



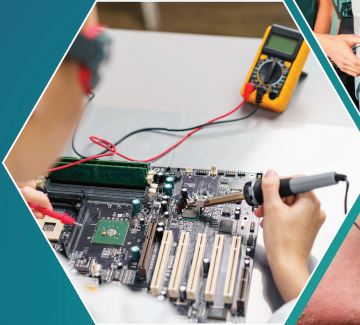
KALASALINGAM

ACADEMY OF RESEARCH AND EDUCATION

(DEEMED TO BE UNIVERSITY)



Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A++" Grade
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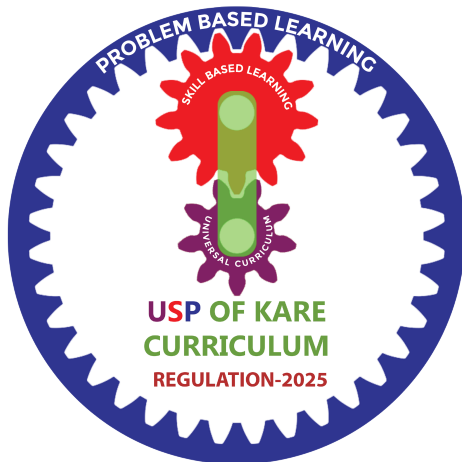


B.Tech. Regulations - 2025



B.Tech.Regulations

2025



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- Approved by Academic Council during 44th meeting (item 44.7)
 - Draft approved by Staff Council on 29 July 2025

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1 Short Title and Commencement

- a) These regulations shall be called the KARE Academic (B. Tech.) Regulation - 2025.
- b) These shall apply to all Engineering Degree Undergraduate level programmes (B. Tech), except B.Tech Agricultural Engineering, offered by Kalasalingam Academy of Research and Education (Deemed to be University u/s 3 of UGC act, 1956)
- c) These shall come into effect from the academic year 2025-26.
- d) These are subject to amendments as may be made by the Academic Council of the institute from time to time. Any or all such amendments shall be effective from such date and to such batches of students including those already undergoing the programme, as may be decided by the Academic Council.

2 Definitions

- a) “Commission” means University Grants Commission (UGC).
- b) “Council” means All India Council for Technical Education (AICTE).

- c) “Institute” means Kalasalingam Academy of Research and Education.
- d) “Programme” means cohesive arrangement of courses, co-curricular and extra-curricular activities to accomplish predetermined objectives leading to the award of a degree.
- e) “Course” means a unit of teaching, which encompasses various topics, that typically lasts one semester, is led by one or more faculty and has a fixed set of registered students.
- f) “Degree” means an academic degree conferred by the University upon those who complete the undergraduate programme successfully.
- g) “Regular Students” means students enrolled into the four year programme in the first year.
- h) “Lateral Entry Students” means students enrolled into the four year programme in the second year.
- i) “Academic Year” means constituting of two consecutive (one odd + one even) semesters.
- j) “Choice Based Credit System” means providing choice for students to select courses from the prescribed course categories, in the preferred semester complying prerequisites and based on their learning aptitudes.

- k) “Staff Council” means a council comprising Directors, Deans, Heads of the Departments, Controller of Examinations and Registrar and chaired by Vice-Chancellor.
- l) “Faculty Advisor” means a member of the faculty who gives advice to students
- m) “Course Coordinator ” means a member of faculty who is responsible for maintaining the quality and consistency of instruction and assessment for a given course or module (group of courses).
- n) “Class Committee” means a committee of particular class or section consisting of course handling faculty of that class and selected students of that students.
- o) “Program Coordinator” means a member of faculty who is responsible for program curricular changes, and annual program assessment activities.

3 Admission

3.1 Eligibility for Admission

3.1.1 Regular

The eligibility criteria for admission into UG programmes are as per the norms of Commission, Council and Board of Management from time to time. At the time of admission,

a candidate should have passed the final examination of any one of the following qualifying courses:

- a) H.Sc (Physics, Mathematics, Chemistry, Computer Science, Electronics, Information Technology, Biology, Informatics Practices, Biotechnology, Technical Vocational Subjects, Agriculture, Engineering Graphics, Business Studies, Entrepreneurship (any of the three)) / H.Sc (Vocational) or equivalent course (10+2) system, conducted by any recognized Central / State Board, such as Central Board of Secondary Education, New Delhi, Council for Indian School Certificate Examination, New Delhi, the National Institute of Open Schooling (NIOS), etc.
- b) Intermediate or two-year Pre-University course conducted by a recognized Board / University.
- c) Two-year course of the Joint Services Wing of the National Defence Academy.
- d) General Certificate Education (GCE) Examination (London / Cambridge / Sri Lanka) at the Advanced (A) level.
- e) High School Certificate Examination of the Cambridge University, U.K.
- f) Any Public School/ Board/ University Certificate examinations in India or in a foreign country

recognized by the Association of Indian Universities (AIU) as equivalent to the 10+2 system.

- g) Any other examination (conducted in India / abroad), equivalent to any of the above mentioned examinations.

In case the relevant qualifying examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination at an earlier level. If any Board awards only letter grades without mentioning the equivalent percentage of marks on the grade sheet, the candidate should obtain a certificate from the Board specifying the equivalent percentage of marks, and submit it at the time of counselling. In case such a certificate is not provided by the candidate, the decision of the Admission Committee regarding his / her eligibility shall be held final.

3.1.2 Lateral

For admission to the second year of the B.Tech. programme of a particular branch of study, under lateral entry scheme, a candidate should have passed the final examination of the three or four year diploma course recognized by AICTE or a State Board of Technical Education or a three year degree program recognised by UGC, to the program of the B.Tech. Degree.

3.2 Entrance Examination, Seat Allocation and Admission

- a) **Entrance Examination:** Admissions to programmes is based on the the Kalasalingam University Engineering Entrance Examination (KEEE) to be conducted every year. The mode of examinations and eligibility criteria are decided by the Board of Management (BoM).
- b) **Seat Allocation:** The Admission Committee will offer the admission, in the order of merit, to the successful candidates, taking into account the choice of the programme indicated by the candidate and the availability of seats in each Programme. The decision of the Admission Committee is final in allotting the seat.
- c) **Admission:** The selected candidate will be admitted into the programme after he/she fulfils all the admission requirements as indicated in the offer of admission, and after the payment of all the prescribed fees within the due date announced.

3.3 Revocation of Admission

The institute may revoke the admission at any time during the program, if, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission and report the same to Board of Management (BoM).

4 Academic System

4.1 Academic Calendar

The academic year is divided into two consecutive semesters. The odd semester may be scheduled from June/July to December and even semester from December/January to June.

The Academic Calendar approved by Academic Council shall strive to provide for a total of about 90 working days in each semester typically in 15-20 weeks. The academic calendar shall provide the schedule of academic activities such as dates for registration, Continuous Assessment and Semester End Examinations.

4.2 Medium of Instruction

The medium of instruction and examination is English.

4.3 Duration of the Program

4.3.1 Minimum Duration of the Programme

The minimum duration of the program as stipulated by commission and council is:

- a) The minimum duration of the programme for regular students shall be four years consisting of eight semesters.

- b) The minimum duration of the programme for lateral entry students shall be three years consisting of six semesters.

4.3.2 Maximum Duration of the Programme

The maximum duration of the program as stipulated by the commission and council is:

- a) Maximum duration = $N+2$ years, where N stands for the minimum duration (years) prescribed for completion of the programme.
- b) Under any exceptional circumstance, a further extension of one more year may be granted subject to approval of Vice-Chancellor for the requisition made by the student.
- c) During the extended period the student shall be considered as a private candidate and also not eligible for first class.

4.4 Course Credit

Credit defines the quantum of contents / syllabus prescribed for a course and determines the number of in-seat hours, 50-minute periods, of instruction required per week. Thus, normally in each of the courses, credits will be assigned on the basis of the number of lectures / tutorial / laboratory work and other forms of learning

(X-Activity: Programming tutorial, Virtual tutorial, Group work, Field work, Studio work, MOOC learning, Virtual Lab, etc.,) required, to complete the course contents in a semester:

- **Lecture (L):** One credit for each one lecture hour per week.
- **Tutorial (T):** One credit for tutorial session of one hour per week.
- **Practical (P):** One credit for practical session of two hours per week.
- **X-Activity (X):** One credit for activity session of three hours per week.

The typical credit allocation scheme is shown in Table 1. The number of credits allotted for the course and the contact hours of the course are displayed in course catalogues / pages.

Table 1: **Typical credit allocation scheme for courses**

L	T	P	X	C
4	0	0	0	4
3	0	2	0	4
3	1	0	0	4
2	1	2	0	4
3	0	0	3	4
0	0	2	3	2
2	0	2	3	4

The courses can have varying credits ranging from one to six and capstone design course can have ten credits. Typical one credit lecture only course requires 15 hours.

4.5 Type of Courses

The courses are classified into four types namely, 1) Theory Courses (TC), 2) Practical Course (PC), and 3) Integrated Course (IC) and Skill Course (SC), based on instruction components used to deliver the course:

- a) **Theory Course (TC):** Courses with lecture(L) and/or tutorial(T) and/or X-activity(X) but no Practical (P).
- b) **Practical Course (PC):** Courses with Practical (P) and/or X-activity (X) but no Lecture (L).

c) **Integrated Course (IC):** Courses with Lecture (L) and Practical (P) and/or Tutorial(T) and/or X-activity (X).

- **Integrated Course - Theory (IC-T):**
Majority credits allotted to the course are contributed by Lecture (L).

- **Integrated Course - Practical (IC-P):**
Majority credits allotted to the course are contributed by Practical(P) and/or Tutorial(T) and/or X-activity(X).

d) **Skill Course (SC):** Courses may include Practical (P), Tutorial (T)/Lecture (L) and/or X-activity (X).

The typical course types based on credit allocation scheme is shown in Table 2.

Table 2: Typical course types based on credit allocation

Course Name	L	T	P	X	C	Course type
Biology for Engineers	3	0	0	0	3	TC
Engineering Graphics	0	0	2	3	2	PC
Engineering Physics	2	0	0	3	3	IC-T
IOT Sensors and Devices	1	0	0	3	2	IC-P

The content in each course shall be organised into five

logical units. The assessment and evaluation (7) of the student performance varies based on type of the course.

4.6 Level of Course

The courses shall be classified in different levels based on the complexity of the course or the study level as shown below:

- a) **Level 0:** Represents courses which are required to enter the program (bridge courses), courses recommended by commission and council as mandatory learning and complimentary skill courses. Example: Mandatory courses and complimentary skill courses.

- b) **Level 1:** Represents introductory courses without prerequisite which the students may choose during first two years of program. Example: Foundation core courses and Program core courses without any requirement of prerequisite and program electives.

- c) **Level 2:** Represents courses of medium complexity which the students may choose during middle of the program. Example: Program core courses, Program electives and introductory Minor courses .

- d) **Level 3:** Represents courses of advanced complexity leading to specialization in chosen area. Example: advanced Program core courses, Program electives and advanced Minor courses .
- e) **Level 4:** Represents specialized courses requiring rigorous academic activity based on deep collaboration between students or independent study. Example: Honors courses.

4.7 Attendance Requirement

Students shall attend the courses regularly and the attendance of the students is recorded for every course till the last working day. The student shall secure minimum 75% attendance to attend the continuous assessments (till the week before assessment starts) and for semester end examinations (by last working day).

4.7.1 Condonation of Shortage of Attendance

Students who secured minimum 65% attendance and availed prior medical leave, may apply for the condonation of shortage of attendance. The student shall apply for condonation of attendance at least two days prior to last working. Head of the department, upon satisfaction with genuine medical grounds, with medical certificate from an

authorised physician along with other supporting medical reports, may recommend through proper channel to the Vice-Chancellor for the grant of condonation.

4.8 Grading Policy

The students will be awarded letter grade and corresponding grade point in each course based on their performance in Continuous Assessment and Semester End Examination. Based on the type of course either relative grading system or absolute grading system is followed.

4.8.1 Grading Scale

All programmes shall follow the 10 point grading scale in accordance with the UGC guidelines. Students shall be awarded letter grades mapped to corresponding grade point values.

4.8.2 Relative Grading System

A faculty based relative grading approach shall be applied uniformly across all UG and PG programmes, irrespective of course type or class size. The Z-score normal distribution method shall be employed to bring all courses to a common scale. Predefined Percentile ranges are fixed for various grades (as illustrated in Table 3). To achieve these predefined Percentile, a flexible Z-score range shall be adopted for each grade.

Table 3: Grade points and performance classification

Grade	Points	Z Range	Percentile	Remarks
S	10	$\boxed{X1} \leq z$	$P \geq 95$	Pass
A	8	$\boxed{X2} \leq z < \boxed{X1}$	$80 \leq P < 95$	Pass
B	7	$\boxed{X3} \leq z < \boxed{X2}$	$55 \leq P < 80$	Pass
C	6	$\boxed{X4} \leq z < \boxed{X3}$	$25 \leq P < 55$	Pass
D	5	$\boxed{X5} \leq z < \boxed{X4}$	$15 \leq P < 25$	Pass
E	4	$\boxed{X6} \leq z < \boxed{X5}$	$10 \leq P < 15$	Pass
U	0	$\boxed{X6} > z$	$P < 10$	Fail
W	0	-	-	Failure for want of attendance
I	0	-	-	Incomplete

4.8.3 Absolute Grading System

In parallel, an absolute grading approach shall be employed for all programmes using the official conversion table. The

absolute grading is computed based on the mean and standard deviation (SD) of faculty wise classroom data. Table 4 provides the conversion table for the absolute grading system.

Table 4: Provides the Conversion table for the absolute grading system.

Grade	Points	Mark Range	Result
S	10	≥ 90	Pass
A	9	$\geq 80 - < 90$	Pass
B	8	$\geq 70 - < 80$	Pass
C	7	$\geq 60 - < 70$	Pass
D	6	$\geq 50 - < 60$	Pass
E	5	$\geq 40 - < 50$	Pass
U	0	< 40	Fail
W	0	-	Failure for want of attendance
I	0	-	Incomplete

4.9 Hybrid Grading Approach

For each student, grades shall be calculated using both the relative grading approach and the absolute grading approach (Table 3). A Hybrid Grading Approach (HGA) shall be adopted, whereby the better outcome of the two methods will be considered as the final grade for the student.

4.10 Semester Grade Point Average (SGPA)

Semester grade point average (SGPA) is a measure of performance of work done in a semester. It is the ratio of sum of product of credit and grade point earned by a student in various courses in a semester and the sum of the credits earned in that semester. It shall be expressed up to two decimal places and same shall be mentioned in the semester grade card.

4.11 Cumulative Grade Point Average (CGPA)

Cumulative Grade Point Average (CGPA) is a measure of cumulative performance of a student in the programme. The CGPA is the ratio of sum of product of credit and grade point earned by a student in various courses in all the semesters and total credits earned in all the semesters. It shall be expressed up to two decimal places. CGPA

shall be placed in semester grade card with CGPA till that semester.

5 Curriculum Structure

A Curriculum structure is a supportive structure to help schools to plan and develop their own curriculum and an important tool in ensuring the consistency and quality. The curriculum structure consists of various course categories to cover the depth and breadth required for the programme, and for the attainment of programme outcomes of the corresponding programme. The courses offered in the program shall be grouped under the different course categories and shall satisfy the programme criteria recommended by professional bodies or the accreditation agency of the respective programme. The course content, credit and appropriateness to the course category shall be approved by respective Board of Studies and Academic Council.

5.1 Program Structure

i) Foundation Courses (FC)

a) Foundation Course Mandatory (FCM)

FCM ensures the attainment of generic engineering competencies of UG engineering graduates of all

programmes to the expected level. The foundation core courses shall have the courses related to basic sciences and mathematics, basic engineering sciences, humanities and design and development of multi-disciplinary solutions using modern tools both individually and in teams.

b) **Foundation Course Electives (FCE)**

Students shall study FCE courses with relevance to humanities and social sciences, life skills, managerial skills, entrepreneurship skills with basic level understanding to build their fundamental skills towards leadership, lifelong learning and adoptability.

ii) **Program Courses (PC)**

a) **Program Course Mandatory (PCM)**

PCM consists of set of courses considered necessary for the students to attain program outcomes. The courses and their contents under this category should satisfy the programme criteria prescribed by the appropriate professional society or accreditation agency.

b) **Program Course Electives (PCE)**

PCE shall cover the depth and breadth to further strengthen the programme specific knowledge and if

chosen by a student in a particular subject area shall lead to specialisation in that area.

iii) **Skill Enhancement Courses (SE)**

a) **Skill Enhancement Mandatory (Internship) (SEM)**

Students shall undergo SEM to gain the experiential learning through real time practice in industry/ institution/Research labs/ NGO's/ Government organizations/ Micro/ Small/Medium enterprises to make themselves ready for the industry. Two weeks of experiential learning through industrial practice shall be considered as equivalent to one credit. During the summer vacation of each academic year the students can undergo internship to gain the credit during their course of study.

b) **Skill Enhancement Electives (SEE)**

Students shall select SEE courses from department or any other department based on their need and interest. However, the level of courses with prerequisite requirement should be followed by the students before the selection of courses. It is mainly aiming to provide up-skilling for the students to meet out the dynamic industry market through

technological/employability skills. In this type of course, one third of the course content should reflect the hands on practice both content delivery as well as assessment aspects. These courses can be offered with the industry expert, faculty with industry experience or through of centre of excellence at the flexible time, however meeting out all other basic requirements.

iv) **Multidisciplinary Courses (MD)**

a) **Multidisciplinary Courses Mandatory (MDM)**

Experiential core courses shall provide project experiences to enhance technical competence and creativity through reflective problem-solving with multiple potential avenues of inquiry. Students shall have two other courses (three credits each) with EXperiential and Service Learning (EXSEL) from Design-Build and Design-Build-Operate during the program.

b) **Multidisciplinary Courses Electives (MDE)**

MDE are the courses offered across the schools to enhance the breadth and professional competency of the students. The student are expected to take courses in engineering (offered by schools other than program of study).

However, students shall earn a minimum of six (6) credits from the Mathematics and Basic Science category of courses.

v) Complimentary Skill Courses

The courses offered under this category are designed to complement the knowledge, skills, and attitudes acquired through the regular curricular courses by engaging students in co-curricular and extra-curricular activities. These courses shall be treated as Audit Courses with a Pass/Fail evaluation. No credits shall be awarded for the courses under this category. All students (both regular and lateral entry) must complete Group I (Soft Skills and Aptitude) mandatorily. In addition, students must successfully complete at least one course/activity each from Group II (Extra-Curricular) and Group III (Co-Curricular) as detailed in Table 5. It is to be strictly noted that courses already claimed for CGPA requirements shall not be considered under Non-Credit courses.

Table 5: Complimentary skill courses - Groups

Sl. No.	Group	Course/Activity
1	I	Soft Skills (or) TOEFL / IELTS (or) MOOC course - (Indian / Foreign National Languages)
2		Aptitude Test (or) GRE/ GMAT/ CAT/ NAC-Tech
3	II	NSS/NCC
4		Sports
5		Extra-Curricular Activity
6	III	Co-Curricular Activity
7		Value Added Courses
8		International Certification (Technical)

5.2 Course Offering by External Experts

Departments are encouraged to offer courses in recent trends using external experts (other than Adjunct / Visiting / Guest Faculty) such as industry professionals and academics from other higher learning institutes under the program elective courses and courses categories.

5.2.1 Course Offering by Experts from Industry

The courses offered by experts from industry shall be in the areas currently relevant to the industry. These course shall enhance the students professional competencies and give exposure to the current industry practices. The course content, schedule, credits and expert profile shall be approved by the Board of Studies.

5.2.2 Course Offering by Academics from Higher Learning Institutes

The courses offered by the academics from other higher learning institutes is to deepen the students competencies recent/emerging areas. These courses further may motivate the students towards higher education or pursuing the capstone design courses in those areas. The course content, schedule, credits and expert profile shall be approved by the Board of Studies.

5.2.3 Course Offering from MOOC Platforms

The students are encouraged to do the courses from MOOC platforms such as NPTEL, Swayam etc.. to improve their self-learning ability and to enhance their breadth/depth. The students can choose the course from the list of courses approved by the respective Board of Studies or they can also propose to respective Board of Studies to consider the course for including in the list before start of the semester. The courses from the MOOC platforms

will be considered under program elective courses and multidisciplinary elective courses categories. The students can choose up to 20% of total credits required for the program.

6 Registration

6.1 Course Numbering Scheme

The course numbering scheme shall consist of digits/alphabets as shown in Figure 1.

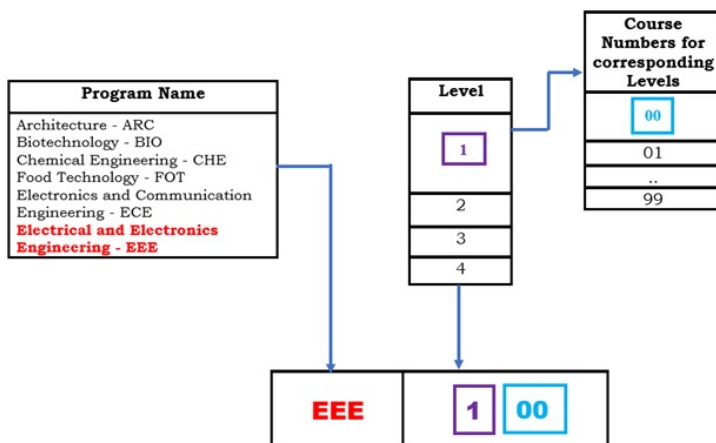


Figure 1: Illustration of course numbering scheme

- **Level 1** → 100 – 199 → Foundation Courses, Multidisciplinary Courses and Skill Enhancement

Courses (SEC)

- **Level 2** → 200 – 299 → Program Courses, SEC (Intermediate)
- **Level 3** → 300 – 399 → Program Courses, SEC (Higher Level)
- **Level 4** → 400 – 499 → Courses with advanced level concept, Honours, SEM (Internship), PCM courses (Capstone project), MDM (EXSEL)

Special Rule:

If a Level 2, Level 3, or Level 4 course does not require any prerequisite or only requires foundation courses as prerequisites, it can be categorized under Multidisciplinary courses and SEC in Level 1 (100-199). Otherwise, it can retain its level based course code.

6.2 Course Registration

The student shall register and/or withdraw the courses at least three working days before the commencement of the academic semester, in consultation with faculty advisor. Maximum number of students allowed to register for a course shall be indicated against each course. The student shall register in a semester minimum of 18 credits and maximum of 25 credits. However, if the student has

acquired requisite number of credits, the minimum required credits may be exempted.

A student is eligible to register course if he/she fulfils the requirement of pre-requisite by acquiring attendance in such course as per section 4.7.

6.3 Course Re-registration

A student may re-register the course in which he/she not acquired eligibility to write the semester end examination as per section 4.7, by paying requisite fee during regular semester. The students are permitted to re-register for maximum 8 credits in a semester together with course registration as per section 6.2. A student who did not acquire eligibility to write the semester end examination as per section 4.7 in an elective course may re-register the same course or may register a different elective course.

6.4 Course Registration after Minimum Duration

A student may register the courses before their maximum duration of the program as mentioned in Section 4.3.2, to fulfil the minimum credit requirement as mentioned in section 9.1 by paying the requisite fee together with regular semester students. If the student is eligible to register for the courses offered during summer term as mentioned in section 8.5, he/she may register for the same by paying prescribed fee.

7 Assessment and Evaluation

Student performance is measured through various modes of examinations such as sessional examination, quizzes, home assignments, group assignments, viva-voce and semester end examination. Student performance shall be measured throughout the semester through Continuous Assessment (CA) and Semester End Examinations (SEE).

7.1 Continuous Assessment

Continuous Assessment (CA) shall be conducted by the course handling faculty/course coordinator all through the semester covering all the course outcomes. Continuous Assessment may vary based on the type of course 4.5. Continuous assessment shall follow the guidelines as given in Table 6 ordinarily. However, upon the recommendation of the Board of Studies and approval of academic council, the continuous assessment scheme may vary for specific course. The continuous assessment scheme of each course shall be given in the course plan.

Table 6: Scheme of continuous assessment based on type of course

Sl. No.	Course type	Mode of Examination	Weightage
1	TC	A) Sessional Examinations (two)	35%
		B) Open-ended Assignments (two) /Group Tasks (two)/Project/etc.,	15%
2	PC	A) Mid - Semester Practical	20%
		B)Open-ended Group Tasks (two)/Project/ etc.,	30%
		C) Regular laboratory performance	20%
3	IC-T	A) Sessional Examinations (two)	35%
		B) Mid-semester practical	10%
		C) Regular laboratory performance	5%
4	IC-P	A) Mid-semester Practical	20%
		B) Sessional examination	10%
		C) Open-ended Group tasks/project/etc.,	20%
		D) Regular laboratory performance	20%
5	SC	A) Quiz (Two)	20%
		B) Experimental based short Exams (Minimum Three)	40%

7.1.1 Continuous Assessment for Project Work courses

- a) **Capstone Project:** Department shall constitute a two-member committee, out of which one is nominated by Dean of the school, to assess the individual student performance in the capstone project.

The continuous assessment for a Capstone Project category shall be as follows:

- Two reviews by committee on the basis of rubrics given at the beginning of semester - **50%.**
- Assessment by Guide/course handling faculty - **20%.**

- b) **Experiential and Service Learning (EXSEL)**

Phase - I: Design Build

In this phase, students are introduced to SDG - centered courses within their respective verticals (e.g., Plastic Waste Management, Solar PV, Smart Irrigation, etc.). Based on their interests, students select specific courses and begin formulating unique ideas aligned with predefined real-world problem statements.

The internal assessment methodology shall be finalized by the respective course instructor based on the nature and academic requirements of the

course. The assessment may include methods such as quiz-based evaluations, case study analysis, hackathon or problem-solving activities, or any other innovative instructional and evaluation strategy deemed suitable. All proposed assessment components shall obtain prior approval from the Board of Studies (BoS). The overall weightage for internal assessment is 70%.

Phase-II Design Build Operate This advanced phase focuses on moving from ideation to real implementation. Students apply innovative engineering approaches to convert their designs into functional and scalable outcomes.

The continuous assessment for a Design Build Operate category shall be as follows:

- Two reviews by committee on the basis of rubrics given at the beginning of semester - **50%.**
- Assessment by Guide/course handling faculty - **20%.**

7.2 Semester End Examination

Semester end examination (SEE) shall be conducted by the Controller of Examination by following the standard operating procedure as approved by the academic council.

The scheme of evaluation for semester end examinations may vary based on type of course 4.5. Semester end examinations shall follow the guidelines given below ordinarily based on type of course:

- a) **Theory Courses (TC):** There shall be semester end theory examination for 180 minutes duration and it shall measure the competencies of the students in all levels as mentioned against the respective course outcomes, in cognitive learning domain. The scheme of such question paper shall be as follows for 50%:
- b) **Practical Course(PC):** There shall be semester end practical examination for 180 minutes duration to measure the expected competencies of the students as mentioned against the respective course outcomes. The evaluation of the performance shall be as per the rubrics and rubrics for 30% shall be given in course plan.
- c) **Integrated Course - Theory (IC-T):** The semester end examination for the integrated course shall measure both the theoretical and practical components, with varying weightage, of the course covering all the course outcomes. The semester end examination for integrated course - theory (4.5) shall be as
 - Semester end theory examination - 35%.
 - Semester end practical examination - 15%.

d) **Integrated Course - Practical (IC-P):** The semester end examination for the integrated course shall measure both the theoretical and practical components, with varying weightage, of the course covering all the course outcomes. The semester end examination for integrated course - practical (4.5) shall be as

- Evaluation of the problem/project - 20%.
- Comprehensive viva-voce on course - 10%.

e) **Skill Course (SC):** The semester end examination for the skill course shall be as

- Case study - 40%.

Or

- Mini Project - 40%.

Or

- Written (15%) & Practical Examination - 25%

However, the semester end examination scheme may vary for specific course as recommended by the Board of studies and approved by academic council based on the special needs of the course.

7.2.1 Semester end examination for Project Work courses

- a) Capstone Project: Department shall constitute a three-member committee, out of which one is nominated by Dean of the school, to assess the individual student performance in the capstone project. The committee shall evaluate the performance as per the rubrics given in course plan for 30%.
- b) Experiential and Service Learning (EXSEL):

Phase - I: Design Build

The end-semester assessment methodology, carrying a weightage of 30%, shall be determined by the respective course instructor in alignment with the nature and academic requirements of the course. All proposed assessment components shall obtain prior approval from the Board of Studies (BoS).

Phase - II Design Build Operate

The semester end examination for Design Build Operate shall be same as Capstone Project.

7.3 Scheme of Instruction and Evaluation for Complimentary skills (Non-credit)

The scheme of instruction and evaluation for the complimentary skill courses 5.1.v) is as mentioned in Table 7 - 15.

Table 7: Group I: Soft Skills

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 1 st year.
2	Duration of the course	The duration of the course shall be a minimum of 30 hours

3	Passing Criteria	<p>Students are required to maintain at least 75% attendance.</p> <p>Based on successful completion of the prescribed Soft Skills course with the required attendance, or obtaining a valid score in TOEFL / IELTS, or passing a MOOC course in Indian or Foreign National Languages or clearing any other recognized Soft Skills test as approved by the Vice Chancellor.</p>
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Table 8: Group I: Aptitude

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 1 st year.
2	Duration of the course	The duration of the course shall be a minimum of 30 hours

3	Passing Criteria	Students are required to maintain at least 75% attendance. Based on successful completion of the prescribed Aptitude course with the required attendance or obtaining a valid score in GRE / GMAT / CAT / NAC-Tech etc., or clearing any other recognized Aptitude test as approved by the Vice Chancellor.
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Table 9: Group II: National Cadet Corps (NCC)

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Only students enrolled as NCC cadets (As per NCC Norms) shall be eligible.
2	Duration of the course	Secure a minimum of 75% attendance in 3 consecutive years.

3	Condition for repeating the course in case of failure.	The cadet should successfully complete the ‘C’ Certificate Exam or pass the test conducted by the Company Commander. Note: A special test will be conducted by the Company Commander exclusively for cadets who fail in the ‘C’ Certificate examination, and upon passing this test, such cadets will also be considered as having fulfilled the requirement.
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Table 10: Group II: National Service Scheme (NSS)

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	As per NSS Norms
2	Duration of the course	Attendance (75% in 240 hours in the 2-year period) or attended one annual special camp

3	Passing Criteria	In case of failure to complete the 120 hours in a year, day camps of 8-hour duration may be organized on weekends and holidays. The regular activities may be planned for 16 hours on consecutive days.
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Table 11: Group II: Sports

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 1 st semester

2	Passing Criteria	<p>Students are required to complete a minimum of 40 hours of Non-CGPA Sports Course.</p> <p>(OR)</p> <p>Any student who participates at the National level or secures a winning position in any recognized tournament (Intramural level or at Inter-University/Collegiate level and above) approved by the Director (Student Affairs) shall be deemed to have fulfilled the requirement for clearing the criteria.</p>
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Table 12: Group II: Extra-Curricular Activities

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 1 st semester

2	Passing Criteria	A student must enrol in any one recognized club and secure a minimum of 5 participation certificates from events conducted within the same club. Alternatively, the requirement may also be fulfilled if the student secures a winning position in any recognized event approved by the Director (Student Affairs) or by serving as an office bearer in a club, duly certified by the respective club coordinator
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Table 13: Group III: Co-Curricular Activities

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 2 nd semester.

2	Passing Criteria	<p>Professional Society Activities: A student must hold a valid membership certificate from a recognized professional society for a minimum duration of two years, along with participation certificates for at least two events conducted by the same society (OR) office bearer in students chapter for a period of one year.</p> <p>(OR)</p> <p>Co-curricular activities: students may fulfill the requirement by producing a minimum of 10 participation certificates in workshops, seminars, or conferences, or by securing a winning position in any recognized event approved by the HoD and Dean.</p> <p>Note: Conference presentations shall not be considered for Non-Credit requirements.</p>
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Table 14: Group III: Value Added Courses

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 1 st year
2	Duration of the course	40 hours (minimum)
3	Passing Criteria	<p>The students should score a minimum of 60% marks with minimum attendance of 75%.</p> <p>Note: The value-added courses and its content will be specified by the course coordinator and approved by HoD & Dean</p>

Table 15: Group III: International Certification (Technical)

Sl. No.	Conditions/ Attributes	Fulfilling Requirements
1	Pre-requisites / Eligibility conditions	Completion of 4 th semester.
2	Duration of the course/ Assessment Procedure/ Course content	As given by the certifying authority
3	Passing Criteria	Appeared in any one of the exams like GATE / TANCET or any International certification as approved by the respective BoS.

7.4 Scheme of Evaluation for Mandatory courses

The student performance in the mandatory courses shall be evaluated only through semester end examination. The scheme for the semester end examinations shall be same as theory courses.

7.5 Makeup Examination

The students who have missed the continuous assessment and/or semester end examination(s) for genuine reasons, upon the faculty advisors recommendation, competent authority may permit them to appear for the make-up examination(s). The application for make-up examination shall be submitted through proper channel for the final approval as follow:

- Continuous Assessment - Dean of the concerned school
- Semester End Examination - Vice-Chancellor
- If the student applies both continuous and semester end assessment, Vice-Chancellor shall decide the application and only semester end examination performance will be considered with 100% weightage.

7.6 Supplementary Examination

The student who failed a course after semester end examination(s) (as per grading who got U or AB or I) may appear for the supplementary examination(s) whenever it is scheduled in subsequent semesters. Continuous assessment marks in the course shall remain same.

8 Program Management

8.1 Change of Program

The student may apply for change of program with the recommendation of faculty advisor through proper channel to Vice-Chancellor four weeks before the start of the semester. Applications will be strictly processed based on the order of CGPA and vacancies in the desired program. The equivalency for the already studied courses and the courses required to be studied will be decided by a committee consisting of Dean, HoD and one faculty member nominated by Dean. The decision of the committee shall be placed for ratification/approval before BoS, Academic Council and Board of Management.

8.2 Mobility and Credit Transfer

The students are encouraged to pursue the courses offered by MOOC platforms as per section 5.2.3 and from international institutions of higher learning either virtually or in-person. The equivalent credit for the chosen course will be decided by a committee consisting of Dean, HoD and one faculty member nominated by Dean. The decision of the committee shall be placed for ratification/approval before BoS and Academic Council. The equivalent grade points for the marks/grades/grade points awarded by different MOOC platforms and international institutions of higher learning will be decided by a committee duly

constituted by Vice-Chancellor. The decision of the committee shall be placed for ratification/approval before Academic Council.

8.3 Migration from Other Institutions

The academic programme offers Choice Based Credit System and transfer of credits. This enables a student to migrate mid stream from other institutions to this institute. The students from other universities within and outside India (AIU equivalency norms will be followed) can also join programmes of their choice mid stream subject to vacancy in the desired program. The equivalency for the already studied courses and the courses required to be studied will be decided by a committee consisting of Dean, HoD and one faculty member nominated by Dean. The decision of the committee shall be placed for ratification/approval before BoS, Academic Council and Board of Management.

8.4 Break in Study

A student may temporarily withdraw from the programme in the middle of semester for valid reasons (such as accident or hospitalization due to prolonged ill health), with the recommendation of the faculty advisor and prior approval of Vice- Chancellor. A student will be permitted to discontinue the programme for a maximum period of only two semesters. A student who is permitted to discontinue may rejoin the programme at the appropriate semester only

with regular students at the time of normal commencement of that semester. A student who discontinues and rejoins shall be governed by the rules, regulations, programme of study and syllabus in force, at the time of his/her rejoining the programme. The maximum duration of the program shall remain same as given in section 4.3 However, the MOOC courses which he/she might have done during this period will be accounted as and when the student re-joins the program.

8.5 Summer Term

Summer Term is a short duration term (half the duration of the normal semester) run during the summer vacation. The students who have obtained the eligibility to write the semester end examinations but not successful or absent to semester end examination alone are eligible to pursue the courses offered during summer term. A student can en-roll maximum 10 credits during the summer term. The courses to be offered during summer term shall be announced by the end of even semester and only foundation core and program core courses shall be offered. Student may register for the summer term courses by paying prescribed fee. The continuous assessment and semester end examinations shall be same as regular semester.

9 Degree Requirements

9.1 Credit Requirement

9.1.1 Regular

The students shall earn credits in various course categories as indicated in Table 16.

Table 16: Minimum credits required for regular students in various course categories

S.no	Course Category		Minimum Credits Required
1	Foundation Courses	Mandatory	35
		Elective	05
2	Program Courses	Mandatory	70 (Capstone Project -10 Credits)
		Elective	18
3	Skill Enhancement Courses	Mandatory	2-4
		Elective	12-14
4	Multidisciplinary Courses	Mandatory	6 (ExSEL)
		Elective	10
Total			160+ (3 Mandatory Courses)

9.1.2 Lateral

The students shall earn credits in various course categories as indicated in Table 17.

Table 17: Minimum credits required for lateral students in various course categories

S.no	Course Category		Minimum Credits Required
1	Foundation Courses	Mandatory	05
		Elective	
2	Program Courses	Mandatory	65 (Capstone Project -10 Credits)
		Elective	18
3	Skill Enhancement Courses	Mandatory	2-4
		Elective	12-14
4	Multidisciplinary Courses	Mandatory	6 (ExSEL)
		Elective	10
Total			120

9.2 Complimentary Skill (Non-Credit) Requirement

The students (regular and lateral entry) shall successfully pass group I and any one course/activity from groups II and III as given in Table 5.

9.3 Eligibility for Award of Degree

The Degree shall be conferred on a candidate who has satisfied the following requirements, after Academic Council recommendation and approval by Board of Management.

9.3.1 Regular

- a) A regular student shall secure minimum of 160 credits and fulfil the minimum credit requirement in each category as per section 9.1.1.

AND

- b) A regular student shall successfully complete the complementary skill course requirement as per section 9.2.

AND

- c) A regular student shall successfully complete the mandatory course requirement as per section 5.1.

AND

- d) A regular student shall fulfil the duration of the programme norms as per section 4.3

9.3.2 Lateral

- a) A lateral student shall secure minimum of 120 credits and fulfil the minimum credit requirement in each category as per section 9.1.2.

AND

- b) A lateral student shall successfully complete the complimentary skill course requirement as per section 9.2.

AND

- c) A lateral student shall successfully complete the mandatory course requirement as per section 5.1.

AND

- d) A lateral student shall fulfil the duration of the programme norms as per section 4.3.

9.4 Degree Classification

The Degree shall be awarded in three divisions for the candidates who are eligible for the award of degree as per section 9.3:

- First Class with distinction
- First Class
- Pass

1. First Class with distinction

First class with distinction shall be awarded for the candidate who is eligible for the award of degree as per section 9.3 and obtained a minimum CGPA of 8.25 by passing all the courses in first attempt within minimum duration of the program as per section 4.3.1.

2. First Class

First class shall be awarded for the candidate who is eligible for the award of degree as per section 9.3 and obtained a minimum CGPA of 6.5 within maximum duration of the program as per section 4.3.2.

3. Pass

Candidate who is eligible for the award of degree as per section 9.3, except complimentary skills mention in section 9.2, shall be awarded a Pass.

9.5 Honours Program Regulations

Eligible candidates who wish to pursue Honours in their chosen area of specialization must have a minimum CGPA of 8.25 with no history of arrears. Students may opt for one of the following pathways, subject to the specified conditions:

9.5.1 Case 1: Honours

- Students shall complete an additional 20 credits in higher-level (Level 4 and above) domain-specific advanced courses, with the approval of the Board of Studies (BoS).
- A minimum of 'B' grade must be secured in all these additional courses.
- Grades earned in these courses will not be included in CGPA calculation.

9.5.2 Case 2: Honours in Research

- Students shall undertake a 5–6 month research project starting from the fifth semester under the guidance of a faculty supervisor.
- The research work must result in a publication as first author in a SCIE indexed peer-reviewed journal.
- A minimum of one semester sustained research effort shall be deemed equivalent to 20 additional credits

9.5.3 Case 3: Honours in Innovation

- Students shall engage in entrepreneurial activities leading to product development, as per the University IEDC guidelines.
- The outcome must include filing a patent and establishing a startup within the campus.
- A minimum duration of 5 to 6 months shall be considered as fulfilling the requirement for the award of this category of Honours

9.5.4 Case 4: Honours in Industry Practice

- Students shall undergo a semester long industry internship (in addition to mandatory credit requirements under the Skill Enhancement Course category)
- The internship must be with an industry from the list approved by the University Corporate Office and should be a stipend based engagement.
- On successful completion and evaluation, students shall be awarded Honours under this category.

9.5.5 Minors Program Regulations

- The Minors Program is designed to enhance student's multidisciplinary skills and broaden their academic and professional competencies.

- Students shall complete an additional **20 credits** from **a specific set of courses in the chosen multidisciplinary area**, with the approval of the Board of Studies (BoS).
- Students must secure a minimum of a ‘Pass’ grade in all minor courses.
- Grades earned in these courses will not be included in the main CGPA calculation.
- A separate CGPA for the Minors Program will be calculated and printed in the transcript.

9.6 Multiple Entry and Exit Options

In line with the provisions of NEP-2020, undergraduate students shall be provided with multiple exit options during the course of study. These exits are intended to offer flexibility to students based on their academic progress, financial or personal circumstances, and career needs. Exiting a programme shall not be considered a failure option.

Exit and Re-Entry Option:

Exit 1: A UG certificate will be awarded when a student exits at the end of Year 1 (NcRF Level 4.5). The first year of the undergraduate programme builds on secondary education and requires 40 credits, along with 4 credits in skill-based vocational courses offered during the summer term, for qualifying for an Undergraduate Certificate as

mentioned in Table 18.

Exit 2: A UG Diploma/Diploma in Eng., will be awarded when a student exits at the end of Year 2 (NcRF Level 5). The student must complete two years or four semesters of the undergraduate programme and secure 80 credits, along with 4 credits in skill-based vocational courses offered during the first or second year summer term. Within the total of 80 credits, the student must have earned 40 % of the credits from programme courses in order to qualify for an Undergraduate Diploma or Diploma in Engineering.

Exit 3: A B.Sc., (Eng) will be awarded when a student exits at the end of Year 3 (NcRF Level 5.5). The student must complete three years or six semesters of study and secure 120 credits. Within the total of 120 credits, the student must have earned approximately 80% of the credits from programme courses in order to qualify for a B.Sc in Engineering.

Re-entry Option: A student who exits at any stage with a Certificate, Diploma, or Bachelor's Degree shall be permitted to re-enter the programme within three years, with full transfer of previously earned credits. The maximum duration for completion of the undergraduate programme, including re-entry, shall be limited to seven years from the date of initial enrolment. Any extension beyond this duration shall require the approval of the Academic Council.

Table 18: Eligible/Credit Requirements for multiple Exit Entry

Joining Year	NCrF Level	Entry Level	Credit Requirement for Exit	Degree Conferred
I	4.5	HSC	After completion of the first year; Minimum of 40 credits + 4 credits in skill Development course	UG Certificate
II	5	UG Certificate	Minimum of 80 credits + 4 credits in skill Development course	UG Diploma

III	5.5	UG Diploma	As per University norms; no exit option	
IV	6	No Entry Option	Minimum 160 credits + Mandatory courses	B.Tech
IV	6	No Entry Option	Minimum 160 credits (8.25 CGPA) + Mandatory courses + 20 credits from specific higher level courses minimum B grade	B.Tech with Honours

IV	6	No Entry Option	160 credits (with 6.5 CGPA) + Mandatory courses + 20 credits from multidisciplinary program domain and CGPA above 7.5	B.Tech with Minor
IV	6	No Entry Option	160 credits + Mandatory courses + 20 credits from specialized in a specific vertical	B.Tech with Specialization

10 Academic Support

10.1 Faculty Advisor

Faculty Advisor provide students with accurate information, engage in constructive discussion about

curricular options, and assist students in understanding the purpose and value of academic policies. A set of students will be assigned to the faculty advisor by Head of the Department and thus assigned will continue to be under the guidance of the advisor till they complete the program. The faculty advisor recommendation is required for processing the student requests such as the leave of absence, break in study and change of program. The faculty advisor shall monitor the regularity of students, academic progress and advise them on career opportunities.

10.2 Course Coordinator/Module Coordinator

A faculty member who shall have full responsibility for the course or module (group of courses), coordinating the work of other faculty member(s) handling that course, such as overseeing the coverage of course syllabus, quality of the continuous assessment, pedagogy for delivery of course and student performance. Course coordinators shall schedule regular meetings with faculty and provide resources to support the teaching and learning in the courses they coordinate. In case of any difficulty, the student is expected to approach the course coordinator for advice and clarification.

10.3 Class Committee

A Class Committee shall be constituted by the Head of Department, and the committee is as below:

- Chairperson - A senior faculty member generally not teaching for that particular class.
- Members - Faculty of all the courses of study and the Faculty Advisors.
- A minimum of eight student members (mixed ability) from all genders.

The class committee shall meet thrice during the semester to interact and express opinions and suggestions to improve the effectiveness of teaching - learning process and analyze the performance of the students in the assessments. The Class committee shall send the minutes of the meetings to the Head of the Department and to Dean for information and necessary action.

10.4 Programme Coordinator

Each programme offered by the department shall have a programme coordinator. The programme coordinator has the responsibility for the design and development of the curriculum of that particular programme and to present to the Board of Studies member. In addition, programme outcome and course outcomes attainments of students and

annual programme assessment activities shall be taken care by the programme coordinator.

11 Code of Conduct

11.1 Examination Monitoring and Grievance Redressal Committee

The Examination Monitoring and Grievance Redressal Committee shall deal with the grievances of students and faculty related to the Examination and Evaluation. The duly constituted committee will inquire into the matter and make recommendations, along with mentioning suitable punishment for the offenders, to the Staff Council. The Staff Council will consider the recommendation of these committee and decide on the appropriate action to be taken.

