorize the process, monitor their attendance and 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 of the faculty advisor shall be:

- To inform the students about the various facilities and activities

available to enhance the student's curricular and co-curricular activities.

- To guide in the process of enrollment and registration of the courses.
- To authorize the final registration of the courses at the beginning of each semester.
- To Advise the students in their career development/professional guidance
- To monitor the academic and general performance of the students including attendance and to counsel them accordingly.
- To collect and maintain the academic and co-curricular records of the students.

### **R8.3 Class Committee**

A class committee consists of teachers of the class concerned, student representatives and a Chairperson / Class advisor. It is like the 'Quality Circle' (more commonly used in industries), with the overall goal of improving the teaching-learning process. The functions of the class committee include:

- Solving problems experienced by students in the classroom and in the laboratories in consultation with Head of the Department / Dean (Academic Courses).
- Clarifying the Regulations of the degree programme and the details of rules therein.
- Informing the student representatives about the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- Informing the student representatives, the details of Regulations regarding weightage used for each assessment.
- Discussing in the class committee meeting the breakup of marks for

each experiment / exercise / module of work, in case of practical courses (laboratory / project work / seminar, etc.) and informing the students.

- Analysing the performance of the students of the class after each assessment and finding ways and means of improving the performance of the students.
- Identifying the students who are low achievers or weak in their subjects if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such students.

The class committee is normally constituted by the Head of the Department. However, if the students of different branches are mixed in each class, the class committee is to be constituted by the Dean (Academic Courses). The class committee shall be constituted within a week from the date of commencement of a semester. At least 4 student-representatives from the respective class (usually 2 boys and 2 girls) shall be included in the class committee. The Chairperson of the class committee may invite the Faculty Advisor(s) and the Head of the Department to the meeting of the class committee. The Dean (Academic Courses) may also be invited to participate in any class committee meeting. The Chairperson of the class committee is required to prepare the minutes of every meeting, submit the same to the Head of the Department within two days of the meeting and arrange to circulate the same among students concerned and teachers. If there are some points in the minutes requiring action by the Institute, the same shall be brought to the notice of the Head of the Institution.

The first meeting of the class committee shall be held within fifteen days from the date of commencement of the semester. Two or three subsequent meetings in a semester may be held at suitable intervals. **The Class Committee Chairman shall put on the Notice Board the cumulative attendance particulars of each student at the end of every such meeting**

**to enable the students to know their attendance details to satisfy the clause 7 of this Regulations.** During these meetings the student members representing the entire class, shall meaningfully interact and express their opinions and suggestions of the class students to improve the effectiveness of the teaching-learning process. In each meeting, the action taken report based on the minutes of the previous meeting is to be presented and discussed by the Chairperson of the class committee.

#### **R8.4 COMMON COURSE COMMITTEE**

Each common theory course offered to more than one discipline or group of disciplines, shall have a “Common Course Committee” comprising all the instructors teaching the common course with one of them nominated as Course Coordinator. The nomination of the Course Coordinator shall be made by the Dean (Academic Courses) in consultation with Heads of Departments duly approved by the Head of the Institution, from among the instructors teaching the common course either from a single department or several departments. The “Common Course Committee” shall meet as often as possible and ensure uniform evaluation of continuous assessments after arriving at a common scheme of evaluation for the tests. Wherever feasible, the common course committee shall prepare a common question paper for the test(s) and end semester examinations.

#### **R8.5 PERFORMANCE ANALYSIS COMMITTEE**

The Performance Analysis Committee will consist of the Principal, Dean (Academic Courses), IQAC Co-ordinator, Head of the Department and internal / external member from an allied department as nominated by the Head of the Institution. The meeting of the Performance Analysis Committee is to be held within ten days after the declaration of results of the end semester examinations. This committee shall analyse the performance of the students in all courses of study by comparing continuous assessment

and end semester examination results, CO - PO attainment levels for each course, verification of class records of each course, etc.,. The compliance report of the performance analysis committee will be forwarded to IQAC for further discussions and approval. The Performance Analysis Committee, by collective wisdom, should ensure that the clustering / grading / pass–fail decisions have been reasonably balanced.

## **R9. SYSTEM OF EXAMINATION**

### **R9.1 Assessment Procedures for Awarding Marks**

All B.E. / B.Tech. programmes consist of Theory , Theory cum Practical, 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 including theory, theory cum practical, laboratory courses and project work.

Performance in each course of study shall be evaluated based on:

- i) Continuous Assessments throughout the semester and
- ii) End Semester Examination

**R9.2** Each course, theory, practical, Project work, Theory Integrated with practical course and Practical Integrated with theory course shall be evaluated for a maximum of 100 marks. The weightage for continuous assessment marks and End semester examination marks are given in the table 3.

**R9.3** All other courses included under Employability Enhancement Courses are evaluated by continuous assessments only. There is no evaluation for Audit Courses. However, minimum attendance requirements as per Clause R7 shall be satisfied.

**Table 3**

Sl. No.	Category of Course	Marks	
		Continuous Assessments	End Semester Examination
1.	Theory courses	40 %	60 %
2.	Practical Courses	50 %	50 %
3.	Theory Integrated with Laboratory Courses	Assessment through theory – 20 % Assessment through Practical - 20 % Total – 40 %	Theory – 60 %
4.	Laboratory Integrated with Theory courses	Assessment through theory – 15 % Assessment through Practical - 35 % (Total – 50 %)	Practical – 50 %
5.	Project Work	60	40
6.	Other Employment Enhancement Courses	100	---

**R9.4** Every teacher is required to maintain an ‘**ATTENDANCE AND ASSESSMENT RECORD**’ for every semester, which consists of attendance marked in each class of theory / theory cum practical / practical / EEC / Audit Courses, the assessment marks and the record of class work (topics covered), separately for each course handled by the teacher. This should be submitted to the Head of the Department periodically (at least 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 and date after due verification. At the end of the semester, the record should be verified by the Dean (Academic Courses) 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.

## **R9.5 Assessment for Theory Courses**

R9.5.1 The End Semester Examinations for theory 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.

R9.5.2 Continuous Assessment comprises of three assessments of equal weightage (10 marks each), conducted by the course instructor / coordinator / department. Other 10 marks for a mini project or any combination of conducting Quizzes / Assignments / Tutorials / Seminar / Online test as decided by the respective Course Instructor.

R9.5.3 In case a student misses the assessment due to medical reasons (hospitalization / accident / specific illness) or due to participation in the College / University / State / National / International level Competitions/ NSS/ NCC camps with prior permission from the Head of the Department, only one reassessment may be given at the end of the semester after getting approval from the Head of the Institution by the concerned Head of the Department and Course Instructor.

R9.5.4 The Internal tests will be conducted as per schedule given in the academic calendar. Each test carries a maximum of 50 marks and will be conducted



for a duration of one and a half hour. Internal mark shall be calculated by considering the best of two internal test. The formula for calculating the internal mark is given below

$$\text{Internal mark} = \frac{\text{sum of Best of two Cycle test mark}}{200} \times 30 + \text{other assessment decided by course instructor (10 marks)}$$

### **R9.6 Assessment for Theory Integrated with Practical Courses and Practical Integrated with Theory Courses**

Each theory integrated with practical or practical integrated with theory course shall be evaluated for a maximum of 100 marks as shown in table 4

Table 4

Sl. No.	Category of Course	Marks		
		Assessment for Theory	Assessment for Laboratory	End Semester Examination
1.	Theory integrated with Practical	20 (Two Assessments)	20 (Continuous Evaluation)	60 (Theory Examination)
2.	Practical integrated with Theory	15 (one Assessment)	35 (Continuous Evaluation)	50 (Practical Examination)

For Theory cum practical courses, end semester examinations will be conducted as theory examinations. For Practical integrated with theory courses, end semester examinations will be conducted and evaluated at the department level with external examiner appointed by Dean Examination

## **R9.7 Assessment for Laboratory Courses**

- R9.7.1 Every laboratory exercise / experiment shall be evaluated based on the student's performance during the laboratory class and the maintenance of laboratory records.
- R9.7.2 There shall be at least one assessment test for laboratory courses.
- R9.7.3 The criteria for arriving at the continuous assessment marks of 50 will be as per the following scheme (75% continuous assessment and 25 % by conducting one assessment test)
- R9.7.4 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 and evaluated by external examiner appointed by Dean Examination.

## **R9.8 Assessment for Project Work**

- R9.8.1 For Project work out of 100 marks, the maximum marks for continuous assessment is fixed as 60 and the end semester examination (project report evaluation and viva-voce examination) carries 40 marks. Project work may be assigned to a single student or to a group of students, not exceeding 4 per group.
- R9.8.2 There shall be three assessments (each 30 marks) during the semester by a review committee. The student shall make presentation on the progress made before the committee. The Head of the Department shall constitute a review committee for each programme. There shall be a minimum of three members in the review committee. The committee shall consist of the guide, project co-ordinator and one of the faculty members. The total marks obtained in the three reviews shall be reduced to a maximum of 60 marks rounded to the

nearest integer.

R9.8.3 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 the project work shall consist of the evaluation of the final project report submitted by the student or students of the project group by an external examiner, followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner and an internal examiner (other than project guide). The project coordinator shall be the internal examiner. The Dean (Examinations) with the approval of the Head of the Institution shall appoint the external examiner for the end semester examination of the project work.

R9.8.4 The continuous assessment and viva-voce examination marks for project work will be distributed as indicated below:

Continuous Assessment (60 % Marks)								End Semester Examination (40 Marks)			
Review I (30 Marks)			Review II (30 Marks)			Review III (30 Marks)		Project Report Evaluation (20 Marks)		Viva-Voce Examination (20 Marks)	
PC	M	G	PC	M	G	PC	M	G	External Examiner	EX	IE
10	10	10	10	10	10	10	10	10	10	10	10

(PC - Project Coordinator; M - Member; G - Guide; IE - Internal Examiner; EX - External Examiner)

- R9.8.5 If the project report is not submitted on or before the specified deadline, an extension of time up to a maximum limit of 30 days may be given for the submission of project work with due approval obtained from the Dean (Academic Courses) and the same needs to be communicated to Dean (Examinations). 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.
- R9.8.6 A student may, however in certain cases, be permitted to work on the project in an Industrial / Research organisation on the recommendation of the Head of the Department, with the approval of the Dean (Academic Courses). In such cases, the project work shall be jointly supervised by a faculty member (Guide) of the department and an Engineer / Scientist from the organisation and the student shall be instructed to report the progress periodically and to attend the project review for evaluating the progress. The student will produce a certificate of attendance from the Industry / Research organisation where the project is carried out.

## **R9.9 Assessment for Seminar / Professional Practices**

The Seminar / Professional Practices / Case study / Mini-Project shall carry 100 marks and shall be evaluated through continuous assessment only. Every student is expected to present a minimum of 2 presentations / demonstration per semester before the evaluation committee and for each presentation / demonstration, marks can be equally apportioned. The three member committee consisting of one co-ordinator and two members appointed by the Head of the Department will evaluate the performance of the student in above activities at the end of the semester, the marks can be consolidated and taken as the final mark. The evaluation shall be based on the seminar paper / report (40 marks), presentation / demonstration (40

marks) and response to the questions asked during presentation / demonstration (20 marks). The final marks obtained by each student in all the above activities should be submitted by the concerned Head of the Department to the Office of Dean (Examinations) with due approval from Head of the Institution at the end of each semester.

#### **R9.10 Assessment for Industrial / Practical Training / Internship / Summer Project**

The Industrial / Practical Training shall carry 100 marks and shall be evaluated through continuous assessment only. At the end of the Industrial / Practical Training / Internship / Summer Project, the student shall submit a certificate from the organization where the student has undergone training and a brief report about the training. The evaluation will be made based on this report (40 marks), presentation (30 marks) and a Viva-Voce Examination (30 marks). The viva- voce examination will be conducted by a three member committee constituted by the Head of the Department. The committee comprises of one expert from an industry / organisation and two members (a co-ordinator and a member) from the Department. Certificates (issued by the Organization) of the student along with his/her mark statement should be submitted by the concerned Head of the Department to the Office of Dean (Examinations) with due approval from Head of the Institution at the end of each semester.

#### **R9.11 Assessment for Value Added Courses**

This one / two credit course shall carry 100 marks and shall be evaluated through continuous assessments only. Two assessments shall be conducted during the semester by the department concerned. The Head of the Department may identify a faculty member as coordinator for the course. A committee consisting of the Head of the Department, staff handling the course (if available), coordinator and a senior Faculty member

nominated by the Head of the Department shall monitor the evaluation process. The grades shall be assigned to the students by the above committee based on their relative performance. Certificates (issued by the Industry) of the student along with his/her mark/grade statement should be submitted by the concerned Head of the Department to the Office of Dean (Examinations) with due approval from Head of the Institution at the end of each semester.

#### **R9.12 Assessment for Online Courses**

Students may be permitted to credit online courses (NPTEL/Swayam) with the approval of the Head of the Department and Dean (Academic Courses), subject to a maximum of six credits.

**R.9.12.1** On successful completion of the online course, the candidate has to submit the copy of the certificate and the grade card (if applicable) to the Head of the Department.

**R9.12.2** The Head of the Department shall form a team of faculty members to recommend the credit and grade to be awarded to the candidate by mapping the score earned by the student and results shall be submitted to the Dean (Examinations) for further processing with due approval from Head of the Institution.

**R9.12.3** If the grade card is not submitted by the student, the HoD shall recommend to the Dean (Examinations) to conduct end semester examination on the online course

**R9.13** Internal marks approved by the Head of the Institution shall be displayed to students by the respective HODs within 5 days from the last working day.

## **R10. PASSING REQUIREMENTS**

- R10.1** A student who secures not less than 50% of total marks prescribed for the course [sum of Continuous Assessment marks and End semester Examination marks] shall be declared to have passed the course and acquired the relevant number of credits. Appearing for end semester examinations in theory courses, laboratory courses, theory courses integrated with Laboratory, Laboratory course integrated with theory project work is a mandatory requirement.
- R10.2** If the student gets less than 50 percent of total marks, then the student will be awarded only RA (Reappearance) grade.
- R10.3** If a student fails to secure a pass in theory courses and laboratory courses in the current semester examination, he / she is allowed to write arrear examinations for the next three consecutive semesters and their internal marks shall be carried over for three attempts only (vide Clause R6.9.1) If a student fails to secure a pass in a course even after three consecutive attempts, internal marks of that particular course will be nullified and the student has to pass by earning the full 50 percent marks purely in the end semester examination in the subsequent semesters.
- R10.4** If a candidate fails in the seventh semester examination for Project 1, he / she has to resubmit the Project Report within 30 days from the date of declaration of the results. If he / she fails in the final project work (Project 2) of B.E. / B.Tech., he / she shall resubmit the Project Report within 60 days from the date of declaration of the results. The resubmission of the project report and the subsequent viva-voce examination will be considered as reappearance with payment of exam fee. In case, a student fails in the resubmission of a project report and subsequent viva-voce examination, the student shall register for the course again, when offered next.

**R10.5** The passing requirement for the courses which are assessed only through continuous assessment (Employment Enhancement courses except project work), shall be fixed as minimum 50 percent and the rest of the grades are decided (vide Clause R11.1).

**R11. AWARD OF LETTER GRADES**

**R11.1** All assessments will be done on the basis of marks. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of total marks (out of 100) obtained by the candidate in each subject as detailed below:

- A hybrid of relative and absolute grading system will be followed in assigning grades to students for each course registered.
- A student earning 91-100 marks will be awarded with 'O' grade and 50-60 marks will be awarded with 'B' grade. The marks in range of 61-90 will be awarded with intermediate grades, which shall be fixed based on the mean of marks in each course/subject.



**Table 6**

<b>Range of Total Marks (TM)</b>	<b>Letter Grade</b>	<b>Grade Significance</b>	<b>Grade Points</b>
$91 \leq TM \leq 100$	O	Outstanding	10
$61 \leq TM \leq 90$ intermediate grades shall be fixed based on the mean of marks in each course	A+	Excellent	9
	A	Very Good	8
	B+	Good	7
$50 \leq TM \leq 60$	B	Average	6
$0 \leq TM < 50$	RA	Reappearance Registration	0
---	SA	Shortage of Attendance	-
---	W	Withdrawal from End Semester Examination	-
---	AB	Absent	0
---	AU	Audit Course	-

- i) “RA” denotes Reappearance required for the examination in the course and “W” denotes withdrawal from the course.
- ii) The Grade “SA” denotes inadequate attendance (as per Clause R7) and hence prevented from writing the end semester examination.
- iii) The Grade “SA’ and “W” will figure only in the Result Sheets.

**R11.2** For the Co-curricular activities such as NCC / NSS / NSO / YRC, a **Satisfactory / Not Satisfactory** grading will appear in the mark sheet. Every student shall put in a minimum of 75 percent attendance in the training and attend the camp compulsorily. A Satisfactory grade in the above co-curricular activities is compulsory for the award of degree.

**R11.3** The grades obtained for the one / two credit course shall figure in the Mark sheet under the title ‘**Value Added Courses**’ / ‘**Online Course**’. The other grades RA, SA will not figure in the mark sheet.

**R11.4 GRADE SHEETS**

R11.4.1 After the results are declared, Grade Sheets will be issued to each student, which will contain the list of courses enrolled for that semester and the grades obtained by the student.

R11.4.2 The Grade Point Average (GPA) for each semester will be calculated only for the students who have passed all the subjects of that semester. Similarly, Cumulative Grade Point Average (CGPA) up to any semester will be calculated only for the students who have passed all the subjects up to that semester. GPA is the ratio of the sum of the products of the number of credits of a course ( $C_i$ ) and the grade points scored in that course ( $GP_i$ ), taken for all the courses, to the sum of the number of credits of all the courses ( $n$ ) in the semester.

$$GPA = \frac{\sum_i^n C_i * GP_i}{\sum_i^n C_i}$$

where  $n$  is the number of courses in that semester.

On successful completion of the programme, the CGPA will be calculated as follows:

$$CGPA = \frac{\sum_1^N C_i \times GP_i}{\sum_1^N C_i}$$

where  $N$  is the total number of courses for the entire programme

## **R11.5 REVALUATION OF ANSWER SCRIPTS**

A candidate can apply for photocopy of his/her semester examination answer paper in a theory course, within 2 weeks from the declaration of results, on payment of a prescribed fee through proper application to the Dean (Examinations) through the Head of Department. Students can see the valued answer scripts of the semester examinations and can get it retotalled / revalued by the faculty concerned. Based on the recommendation, the candidate can register for the revaluation through proper application to the Dean (Examination). The answer sheets will be revaluated and the results will be intimated to the candidate concerned through the Head of the Department. Revaluation is not permitted for practical courses and for project work.

## **R12. ELIGIBILITY FOR THE AWARD OF DEGREE**

**R12.1** 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 Examinations and passed all the subjects prescribed in all the 8 semesters within a maximum period of 7 years reckoned from the commencement of the first semester (6 years reckoned from the commencement of the third semester in case of lateral entry scheme) to which the candidate was admitted.
- iii) Successfully passed any additional courses prescribed by the Dean

(Academic Courses).

- iv) Successfully completed the NCC / NSS / NSO / YRC requirements.
- v) No disciplinary action is pending against the student
- vi) The award of Degree must have been approved by the Academic Council of the Institution.

## **R12.2 Classification of the Degree Awarded**

### **R12.2.1 First Class with Distinction**

A student who satisfies the following conditions shall be declared to have passed the examination in First class with Distinction:

- i) Should have passed the examination in all the courses of all the eight semesters in first appearance within five years (four years in case of lateral entry students), which includes authorized break of study of one year. Withdrawal from examination (vide Clause R14) will not be considered as an appearance.
- ii) Should have secured a CGPA of not less than 8.50.
- iii) Should not have been prevented from writing end semester examination due to lack of attendance in any of the courses.

The authorised break of study (vide Clause R13) and withdrawal from the examination (vide Clause 14) will not be counted as an attempt.

### **R12.2.2 First Class**

A student who satisfies the following conditions shall be declared to have passed the examination in First class:

- i) Should have passed the examination in all the courses of all eight semesters within five years (four years in case of lateral entry students), which includes one year of authorized break of study (if availed) or prevention from writing the End Semester Examination due to lack of attendance (if applicable).
- ii) Should have secured a CGPA of not less than 7.00.

The authorised break of study (vide clause R13) and withdrawal from the examination (vide clause R14) will not be counted as an attempt.

### **R12.2.3 Second Class**

All other students (not covered in Clauses 12.2.1 and 12.2.2) who qualify for the award of the degree (vide Clause R12.1) shall be declared to have passed the examination in Second Class.

- R12.2.4 A student who is absent in the end semester examination in a course / project work after having registered for the same shall be considered to have appeared in that examination (except approved withdrawal from end semester examinations as per Clause R14) for the purpose of classification.

## **R13. PROVISION FOR AUTHORISED BREAK OF STUDY**

- R13.1** Break of Study shall be granted by the Dean (Academic Courses) only once for valid reasons for a period of maximum one year during the entire period of study of the degree programme.

- R13.2** Prescribed fee to the Institute should be paid during the “Break of Study” period.

- R13.3** The candidate permitted to re-join after the break shall be governed by the Curriculum and Regulations in force at the time of re-joining. If the

Regulation is changed, then, those candidates may have to take up additional courses as prescribed by the Dean (Academic Courses).

**R13.4** The authorized break of study (for a maximum of one year) will not be counted for the duration specified for passing all the courses for the purpose of classification. (vide Clause R12.2).

**R13.5** The total period for completion of the programme reckoned from, the commencement of the first semester (third semester for Lateral Entry Scheme) to which the candidate was admitted shall not exceed the maximum period specified in Clause R5.1 irrespective of the period of break of study (vide Clause R14.4) in order that he / she may be eligible for the award of the degree.

**R13.6** If any student is detained for lack of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted 'Break of Study' or 'Withdrawal' (Clause R13.4 or R14) is not applicable for this case.

**R13.7** If the candidate has not reported back to the department, after the break of study, his / her name shall be deleted permanently from the college enrollment. Such candidates are not entitled to seek readmission under any circumstances.

#### **R14. PROVISION FOR WITHDRAWAL FROM THE END SEMESTER EXAMINATIONS**

**R14.1** A candidate may, for valid reasons and on prior application, be granted permission to withdraw from appearing for one examination of one course or two or more consecutive examinations of different courses in the end semester examination. Permission cannot be given to withdraw from the examinations in a non-consecutive sequence

- R14.2** Such withdrawal shall be permitted only once during the entire period of study of the degree programme
- R14.3** Withdrawal application is valid only if it is made within 10 days prior to the commencement of the end-semester examination and recommended by the Head of the Department and approved by the Dean (Academic Courses).
- R14.4** Notwithstanding the requirement of mandatory 10 days' notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.
- R14.5** Withdrawal shall not be construed as an appearance for the eligibility of a candidate for First Class with Distinction. This provision is not applicable to those who seek withdrawal during VIII semester.
- R14.6** Withdrawal from the end semester examination is NOT applicable to arrears subjects of previous semesters.
- R14.7** The candidate shall appear for the end semester examination with respect to the withdrawn courses during the examination conducted in the subsequent semester and need not re-appear for the continuous assessment examination.
- R14.8** Withdrawal from the continuous assessment examination is not permitted.
- R14.9** Withdrawal is not permitted to the student who has not satisfied the conditions prescribed in Clause R7 as requirements for appearing in the end semester examination

## **R15. DISCIPLINE**

The Institute reserves the right to cancel the admission of any student and ask him / her to discontinue his / her studies at any stage of his / her career on the grounds of unsatisfactory academic performance or misbehaviour and conduct.

**R15.1** Every student is required to observe discipline and decorous behaviour both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the institution.

**R15.2** Any act of indiscipline of a student reported to the Dean (Academic Courses) will be referred to a Discipline and Welfare Committee constituted by the Head of Institution. The Committee will enquire into the charges and recommend suitable punishment if the charges are substantiated. The Head of Institution will consider the recommendation of the Discipline and Welfare Committee for appropriate action.

**R15.3** If a student indulges in malpractice in any of the end semester examination / continuous assessment test, he / she shall be liable for punitive action as prescribed by the institution from time to time.

**R15.4** Ragging of any dimension is a criminal and non-bailable offence in our country. The current State and Central legislations provide for stringent punishment, including imprisonment. Once the involvement of a student is established in ragging, the offending student will be dismissed from the Institution and will not be admitted into any other Institution. Avenues also exist for collective punishment, if individual cannot be identified in this inhuman act. Every student of the Institute, along with the parent, shall give an undertaking every year in this regard and this should be submitted at the time of enrolment.



**R16. REVISION OF REGULATIONS AND CURRICULUM**

The Academic Council of the Institute reserves the right to revise, amend or change the regulations, the curriculum, syllabus and the scheme of examinations from time to time if found necessary and shall send the recommendations to the Governing Body for approval.

**R17. SPECIAL CASES**

In the event of any clarification in the interpretation of the above regulations, they shall be referred to the Standing Committee (Internal members of the Academic Council). The Standing Committee will offer suitable interpretation / clarification required for special case on such references and get them ratified in the next meeting of the Academic Council. The decision of the Academic Council is final.

**Annexure – I**  
**Details of B.E./B.Tech Degree Programmes**

<b>Sl. No.</b>	<b>UG Departments</b>	<b>Credits</b>
1.	B.E. Computer Science and Engineering	168
2.	B.E. Electronics and Communication Engineering	169
3.	B.E. Electronics and Instrumentation B.E. Engineering	166
4.	B.E. Electrical and Electronics Engineering	165
5.	B.E. Mechanical Engineering	167
6.	B.E. Civil Engineering	167
7.	B.E. Mechatronics Engineering	169
8.	B.Tech. Information Technology	168
9.	B.Tech. Polymer Technology	168
10.	B.Tech. Biotechnology	169
11.	B.Tech. Artificial Intelligence and Data Science	168