

RAJALAKSHMI ENGINEERING COLLEGE, CHENNAI
An Autonomous Institution affiliated to Anna University, Chennai

UG REGULATIONS 2023
CHOICE BASED CREDIT SYSTEM
Common to all B.E. / B.Tech. Programmes

DEGREE OF BACHELOR OF ENGINEERING / BACHELOR OF TECHNOLOGY

This set of Regulations is applicable for the students admitted to B.E./B.Tech. Programmes at Rajalakshmi Engineering College, Chennai, from the academic year 2023-2024 onwards.

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, Mechanical Engineering, etc.
- III) **“Course”** means a Theory or a Laboratory or a Theory with Laboratory component that is normally studied in a semester, like Mathematics, Physics, etc.
- IV) **“Head of the Institution”** means the Principal of the College.
- V) **“Dean-Academics”** means the authority of the college who is responsible for all the Academic activities and for the implementation of relevant rules and regulations.
- VI) **“Head of the Department”** means Head of the Department concerned.
- VII) **“Controller of Examinations (CoE)”** means the authority of the college who is responsible for all the activities of the examination centre.
- VIII) **“College”** means Rajalakshmi Engineering College, Chennai.
- IX) **“University”** means ANNA UNIVERSITY, Chennai.

2. ADMISSION

As per the norms of the Anna University, Chennai.

3. PROGRAMMES OFFERED

- The programmes currently being offered by the college, affiliated to Anna University and approved by AICTE, New Delhi are given in ANNEXURE-I. The prescribed range of total credits for each B.E./ B.Tech. Degree programme is 160-165.
- Students who join a B.E./B.Tech. programmes, apart from this regular programme, if

they wish, they have a choice to take up any one of the following three degree programmes, from the V semester onwards, provided they satisfy certain criteria as mentioned in clause 4.10.

- (i) B.E./B.Tech. Honours degree
- (ii) B.E./B.Tech. Honours degree with specialization in the same discipline
- (iii) B.E./B.Tech. with Minor degree with specialization in an another programme

4. STRUCTURE OF THE PROGRAMMES

4.1 Categorization of Courses

Every B.E. / B. Tech. Programme will have a curriculum with syllabi consisting of theory, laboratory and theory with laboratory component, project work courses that shall be categorized as follows:

- i. **Humanities and Social Sciences including Management Courses (HSMC)** courses include Technical English, Professional Ethics and Human Values, Management courses.
- ii. **Basic Sciences (BS)** courses include Mathematics, Physics, Chemistry, etc.
- iii. **Engineering Sciences (ES)** courses include Engineering practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.
- iv. **Professional Core (PC)** courses include the core courses relevant to the chosen specialization / branch.
- v. **Professional Elective (PE)** courses listed in the verticals relevant to the chosen specialization.
- vi. **Open Elective (OE) courses are multidisciplinary courses that include the courses from Humanities and Sciences, other disciplines of Engineering and Technology and Management.**
- vii. **Employability Enhancement Courses (EEC)** include soft skills, Problem solving Techniques, Internship, Industrial training, Seminar and Projects.
- viii. **Mandatory Non-credit Courses (MC)** expose the students to courses such as Constitution of India, Environmental Engineering, Yoga, Value Education, Pedagogy Studies, Stress Management and Personality Development through Life Enlightenment Skills

The blend of all the above 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 **emerged** as a socially conscious human professional.

4.2 Personality and Character Development

All students shall enrol, on admission, in atleast one of the personality and character development programmes (NCC/NSS/NSO/YRC etc.,) and undergo training for a minimum of 50 hours. The training shall include classes on hygiene and health awareness, training in first-aid and other socially relevant activities such as blood donation camps, Swatch Bharath, doing services for the inmates of orphanage and old age homes etc.,

- **National Cadet Corps (NCC)** will have about 20 parades.
- **National Service Scheme (NSS)** will have social service activities in and around the College. The activities may include practical projects on recycling and reusing biodegradable and dry waste etc.
- **National Sports Organization (NSO)** will conduct Sports, Games, Drills and Physical exercises.
- **Youth Red Cross (YRC)** will have activities related to social services in and around the College.
- **Training activities** will normally be during weekends and there can be camps held during semester holidays.

Apart from the above, the students may also enrol in any other units of Centre for Fostering Social Responsibility (CFSR) like –ROTARACT / LEO / ATRIUM / ENACTUS / EDC / etc.,

4.3 Mandatory Two Week Induction Programme

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

4.4 Number of courses per semester

Curriculum of each semester shall normally have a blend of theory courses, laboratory courses, theory cum laboratory courses not exceeding **7. Number of** Laboratory courses, Employability Enhancement Course(s) not exceeding **4**. However, the total number of courses per semester shall not exceed 10. Each course may have credits assigned as per clause 4.5.

4.5 Credit Assignment

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

Table : 4.1

Contact period(s) per week	Credit(s)
1 Lecture Period	1
1 Tutorial Period	1
2 Laboratory Periods	1
2 periods of EEC courses like Seminar / Case study etc.,	1

4.6 Industrial Training / Internship

- 4.6.1 The students may also 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 after due approval from the Dean Academics for the period prescribed in the curriculum during summer / winter vacation, in lieu of Industrial training.

- 4.6.2 If Industrial Training / Internship is not prescribed in the curriculum, the student may undergo Industrial Training / Internship optionally (Refer table 4.2). The student is allowed to undergo a maximum of 6 weeks Industrial Training / Internship during the entire duration of study earning 3 credits. In such cases, Industrial Training / Internship need to be undergone continuously in one organization only. If the student earns 3 credits in Industrial Training / Internship, then he/she may optionally drop any one of the Elective courses.

Table 4.2

Duration of the Training / Internship	Credit(s)
2 weeks	1
4 weeks	2
6 weeks	3

4.7 Industrial Visit

Every student is required to go for at least one Industrial Visit every year, starting from the second year of the Programme. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

4.8 Value Added Courses

The Students may optionally undergo Value Added Courses apart from the courses mentioned in the curriculum and the credits earned through these Value Added Courses shall be over and above the total credits requirement prescribed in the curriculum for the award of the degree. One / Two credit courses may be offered by the Department **with prior approval from the Head of the Institution**. The details of the syllabus, time table and faculty members handling the course should be sent to the Dean-Academics and the Controller of Examinations, **before the commencement of the course**. The students can take a maximum of two one credit courses or one Two credit course. The credits earned through these optional courses will not be counted for GPA/CGPA computation, but will be indicated in the grade sheet.

4.9 Online courses

- 4.9.1. Students may be permitted to optionally enrol and earn credits through online courses (which are conducted and provided with a certificate by any reputed institution or SWYAM / NPTEL platforms, approved by appropriate authorities of the college) and these credits may be transferred after due approval of the Dean- Academics **subject to a maximum of 9** credits. The

credits earned in such online course(s) can be 4 or 3+1 or 2+2 or 3 or 2+1 credits, which can be considered, instead of one elective course **subject to a maximum of three electives**. The duration of the course and corresponding number of credits are listed in table 4.3.

Table 4.3 : Duration of the course and Number of credits

Sl. No.	No. of Weeks	No. of Credits
1	4	1
2	8	2
3	12	3
4	16	4

4.9.2.Students are also permitted to enrol and undergo courses in Physical mode / Online mode offered by Universities in India or abroad and also permitted to pursue a semester long programme in physical mode. The transfer of credits shall be decided by the committee constituted by the Dean Academics of the college, as per the guidelines of National Educational Policy (NEP) -2020

4.9.3.Students are permitted to optionally study courses offered in physical/online/ hybrid mode by reputed companies practicing Engineering / Technology having MoU with the college. The transfer of credits shall be decided by the committee constituted by the Dean Academics of the college. The design of the courses with regard to the syllabus content, duration of each course and number of credits offered for each course by the companies shall be discussed and recommended by Department Advisory Board (DAB) and approved by the Dean Academics, as per the guidelines of National Educational Policy (NEP) -2020

4.10. B.E./B.Tech. Honours and Minor Degree programmes

Eligibility for enrolling in B.E./ B. Tech. (Honours) degree or B.E./B.Tech Honours degree with specialization in the same discipline or B.E./B.Tech. with Minor degree with specialization in another programme: The students (who have joined first year in B.E./B.Tech degree programme) should have earned a CGPA of 7.5 and above till Third semester and should have passed all the courses in the First attempt itself. The lateral entry students should have passed all the subjects in the first attempt in III semester and earned a CGPA of 7.50 and above in that semester (Refer vide clause 16.2)

4.10.1. Eligibility for securing B.E./ B. Tech. (Honours) degree programmes

- The students should have taken additional courses from any of the verticals of the same programme and earned a minimum of 18 credits from V semester onwards.
- Should have passed all the courses prescribed in the curriculum and additional courses in the first attempt.
- Should have earned a minimum of 7.50 CGPA taking into account all the courses prescribed in the curriculum for eight semesters and additional courses

4.10.2. Eligibility for securing B.E./B.Tech Honours degree with specialization in the same programme

- The student should have earned additionally a minimum of 18 credits from a specified group of Professional Electives (vertical) of the same programme from V semester onwards.
- Should have passed all the courses prescribed in the curriculum and additional courses in the first attempt.
- Should have earned a minimum of 7.50 CGPA taking into account all the courses prescribed in the curriculum for eight semesters and additional courses

4.10.3. Eligibility for securing B.E./B.Tech. with Minor degree with specialization in an another programme

The student should have earned additionally a minimum of 18 credits in any one of the verticals of another B.E/B.Tech programmes or any one of the following specializations

- Internet of Things (IoT)
- FinTech and Entrepreneurship
- Data Science
- Block Chain and Cyber Security
- Augmented Reality (AR) and Virtual Reality (VR)
- Electric Vehicles
- Robotics
- Business Analytics

4.10.4. Out of these 18 credits to be earned by the students opting for either B.E./ B.Tech. (Honours), B.E. / B.Tech. (Honours with specialization) degree and or B.E./B.Tech. with Minor degree in an another specialization can earn maximum of 8 credits (subject to the maximum of two courses) in online mode (like SWAYAM platform), with the approval of the respective HoD and Dean (Academics)

4.10.5. If a student decides not to continue with the Honours degree programme mentioned 4.10.1 and 4.10.2 after completing certain number of additional courses, the additional courses studied shall be considered instead of the Professional Elective courses which are part of the curriculum. If the student has studied more number of such courses than the number of Professional Elective courses required as per the curriculum for B.E. / B.Tech. degree (without Honours degree), the courses with higher grades shall be considered for the calculation of CGPA. Remaining courses shall be printed in the grade sheet and they will not be considered for calculation of CGPA.

4.10.6. If a student decides not to continue with the Minor degree programme, after completing certain number of courses, the additional courses studied shall be considered, instead of Open Elective courses which are part of the curriculum. With this option, if the student has accumulated more number of open electives than required for B.E. / B.Tech. degree (without Minor degree) as per the curriculum, then the courses with higher grades shall be considered for calculation of CGPA. Remaining courses shall be printed in the grade sheet, however, they will not be considered for calculation of CGPA.

4.11 Medium of Instruction

The medium of instruction and assessment for the courses which can be written test, seminar presentations and project / thesis / dissertation reports will be in English (except regional /foreign language courses).

5. DURATION OF THE PROGRAMME

- 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) students.
- 5.2 Each semester shall normally consist of 90 working days. The Head of the Institution shall ensure that every faculty member imparts instruction as per the number of periods specified in the syllabus and that the faculty member teaches the full content of the specified syllabus for the courses being taught.
- 5.3 The Head of the Institution may arrange the conduct of additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. The End Semester Examination will ordinarily follow immediately after the last working day of the semester, commencing from first semester as per the academic schedule prescribed from time to time.

6. COURSE REGISTRATION

- 6.1 For the first semester of study, each student on admission shall register for all the courses prescribed in the curriculum for that semester
- 6.1.1 From the II semester onwards, a student can register the courses as per the details given below:
 - I. Courses of the current semester (including Professional/Open elective courses and Mandatory non-credit courses, Minor/ Honours Degree courses)
 - II. Course(s) in which he/she has not been permitted to appear for the end semester examinations in earlier semesters, for want of the minimum required attendance, if such courses are offered in that semester subject to a maximum of 36 credits including current semester subjects (vide clause 7.3) However, this does not include the number of Reappearance (RA) and Withdrawal (W) courses registered by the student for the appearance of Examination.
 - III. A student has to register for reappearance in a subsequent semester, for those courses in which he/she has failed in the earlier semester(s).
 - IV. Professional or Open elective course(s) newly opted by the students in lieu of such 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. If a student wishes, then he/she is also permitted to register for courses offered in a higher semester, in advance from V semester onwards, to earn more than the total number of credits prescribed in the current semester in the curriculum of the

student's programme (subject to maximum of 36 credits) with the approval of Dean-Academics (Refer Clause 6.4)

- VI. The student shall register for the project work and semester long internship as prescribed in the curriculum.
- VII. Any other course(s) the student wishes to register as per norms (vide clause 4.6, 4.8, 4.9 and 4.10).

6.2 STUDENTS' COURSE REGISTRATION ENABLEMENT:

- 6.2.1 Each student, on admission shall be assigned to a Faculty Counselor (vide clause 8) 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.
- 6.2.2 Every student shall enroll for the course of the succeeding semester before the end of the current semester. However, the student shall confirm the enrollment by registering for the courses within the first five working days after the commencement of the concerned semester.
- 6.2.3 Any elective course shall be offered by a Department only if a minimum of 20 students register for that course, subject to the approval of the Head of the Department.
- 6.2.4 After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn continuous assessment marks and appear for the End Semester Examinations.
- 6.2.5 The enrollment for the courses of the Semesters II to VIII will commence 10 working days prior to the last working day of the preceding semester. The student shall enrol for the courses with the guidance of the student's Faculty Counselor. If the student wishes, he/she may drop or add courses (vide clause 6.4) within five working days after the commencement of the concerned semester and complete the registration process duly authorized by the Faculty Counselor.
- 6.2.6 After a student completes the VIII semester, if he/she has to complete ONE / TWO course(s) (maximum 2 only) of any semester, to give one more opportunity for the student to complete the program within 4 years, he/she will be permitted to appear for special examination (conducted within a month after the announcement of VIII semester results) for those courses, carrying forward the continuous assessment marks of the last attempt, if applicable.

6.3 Registration for Reappearance

- 6.3.1 Course(s) in which the student has failed and reappears for the second time in a subsequent semester, he/ she can carry forward the same continuous assessment marks earned in the 1st attempt. If he/she fails to secure a pass mark in the second attempt also, in his/her attempts in subsequent semesters, the continuous assessment marks will not be considered and he/she has to secure minimum of 50% marks prescribed for End Semester Examination alone.
- 6.3.2 If the course, in which a student has failed, is a professional elective or an open elective, he/she may register for the same elective course, or any other professional elective or an

open elective respectively, if offered in that semester.

- 6.3.3 If a student is prevented from writing End Semester Examination of a course due to lack of attendance, the student has to register for that course again, when offered next, attend the classes and fulfill the attendance requirements as per clause 7.

6.4 Flexibility to Add/ Drop Courses

A student has to earn the total number of credits specified in the curriculum of the respective programme of study in order to be eligible to obtain the degree. From the II to VII semesters onwards, the student has the option to drop courses listed in a semester. Also, the student who have cleared all the courses upto IV semester in the first attempt, has the option to study the courses listed in VI, VII and VIII semesters except project work. The total number of courses that a student can add or drop in a semester is limited to a maximum of 2 courses.

7. REQUIREMENTS FOR COMPLETION OF THE SEMESTER

- 7.1 A student who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester. Ideally every student is expected to attend all classes of all the courses and secure 100% attendance. However, in order to give provision for certain unavoidable reasons such as Medical / participation in sports, the student is expected to attend a minimum of 75% of the classes for every course of the semester. Therefore, he/she shall **secure not less than 75% attendance** (after rounding off to the nearest integer) in every course (including Mandatory non-credit courses) that he/she has registered as calculated as per clause 7.4.
- 7.2 However, a student who secures an attendance for any course(s) between 65% and 74% in the 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 student shall submit the medical certificate / sports participation certificate approved by the Dean-Academics. **This concession can be availed only for any two semesters during the entire course of the study.**
- 7.3 Students **who do not satisfy the clauses 7.1 and 7.2** will not be permitted to write the End Semester Examination of that course. They are required to redo the course in a subsequent semester when the course is offered next.
- 7.4 For the purpose of calculation of attendance requirement for writing the end semester examinations by the students for every course, the following method shall be used.

Percentage of Attendance	=	$\frac{\text{Total no. of periods attended in a course during the semester}}{\text{Total number of periods conducted in that semester for that particular course}}$	X 100
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7.5. A student who has not satisfied the attendance requirement as per clauses from 7.1 to 7.4, but having atleast 50% of attendance in every course of that semester can appeal to the Head of the Institution or his nominee, for proceeding to the next higher semester. Head of the Institution will appoint a committee for examining these appeals. Based on the recommendations of the committee, Head of the Institution will take a final decision on the appeal by the student.

7.6. In the case of reappearance (Arrear), the student has to register for the examination in that course by paying the prescribed fee.

8.0 FACULTY COUNSELOR AND CLASS ADVISOR

8.1 Faculty counselor

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 Counselor for those students throughout their period of study. The Faculty counselor shall advise the students in registering and reappearance registering of courses, authorize the process, monitor their attendance and progress and counsel them periodically. If necessary, the Faculty Counselor may also discuss with or inform the parents about the progress / performance of the students concerned.

The responsibilities for the faculty Counselor shall be:

- To inform the students about the various facilities and activities available to enhance the students' curricular and co-curricular activities.
- To guide students on enrollment and registration of the courses.
- To authorize the final registration of the courses at the beginning of each semester.
- To monitor the academic and general performance of the students including attendance and to counsel them accordingly.

8.2 Class Advisor

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 Head 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 statistical details of students.
- To help the chairperson (refer clause 9.1) of the class committee in planning and conduct of the class committee meetings.
- To monitor the academic performance of the students including attendance and to inform the class committee.
- To attend to the students' welfare activities like awards, medals, scholarships and industrial visits etc.,

9. CLASS COMMITTEE

- 9.1. Every class shall have a class committee consisting of teachers of the class concerned, student representatives and a chairperson who is not teaching the respective class. 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 class room, laboratories and within the campus
 - Clarifying the regulations of the degree programme and the details of rules therein particularly (clause 5 to 7) which should be displayed on college Notice-Board.
 - 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. In case of practical courses (laboratory / drawing / project work / seminar etc.,) the breakup of marks for each experiment / exercise / module of work should be clearly discussed in the class committee meeting and informed to the students.
 - 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 slow learners, if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such slow learners.
- 9.2 The class committee for a class under a particular branch is normally constituted by the Head of the Department. However, if the students of different branches are mixed in a class (like the first semester which is generally common to all branches), the class committee is to be constituted by the Head of the Institution.
- 9.3 The class committee shall be constituted within the first week of each semester.
- 9.4 At least 4 student representatives (usually 2 boys and 2 girls) shall be included in the class committee.
- 9.5 The Chairperson of the class committee may invite the class advisor(s) and the Head of the Department to the class committee meeting.
- 9.6 The Head of the Institution may participate in any class committee meeting of the institution.
- 9.7 The Chairperson is required to prepare the minutes of every meeting, submit the same to Head of the Institution within two days of the meeting and arrange to circulate it among the students and teachers concerned. 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.
- 9.8 The first meeting of the class committee shall be held within one week from the date of commencement of the semester, in order to inform the students about the nature and weightage of assessments within the framework of the Regulations. Two or three

subsequent meetings may be held in a semester at suitable intervals. The Class Committee Chairperson 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 the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.

10. COMMITTEE FOR COMMON COURSES

Any course (Theory, Practical, integrated) handled by more than one teacher shall have a committee for the course, comprising of all teachers teaching that course. One of the teachers shall be nominated as Course Coordinator by the concerned HoD or by the Dean Academics.

The first meeting of the committee for the common course shall be held within fifteen days from the date of formation of the committee. 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 to ensure uniform and effective delivery of the course.

In addition, the committee shall meet to ensure uniform evaluation of continuous assessments after arriving at a common scheme of evaluation for the assessments (vide clause 12).

Wherever feasible, the committee shall prepare a common question paper for the continuous assessment tests also.

11. SYSTEM OF EXAMINATION

- 11.1 Performance in each course of study shall be evaluated based on (i) continuous assessment tests during the semester and (ii) End Semester Examination at the end of the semester.
- 11.2 Each course, theory, theory integrated laboratory and laboratory courses (including project work & viva voce examinations) shall be evaluated for a maximum of 100 marks.
- 11.3 Industrial training shall carry 100 marks and shall be evaluated through viva-voce examinations only.
- 11.4 The End Semester Examination (theory, theory integrated laboratory and laboratory) of 3 hours duration shall normally be conducted in November / December for the odd semesters and in April / May for the even semesters.
- 11.5 The End Semester Examination for project work shall consist of evaluation of the final report submitted by the student or students of the project group (of not exceeding 4 students) by an external examiner and an internal examiner, followed by a viva-voce examination.

- 11.6 For all the End Semester Examinations, wherever necessary, the internal and external examiners shall be appointed by the Controller of Examinations.

12. PROCEDURE FOR AWARDING MARKS FOR CONTINUOUS ASSESSMENT TESTS

The weightage for continuous assessment for the theory subject is 40 %, for the laboratory 60% , for the integrated course (Theory and Laboratory) 50% and for the project 40 % marks. The marks for these continuous assessments shall be awarded as per the following procedure:

12.1 Theory Courses

Three assessments shall be conducted during the semester. The total marks obtained in all assessments put together out of 200, shall be proportionately reduced for 40 marks and rounded off to the nearest integer

CAT-I	CAT-II	CAT-III	Other Assessment	Total
Written Test for Unit-1&2	Written Test for Unit-3	Written Test for Unit-4&5	MCQ/Individual Assignment / Case Study / Seminar / Mini Project	Internal Assessment
60	30	60	50	200

12.2 Laboratory Courses

Every laboratory exercise / experiment shall be evaluated based on conduct of experiment / exercise and records are to be maintained. There shall be at least one test. The criteria for arriving at the Internal Assessment marks of 60 are as follows: 75% marks shall be awarded for successful completion of all the prescribed experiments done in the laboratory and 25% marks for the test. The total mark shall be converted for a maximum of 60 marks and rounded off to the nearest integer.

Evaluation of Laboratory Observation, Record and Viva voice	Model Test	Total Internal Assessment
75	25	100

12.3 Theory Courses with Laboratory Component

Weightage of internal assessment and End Semester Examination marks will be 50% each. The distribution of the marks for the theory and laboratory components in the internal assessments and End Semester Examination for the courses with different credit distributions are given below.

L	T	P	C	Internal Marks		End Semester Examination
				Theory	Laboratory	
1	0	6	5	25%	25%	Laboratory only (50%)
1	0	4	3	25%	25%	Laboratory only (50%)
1	0	2	2	25%	25%	Laboratory only (50%)
2	0	2	3	25%	25%	Theory (25%) Laboratory (25%)
2	0	4	4	25%	25%	Theory (15%) Laboratory (35%)
3	0	2	4	25%	25%	Theory (35%) Laboratory (15%)
3	0	4	5	25%	25%	Theory (35%) Laboratory (15%)

For internal assessment, for theory plus laboratory courses, the weighted average shall be converted into 50 marks.

The procedure for the conduct of internal assessments for theory which will be converted into 25% as internal marks

- For 1 credit: one written test (75%) and one assignment (25%) covering all the theory topics
- For 2 credits: Two written tests (75%) and two assignments (25%)
- For 3 credits: Three written tests (75%) and three assignments (25%) and for laboratory components as per clause 12.2

The procedure for the calculation of internal assessment marks for laboratory component as mentioned in clause 12.2.

12.4 Mandatory Non-credit Courses

For mandatory non-credit course(s), only 3 continuous assessment tests are conducted and there is no end semester examination. If a student fails to secure a pass by getting 50% average marks, all the 3 tests put together in such courses, he/she has to register and reappear for the three continuous assessment tests till he/she secures pass mark.

CAT-I	CAT-II	CAT-III	Other Assessment	Total
Written Test for Unit-1&2	Written Test for Unit-3	Written Test for Unit-4&5	Individual Assignment / Case Study / Seminar / Mini Project	Internal Assessment
60	30	60	50	200

12.5 Project Work

Project work may be allotted to a single student or to a group of students not exceeding 4 per group.

The Head of the Department shall constitute a review committee for project work. There shall be three reviews during the semester by the review committee. The student shall make presentation on the progress made by him / her before the committee. The marks obtained in the three reviews will be as indicated in clause 12.5.1.

- 12.5.1 The project work shall be evaluated for a maximum of 100 marks, of which Continuous Assessments carry 40 marks (total) and the End Semester Examination (project report evaluation and viva-voce examination) carries 60 marks. The project report shall be submitted as per the approved guidelines as given by Dean- Academics. The evaluation of the project reports will carry 20 marks and the same mark shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 40 marks and marks are awarded to each student of the project group based on the individual performance in the viva- voce examination.

Continuous Assessment 40 Marks			End Semester Examination 60 Marks			
Review I	Review II	Review III	Project Report Evaluation 20 marks		Viva-Voce 40 marks	
			Internal	External	Internal	External
10	15	15	10	10	20	20

- 12.5.2 If a student fails to submit the project report on or before the specified deadline, he/she is deemed to have failed in the project work

12.6 Employability Enhancement Courses

12.6.1 Assessment for Seminar / Professional Practices / Case study / Creative, Innovative and Core Skill Design project

The seminar / case study / creative, innovative and core skill design project shall carry 100 marks and shall be evaluated through continuous assessment only. Every student is expected to present a minimum of 2 seminars per semester before the evaluation committee and for each seminar, marks can be equally apportioned. The three member committee appointed by Head of the Department will evaluate the seminar and 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%), presentation (40%) and response to the questions asked during presentation (20%). For the Creative and Innovative Project every student is expected to present a minimum of 2 seminars / demonstrations per semester before the evaluation committee and for each such presentation, marks can be equally apportioned. The three member committee appointed by Head of the Department will evaluate the project and 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 / activities carried out (40%), presentation (40%) and response

to the questions asked during presentation (20%).

12.6.2 The Industrial / Practical Training, Summer Project, Internship which is a part of the curriculum shall carry 100 marks and shall be evaluated through continuous assessment conducted by the supervisor in the organization together with a faculty member from the concerned department. Further, at the end of Industrial / Practical training / Internship / Summer Project, the student shall submit a certificate from the organization where he / she has undergone training and a brief report. An evaluation will be made based on this report and a viva-voce examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department. The certificates (issued by the organization) submitted by the students shall be attached to the mark list sent by the Head of the Department to the Controller of Examinations. The mark distribution will be 30 marks for continuous assessment, 40 marks for the report and 30 marks for the viva-voce.

12.6.3 The Industrial / Practical Training, Summer Project, Internship which is not part of the curriculum shall carry 100 marks and shall be evaluated through continuous assessment only. At the end of Industrial / Practical training / Internship / Summer Project, the student shall submit a certified report (evaluated out of 100 marks by a mentor / guide) from the organization where he / she has undergone training. 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 / organization and two members of the department.

Certificates (issued by the organization) submitted by the students shall be attached to the mark (with grade) sheet and sent to the Controller of Examinations by the Head of the Department. The marks distribution will be 40 marks for the report, 30 marks for the presentation and 30 marks for the viva-voce.

12.7 Assessment for Value Added Courses

Students may be permitted to earn credits for value added courses with approval of the committee, consisting of the Head of the Department, staff handling the course and a senior faculty member nominated by the Dean Academics. Two Assessments shall be conducted during the semester by the Department concerned. The total marks obtained in the assessments shall be reduced to 100 marks and rounded to the nearest integer. The list of students along with the marks and the grades earned may be forwarded to the Controller of Examinations (refer 4.8). The grades earned will be printed in the mark sheet and will not be considered for CGPA calculations.

12.8 Assessment for Online Courses

Students may be permitted to credit online courses (which are provided with a certificate) with the approval of internal committee headed by Dean-Academics, subject to a maximum of 9 credits. The credits earned in such online course(s) which can be 4 or 3+1 or 2+2 or 3 or 2+1 credits, can be considered, instead of one elective course subject to the maximum of three elective courses. The committee will take a decision on the evaluation methodology for the online course. At the beginning of the semester, the committee can decide whether to evaluate the online courses by conducting the End Semester Examination or by taking the marks / grade obtained in the online course itself, depending on the assessment method followed by the organization offering the online courses. The Head of the Department may

identify a faculty member as coordinator for these courses, who will be responsible for the evaluation process (if required).

In case of credits earned through online mode from an institute approved by appropriate authorities of the college, the credits may be transferred and grades shall be assigned by an internal committee headed by the Dean-Academics.

12.9 Attendance Record

Every teacher is required to maintain the 'ATTENDANCE AND ASSESSMENT DETAILS' which consists of attendance marked in each lecture or practical or project hour, assignment and test marks and record of class work (topic covered), separately for each course. This shall be verified by the Head of the Department periodically (at least three times in a semester) for checking the syllabus coverage and the records of marks and attendance. The Head of the Department will put his/her signature and date after due verification and keep the document in safe custody in the department for five years.

13. REQUIREMENTS FOR APPEARING FOR END SEMESTER EXAMINATIONS

A student shall normally be permitted to appear for the End semester Examinations for all the courses registered in the current semester (vide clause 6) if he/she has satisfied the semester completion requirements (subject to Clause 7).

A student who has already appeared for any subject in a semester and passed the examination is not entitled to reappear in the same subject for improvement of grades.

14. PASSING REQUIREMENTS

- 14.1. A student who secures not less than 50% of total marks prescribed for the course [Continuous Assessment + End semester Examinations] with a minimum of 45% of the marks prescribed in the end-semester Examination, shall be declared to have passed the course and acquired the relevant number of credits. This is applicable for theory, theory cum laboratory (45% individually in theory and laboratory), laboratory and project work courses.
- 14.2. If a student fails to secure a pass in any one or more of the theory or laboratory courses or theory cum laboratory courses, in such case, the continuous assessment marks obtained by the student in the first appearance shall be retained and valid for the second attempt in a subsequent semester when he /she reappears. However, If he/she fails to secure a pass in the second attempt also, then he/she can reappear in subsequent semester but then onwards, the continuous assessment marks will not be considered and he/she has to secure minimum of 50% marks prescribed for end semester examination alone.
- 14.3. If a student wants to apply for revaluation in any subject(s), he / she can submit an application to the COE office. The COE office will arrange for revaluation and student will be informed of the result.
- 14.4. The passing requirement for the mandatory courses which are assessed only through continuous assessment shall be fixed as minimum 50%.

15. AWARD OF LETTER GRADES

- 15.1 The award of letter grades will be decided based on relative grading principle. The marks of those students who have passed only shall be considered for relative grading. The evolved relative grading method normalizes the results and computes the grade range for each course separately and awards the grade to each student.

For a given course, if the students' strength is greater than 30, the relative grading method shall be adopted otherwise fixed grading shall be followed. The grade range is as specified below.

O	A+	A	B+	B	C	U
91 – 100	81 - 90	71 - 80	61 - 70	56 - 60	50 – 55	< 50

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

Letter Grade	Grade Points
O (Outstanding)	10
A + (Excellent)	9
A (Very Good)	8
B + (Good)	7
B (Average)	6
C (Satisfactory)	5
U (Re-appearance)	0
SA (Shortage of Attendance)	-
WD (Withdrawal)	-

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", "C". 'SA' denotes shortage of attendance and hence prevented from writing the End Semester Examinations. 'SA' will appear only in the result sheet.

"U" denotes that the student has failed to pass in that course. "WD" denotes withdrawal from the exam for the particular course. The grades U and WD will figure both in the Grade Sheet as well as in the Result Sheet. In both cases, the student has to appear for the End Semester Examinations.

If the grade U is given to EEC (Employability Enhancement Course) (except project work), which are evaluated only through internal assessment, the student shall register for the course again in the subsequent semester, fulfill the passing requirements to earn pass in the course. However, attendance requirement need not be satisfied.

- 15.2 For Mandatory Non-credit Courses, a **Pass / U (Re-appearance)** will appear in the grade sheet, and a Pass in these courses is compulsory for the award of degree.
- 15.3 For the Co-curricular activities such as National Service Scheme (NSS) / NSO / YRC etc., a satisfactory / not satisfactory grading will appear in the grade sheet. Every student shall put in a minimum of 75% 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 Head of the Institution may permit a student to complete this requirement in the second year. A satisfactory grade in the above co-curricular activities is compulsory for the award of degree.
- 15.4 The grades O, A+, A, B+, B, C obtained for the “Value Added Courses”, shall figure in the grade sheet.
- 15.5 GPA and CGPA Calculation and Grade Sheet

After the results are declared, Grade Sheets will be issued to each student which will contain the following details:

- The Name of the college and affiliating university.
- The list of courses registered during the semester and the grades scored.
- The Grade Point Average (GPA) for the semester
- The Cumulative Grade Point Average (CGPA) of all courses registered from first semester onwards.
- Month and year of passing.

In each semester, the list of courses registered and the grades scored in each course are used to compute the Grade Point Average (GPA). GPA is the ratio of the sum of the products of the number of credits of courses registered for that semester as prescribed in the curriculum 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.

$$G P A = \frac{\sum_{i=1}^n C_i GP_i}{\sum_{i=1}^n C_i}$$

Where C_i - is the Credits assigned to the course

GP_i - is the grade point corresponding to the letter grade obtained in that course

n - is number of 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. “U” and “SA” grades will be excluded for calculating GPA and CGPA.

15.6. The credits earned through online courses with less than 3 credits shall not be considered for calculating GPA and CGPA.

16 ELIGIBILITY FOR THE AWARD OF THE DEGREE

16.1 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 (6 years in the case of Lateral Entry), reckoned from the commencement of the first (third in the case of Lateral Entry)) semester to which the student was admitted.
- iii. Successfully passed all the prescribed Mandatory Non-credit courses.
- iv. Successfully passed any additional courses prescribed by the Dean- Academics, whenever readmitted under any subsequent new regulations (vide clause 18.3)
- v. Satisfactorily completed the Personality and Character Development requirements.
- vi. No disciplinary action pending against the student.

The award of Degree must have been approved by the authorized body of the University.

16.2 CLASSIFICATION OF THE DEGREE AWARDED

16.2.1 FIRST CLASS WITH DISTINCTION:

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

- Should have passed the examination in all the courses of all the eight semesters (**Six Semesters for Lateral Entry**) in the student’s first appearance within five years (**Four years for Lateral Entry**), which includes authorized break of study of one year. Withdrawal from examination (vide Clause 15) will not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50.
- Should not have been prevented from writing End Semester Examination due to lack of attendance in any of the courses of the Curriculum making up the total credit requirement.
- A student who satisfies norms given in clause 4.10 becomes eligible for classification of the degree with B.E./B.Tech. (Honours), B.E./B.Tech. Honours with specialisation in the same programme and B.E./B.Tech. with Minor with specialisation in an another programme

Degree (i)	Duration of programme (ii)	Duration permitted (iii)	Additional credits above the requirement of curriculum (iv)	CGPA (v)	Pass in (vi)	Break of study (vii)	Lack of attendance (viii)	Withdrawal from writing End Semester Examination (ix)
B.E./B.Tech. (Regular)	4 years	5 years	-	8.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. Lateral Entry	3 years	4 years	-	8.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. (Honours) Specialisation in the same discipline	3/4 years (Lateral entry, Regular respectively)	4/5 years (Lateral entry, Regular respectively)	18 credits from any one vertical of the same programme	8.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. (Honours)	3/4 years (Lateral entry, Regular respectively)	4/5 years (Lateral entry, Regular respectively)	18 credits from more than one verticals of the same programme	8.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. with minor in other specialisation	3/4 years (Lateral entry, Regular respectively)	4/5 years (Lateral entry, Regular respectively)	18 credits from any one vertical of the other programme	8.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt

16.2.2 FIRST CLASS:

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

- Should have passed the examination in all the courses of all eight semesters (Six Semester for Lateral Entry) within five years (within Four years for Lateral Entry), 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).
- Should have secured a CGPA of not less than 6.50.

- A student who satisfies norms given in clause 4.10 becomes eligible for classification of the degree with B.E./B.Tech. (Honours), B.E./B.Tech. (Honours) Specialisation in the same discipline and B.E./B.Tech. With Minor with specialisation in an another programme.

Degree (i)	Duration of programme (ii)	Duration permitted (iii)	Additional credits (iv)	CGP A (v)	Pass in (vi)	Break of study (vii)	Lack of attendance (viii)	Withdrawal from writing end semester examination (ix)
B.E./B.Tech. (Regular)	4 years	5 years	-	6.50	-	One year authorised break of study with in the Duration permitted (iii)	Included in the Duration permitted (iii)	Will not be considered as an attempt
B.E./B.Tech. Lateral Entry	3 years	4 years	-	6.50	-	One year authorised break of study with in the Duration permitted (iii)	Included in the Duration permitted (iii)	Will not be considered as an attempt
B.E./B.Tech. (Honours) Specialisation in the same discipline	3/4 years (Lateral entry, Regular respectively)	4/5 years (Lateral entry, Regular respectively)	18 credits from any one vertical of the same programme	7.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. (Honours)	3/4 years (Lateral entry, Regular respectively)	4/5 years (Lateral entry, Regular respectively)	18 credits from more than one verticals of the same programme	7.50	First attempt	One year authorised break of study with in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. with minor in specialisation in programme	3/4 years (Lateral entry, Regular respectively)	4/5 years (Lateral entry, Regular respectively)	18 credits from any one vertical of the other programme	6.50	-	One year authorised break of study with in the Duration permitted (iii)	Included in the Duration permitted (iii)	Will not be considered as an attempt

16.2.3. SECOND CLASS:

For all the B.E./B.Tech. courses (regular and lateral entry), B.E./B.Tech. Minor in other specialisation degree students (not covered in clauses 16.2.1 and 16.2.2) who qualify for the award of the degree (vide Clause 16.1) shall be declared to have passed the examination in Second Class.

16.2.4. Any student who has opted for B.E./B.Tech. Honours or B.E./B.Tech. Honours with specialization in the same programme, appearing End Semester Examinations for withdrawn course(s), he/she will be considered for Honours degree (Refer Clause 17.3)

16.2.5. Any student who has earned additional 18 credits as per Clause 4.10 but does not satisfy the conditions mentioned in clause 16.2.1 shall not be awarded B.E./B.Tech. Honours with specialization or B.E./B.Tech. Honours. In such cases, the grade sheet will show the additional courses studied and those courses shall not be considered for CGPA computation and the student shall be awarded as per the clauses 16.2.2 and 16.2.3

16.3 A student who is absent in End Semester Examination in a course / project work after having registered for the same shall be considered to have appeared in that examination for the purpose of classification. (subject to clauses 17 and 18)

17. PROVISION FOR WITHDRAWAL FROM END-SEMESTER EXAMINATION

17.1 A student may, for valid reasons, (medically unfit / unexpected family situations / participation in sports approved by Director, Physical Education and HOD and any other academic activities approved by Dean Academics) be granted permission to withdraw from appearing for the End Semester Examination in any course(s) in ANY ONE of the semester examinations during the entire duration of the degree programme. The application shall be sent to Dean-Academics through the Head of the Department with required documents.

17.2 Withdrawal application shall be valid only if the student is otherwise eligible to write the examination (Clause 7) and if it is made within TEN working days before the commencement of the End Semester Examination in that course or courses and also recommended by the Head of the Department.

Notwithstanding the requirement of mandatory TEN working days' notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

17.3 In case of withdrawal from a course / courses (Clause 13) will figure both in Marks Sheet as well as in Result Sheet. Withdrawal essentially requires the student to re-register for the course(s) and attend the End Semester Examination in the subsequent semester, when the examination is conducted. However, withdrawal shall not be construed as an appearance for the eligibility of a student for First Class with Distinction and for First Class.

17.4 Withdrawal is permitted for the end semester examinations in the final semester, only if the period of study the student concerned does not exceed 5 years as per clause 16.2.1.

18. PROVISION FOR AUTHORISED BREAK OF STUDY

- 18.1 A student is permitted to go on break of study for a maximum period of one year as a single spell.
- 18.2 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 student may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study. If a student 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 Dean-Academics in advance, but not later than the last date for registering for the End Semester Examination, with the approval of the Head of the Institution stating the reasons thereof and the probable date of rejoining the programme.
- 18.3 The students 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. The students rejoining in new Regulations shall apply to the Dean-Academics in the prescribed format through Head of the Institution at the beginning of the readmitted semester itself for prescribing additional courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.
- 18.4 The authorized break of study would not be counted towards the duration specified for passing all the courses for the purpose of classification (vide Clause 16.1).
- 18.5 The total period for completion of the Programme reckoned from, the commencement of the first semester to which the student 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.
- 18.6 If any student is prevented for want of required attendance, the period of prevention shall not be considered as authorized "Break of Study" (Clause 18.1)

19. DISCIPLINE

- 19.1 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 Institution shall constitute a disciplinary committee consisting of Head of Institution, Two Heads of Department of which one should be from the faculty of the student, to enquire into acts of indiscipline and initiate necessary action.
- 19.2 If a student indulges in malpractice in any of the end semester / internal examination he / she shall be liable for punitive action as prescribed by the college from time to time.

20. 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 after due approval of the Academic Council

ANNEXURE – I

Details of the B.E./B.Tech Degree programmes

SL NO	UG programmes	Year of starting
1	B.E. Aeronautical Engineering	2005
2	B.E. Automobile Engineering	2006
3	B.E. Biomedical Engineering	2006
4	B.E. Civil Engineering	2009
5	B.E. Computer Science and Design	2021
6	B.E. Computer Science and Engineering	1997
7	B.E. Computer Science and Engineering[Cyber Security]	2023
8	B.E. Electrical and Electronics Engineering	1998
9	B.E. Electronics and Communication Engineering	1997
10	B.E. Mechanical Engineering	1997
11	B.E. Mechatronics	2015
12	B.E. Robotics and Automation	2020
13	B.Tech. Artificial Intelligence and Data Science	2022
14	B.Tech. Artificial Intelligence and Machine Learning	2020
15	B.Tech. Biotechnology	2002
16	B.Tech. Chemical Engineering	2016
17	B.Tech. Computer Science and Business Systems	2019
18	B.Tech. Food Technology	2018
19	B.Tech. Information Technology	1999