



# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956

## NBA VISIT 2024

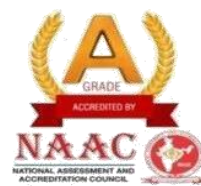


### INSTITUTIONAL LEVEL

#### I.2. Undergraduate Program Academic Regulation 2020



**Bharath**  
**INSTITUTE OF HIGHER EDUCATION AND RESEARCH**  
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

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**FACULTY OF ENGINEERING & TECHNOLOGY**

**REGULATIONS 2020**  
**(As per AICTE Norms)**

**CHOICE BASED CREDIT SYSTEM**  
**(Applicable to the batches admitted from July 2020)**

**EIGHT SEMESTERS**

**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

**CHENNAI – 600073, TAMILNADU**

***Regulations for UG-Engg. (Common to all Programmes)-2020***



***Bharath Institute of Higher Education and Research***

*(Deemed-to-be-University)*

*173, Agaram Road, Selayur, Chennai-73  
Tamilnadu*

*Approved by: 51<sup>st</sup> Academic Council-BIHER Dt.10/01/2020.*

## ***Regulations for B.Tech. (Common to all Programmes)-2020***

These regulations apply to all students admitted beginning with the academic year 2020–21. According to the National Knowledge Commission, University Grants Commission (UGC), and All India Council for Technical Education (AICTE), higher education institutions must implement academic reforms in all areas, including admission policies, a uniform academic calendar, a choice-based credit system, continuous assessment, and grading. In accordance with these recommendations, Bharath Institute of Higher Education and Research (BIHER) implemented the Choice Based Credit System (CBCS) in the faculty of Engineering and Technology in 2015, which was improved in 2020, and is now being refined and implemented from 2020-21 onwards.

### **Preliminary Definitions and Nomenclature**

In these regulations, unless the context otherwise requires:

- a) "Degree" refers to the academic award bestowed upon a student upon successful completion of a four-year program designed to achieve the specified goals. It is referred to as an Under-Graduate (UG) Degree, that is, "Bachelor of Technology," also known as "B.Tech. Degree."
- b) "Programme" means a cohesive arrangement of courses, co-curricular and extracurricular activities to accomplish predetermined objectives leading to the awarding of a degree. It also means a branch or discipline of the B.Tech. Degree Programme like Civil Engineering, Mechanical Engineering, etc. Some degree programmes also provide options to specialize in a specific domain of interest. Such B.Tech. Degree programmes are titled as the degree along with its specializations, like Biotechnology with a specialization in Regenerative Medicine.,
- c) "Course" means a combination of theory, tutorials, and practice sessions of a subject studied in a Term, like Mathematics, Physics, etc.
- d) "Minor" is an optional secondary concentration of courses that often complements the degree.

### **C.1.0 Admission for B.Tech.(Regular) Programme**

**C.1.0.1 Number of Seats:** The number of seats in each branch of the B.Tech. Programme for which admission is to be made in the Faculty of Engineering and Technology will be decided by the Board of Management, BIHER.

**C.1.0.2 Minimum Eligibility:** The minimum eligibility for Admission to B.Tech. degree programmes (Regular) shall be based on the following two essential criteria:

- (a) A pass in the 10+2 (Higher Secondary) examination or any other equivalent examination of any authority, recognized by BIHER, with a minimum aggregate of marks in Mathematics / Biology / Biotechnology, Physics and Chemistry to be specified by the Admissions Committee.
- (b) Qualification in Bharath Engineering Entrance Examination (BEEE) – Engineering (or) any other Entrance Examination conducted by central/state entrance examination body for the purposes of admission to an engineering degree Programme for the respective year of admission.

**C.1.0.3 Eligibility for BEEE:** The eligibility for appearing for BEEE and the format shall be mentioned in the Application form and would be decided by the Admissions Committee for the respective year of admission.

**C.1.0.4 Seat Allocation and Admission:** The Admission Committee will prepare a merit list based on the marks scored by the candidates in the BEEE and call the applicants in the merit order for counselling. Seats are allotted based on applicant's interest and seat availability. Only those candidates who have scored the minimum aggregate of marks as specified in C.1.0.2 (a). will be included in the merit list.

**C.1.0.5 Admissions under Lateral Entry Scheme:** Under the Lateral entry scheme of Admissions, the following categories of candidates are eligible for admission directly to the 3rd Term of any B.Tech. programme offered by BIHER

**Minimum Eligibility:** A pass in Diploma in Engineering/Technology through:

- (i) A minimum of three years of institutional study, after the 10<sup>th</sup> (SSLC) examination, recognized by BIHER. (or)

- (ii) A minimum of 2 years of institutional study, after the 10+2 (Higher Secondary) examination, recognized by BIHER. (or)
- (iii) A Bachelor's degree in Mathematics/Physics/Chemistry, after the 10+2 (Higher Secondary) examination, recognized by BIHER. (or)
- (iv) Any other equivalent degree through a minimum of 3 years of institutional study, after the 10+2 (Higher Secondary) examination, recognized by BIHER.

**C.1.0.6 Medical Standards for Admission:** Candidates have to fulfil the medical standards required for admission as set out by the Admission Committee.

**C.1.0.7 Fees for Admission:** The selected candidate will be admitted to the B.Tech. Programme after he/she fulfils all the admission requirements as indicated in the letter of admission after making the payment of the prescribed fees within the due date announced.

**C.1.0.8 Authority for Admission:** Any matter related to admission to the B.Tech. Programme, the decision of the Admission Committee is final.

**C.1.0.9** If, at any time after admission, it is found that a candidate has not fulfilled the requirements stipulated in the offer of admission, the Dean(Admission) may revoke the admission of the candidate and report the matter to the Vice Chancellor.

**C.1.0.10 In Addition to the above,** admissions will be based on the rules and regulations of the UGC/Competent authorities in force at the time of admissions.

**C.1.0.11 Academic Calendar :** All B.Tech. Programme would be conducted only on an Academic Calendar (Typically starting June / July of a year to May / June in the subsequent year).

## **C.2.0 Structure of B.Tech. Programme (Common to all Programmes)**

**C.2.0.1 List of Programmes:** The B.Tech. Degree Programmes offered by BIHER are as follows:

- Aeronautical Engineering (AE)
- Aerospace Engineering (AS)
- Automobile Engineering (AU)
- Biomedical Engineering (BM)
- Biotechnology (BT)
- Biotechnology with specialization in Agriculture (RM)
- Biotechnology with specialization in Genetic Engineering (GE)
- Civil Engineering (CE)
- Computer Science and Engineering (CS)
- Electrical and Electronics Engineering (EE)
- Electronics and Communication Engineering (EC)
- Information Technology (IT)
- Mechanical Engineering (ME)
- Mechatronics Engineering (MH)

**C.2.0.2 Category of Courses:** The Programme of study will consist of 8 categories of courses distributed over eight Terms (6 Terms for lateral entry students) with two Terms per year as listed below:

No.	Category Code	Course Category
1	H	Humanities and Social Sciences including Management courses
2	B	Basic Science courses
3	S	Engineering Science courses
4	C	Professional Core courses (Compulsory courses)
5	E	Professional Elective courses (Optional courses relevant to chosen branch/specialization)
6	O	Open Elective courses (Optional courses from other technical and/or emerging subjects)
7	P	Project Work, Seminar and Internship in industry or higher institutions
8	M	Mandatory Courses (non-credit courses)

**C.2.0.3 Outcome Based Education:** The B.Tech. programmes follow the Outcome Based Education (OBE) guidelines and have well defined:

1	Program Educational Objectives (PEO)
2	Program Outcomes (PO) which includes Program Specific Outcomes (PSO)
3	Mission of the Department to Program Educational Objectives (PEO) Mapping
4	Program Educational Objectives (PEO) to Program Outcomes (PO) Mapping
5	Structure of Undergraduate Engineering Programme
6	Categorization of Courses (for all four years)
7	Program Articulation Matrix (for all four years)

And, every course has well defined:

1	Course Learning Rationale (CLR)
2	Course Outcomes (CO) – (Outcome based Objectives)
3	Learning Plan with session-wise Session Outcomes (SO)
4	Learning Assessment Scheme
5	Course Designer Details

These details are proposed by the respective Board of Studies and approved by the Academic Council.

**C.2.0.4 Learning Curriculum:** B.Tech. Programmes have a learning curriculum comprising of appropriate combinations of learning from Theory, Tutorials and Practice sessions.

**C.2.0.5 Learning Credits:** Learning Credits are earned by the learner based on the following pattern:

Learning Environment	Learning Credit (C)
1 Hour* Learning from a Lecture Session per week (L)	1
1 Hour* Learning from a Tutorial Session per week (T)	1
1 Hour* Learning from a Practice Session per week (P)	0.5

(\* 1Hour of Learning is usually a 50-60 minute period)

**C.2.0.6 Minimum Learning Credits for the award of Degree:** For the award of B.Tech. Degree, a student has to acquire a maximum of 160 learning credits by learning and practising the various courses prescribed in the curriculum within the stipulated time duration.

(a) **Learning Credit Requirement for Lateral Entry Students:** For the award of B.Tech Degree for a student who has joined through the Lateral Entry Scheme, the number of learning credits to be acquired will be in

accordance with the curriculum of the program concerned and the credit standing at the point of entry (Second year, First Term) to the B.Tech. Program.

For instance, assuming the total credits stipulated for a particular specialization of first year B.Tech. is 42, and the aggregate of bridge courses – mathematics(2 credits), Physics (2 credits) and Chemistry (2 credits) is 6 credits, then the credit standing would work out to  $42-6= 36$  credits. In this case the student, has to earn  $[160 - 36 = 124]$  credits, including the credits of bridge courses to receive his/her B.Tech. degree. Lateral entry students, on admission, shall have to undergo 'Bridge Courses' prescribed by the BIHER, which they have to pass and the learning credits acquired from these courses are added towards their qualifying degree requirements.

#### C.2.0.7 Classification and Numbering of courses: The 9 digit Course Code Structure is provided below:

For Example : U20ECCT03

L YY DD C A SS					
L	YY	DD	C	A	SS
1 Digit	2 digits	2 digits	1 digit	1 digit	2 digits
Level of Course	Year of Regulation	Course Offering Department	Type of Course	Additional Qualifier	Serial No. of the Course
U-UG P-PG	Regulations - 2020	LE – English PY – Physics CY – Chemistry MA – Mathematics MB – Management Studies PD – Career Development Centre AS – Aerospace Engineering AE-Aeronautical Engineering AU – Automobile Engineering BM-Biomedical Engineering RM-Biotechnology (Agriculture) GE-Biotechnology (Genetic Engineering) BT – Biotechnology CE – Civil Engineering CS – Computer Science & Eng., AI- CSE (Artificial Intelligent) SC – CSE (Cyber Security) IT- Information Technology EE – Electrical & Electronics Eng., EC – Electronics & Commn. Eng., ME – Mechanical Engineering MH – Mechatronics Engineering	<b>H</b> – Humanities, Social Sciences including Mgt. Courses <b>B</b> – Basic Science <b>S</b> – Engineering Science Courses <b>C</b> – Professional Core Courses <b>E</b> – Professional Elective Courses <b>O</b> – Open Elective Courses <b>P</b> – Project Work, Seminar, Internship etc., <b>M</b> – Mandatory Courses (non-credit)	T - Theory L – Laboratory I - Industry B - Bridge J - Joint	01 02 etc.,

**C.2.0.8 Medium of Instruction:** The medium of instruction, examination and Project reports will be in English.

### **C.3.0 Registration / Enrolment for Courses**

The process of signing-up for courses is called 'Registration'. Students are enrolled after they pay the prescribed fees. For a student to attend classes he/she has to necessarily complete both registration and enrolment. All students shall formally register for the courses every Term to undergo their learning course work.

**C.3.0.1 Course Enrolment Requirements:** Enrolment for all courses prescribed as per the curriculum is mandatory.

- (a) Registration of any course will be controlled by the respective Deans of School/ Heads of the Department.
- (b) The registration sheet contains the course code, course title, number of credits earned till date, number of credits opted for the current Term, and the remaining number of credits to earn for the award of the degree. The student will make the choice of courses on his own or in consultation with his/her Faculty Advisor.
- (c) For the First Year -First Term (and II-Year & I-Term in the case of lateral entry students) registration shall be completed within a week prior to the commencement of classes.
- (d) For all other Terms, the registration will be done during a specified week immediately after the end Term examination of the previous Term.
- (e) Late enrolment would not be encouraged. In case of a late enrolment, special permission is required from the respective Heads of School/Department.

**C.3.0.2 Break in Studies:** A student will not be allowed to enroll for current Term and has to undergo a year of break in studies if he/she:

- (a) Does not have a minimum of 75 % attendance in at least 3 or more courses in the previous Term
- (b) Has not cleared any pending fee dues to BIHER, Hostel, Library, NCC etc., in the previous Term
- (c) Has been 'Debarred from study' due to any stipulated reason in the previous Term.
- (d) Has any 'Pending Disciplinary Actions' against him/her from the Previous terms.
- (e) Has not registered for previous End Term examinations

**C.3.0.3 During the Break of Studies,** a student:

- (a) Cannot attend any regular classes
- (b) Will not be permitted to stay in the 'Hostel' facility provided by BIHER
- (c) Will not be permitted to participate in any of the BIHER's activities inside the campus.
- (d) Can register for 'Compensatory courses' for such courses in which he/she might have obtained an 'I' grade.
- (e) Can reappear for the 'End Term Final Examination' for such course in which he/she might have obtained 'F' / 'Ab' grade.

**C.3.0.4 Enrolment After Break in Studies:** A student who undergoes a break in studies in the current Term (odd/even) can 'Enroll Back to Study' into the B.Tech. Programme only in the subsequent corresponding (odd/even) term in the next academic year only. And 'Enrol Back from Study' is subject to the approval from Dean, Faculty of Eng. & Tech.

**C.3.0.5 Detention in Courses and Compensatory Courses:**

The system of compensatory courses is meant for those students who are unable to cope up with the academic vigor and hence fails to secure 75% attendance in a few courses in a Term. Such students can not appear for end Term examinations of the courses in which their attendance percentage is less than 75% and are deemed to be detained in such courses and awarded 'I' grade in the same. However, such students can register under Compensatory Courses in the next Term subject to the following conditions:

- (a) Compensatory courses are conducted only for a student who is 'Detained from Study' due to lack of attendance of 75% minimum.
- (b) Compensatory courses may be announced after the publication of results, by the respective



- School/Department, by the Deans/HODs, with the approval of the Dean, Faculty of Eng. & Tech.
- (c) Student has to register for the Compensatory Course and pay the prescribed fee for the Compensatory Courses within the specified time limit.
  - (d) A maximum of two Compensatory Courses alone will be permitted to be registered by a student during the term next to the term of detainment.
  - (e) Withdrawal from Compensatory courses is not permitted
  - (f) These courses will be conducted only for 75% of the hours prescribed in the curriculum and would be held either during weekends or in evenings after the regular class duration.
  - (g) A student has to obtain a minimum of 75% attendance in each of these Courses.
  - (h) There will be only one end term final examination, and no continuous learning assessments. The internal marks scored in the detained course will be ignored.
  - (i) A student has to score the minimum passing criterion to be declared 'Pass' in that course.
  - (j) Students cannot demand a compensatory course for a course in any term as a matter of right. Compensatory courses will be conducted subject to availability of faculty, class rooms and logistics.
  - (k) Students who have done a Compensatory Course will not be considered for rank, medal or distinction.

**C.3.0.6 Adding and dropping courses:** This is applicable only to Professional Elective and Open Elective courses.

- (a) A student may withdraw from an elective course without academic penalty only during the first 2 weeks of the term only.
- (b) A course having a Co-requisite course will not be permitted to be dropped. Similarly registering for a new elective course is permitted only during the first two weeks of the term.
- (c) If an elective course is dropped within the first two weeks of the commencement of classes, it does not appear on the academic transcript. In case, the course is dropped any time after 2 weeks unilaterally by the student, for reasons whatsoever, it will be recorded with a mark of "Ab" or "I".
- (d) When a course is added within the permissible timeframe, the attendance will be calculated from the date of registering the newly added course. No make-up classes need be conducted for the individual student to compensate for the missed classes.
- (e) **Registration in graduate level courses by undergraduate students:** Exceptional undergraduate students who are in the fourth year of study and who possess CGPA of not less than 9.0 may enroll in a graduate (Masters) course. In order to do so, students must receive a strong recommendation from the academic advisor and prior approval of the Dean, Faculty of Engineering & Technology. The according of approval lies solely with the Dean, Faculty of Engineering & Technology. In any case only ONE master's level course will be permitted. The assessment procedure will remain the same as applicable for the master's level course.

## C.4.0 Maximum and Minimum Duration of the Programme

**C.4.0.1 Term Duration:** Each term of study shall normally consist of 90 working days or 450 hours. A student is ordinarily expected to complete the B.Tech. Programme in eight terms for regular Programme and in 6 term under lateral entry scheme. However, a student may complete the Programme at a slower pace by taking more time as specified below:

**Regular students:** within the time duration of 12 terms (As per the UGC Norms) for students admitted in a particular year.

**Lateral Entry students:** within the time duration of 10 terms (As per the UGC Norms) for students admitted in a particular year.

The above-mentioned time duration is counted excluding terms withdrawn on medical grounds etc.

In compliance with the rules and norms of UGC, no student will be allowed to complete the B.Tech. degree in less than 8 full-terms.

## C.5.0 Temporary withdrawal from the programme

**C.5.0.1** A student may be permitted by the Dean, Faculty of Engineering & Technology to withdraw from the Programme for a term or longer for reasons of ill health or other valid reasons. Normally a student will be permitted to discontinue from the programme only for a maximum continuous period of two terms or the aggregate of individual discontinuation not exceeding two terms.

## C.6.0 Academic Advising :

In order to provide academic assistance and individualized attention to students, different levels of advising/attention will be provided by three types of officers.

- (1) Academic Class Advisors
- (2) Student Mentor
- (3) Faculty Advisors

**C.6.0.1. Academic Class Advisors:** For every 60 to 70 students, an Academic Class Advisor would be allocated to help the student evaluate and realize educational and career options. The basic responsibilities of the Academic Class Advisor are:

- (a) To assist the student in career planning and to refer student to campus resources for such assistance.
- (b) To be knowledgeable about the program(s) for which he/she is advising and be familiar with published academic rules and regulations of BIHER.
- (c) To inform the student of the various aspects of degree requirements.
- (d) To approve the course registration of the student at the department/School level
- (e) To consider and approve the application for adding / dropping / auditing of courses
- (f) To guide the students while applying for readmission / transfer etc.
- (g) To help student plan a suitable schedule of classes, at least one term in advance.

In all of these matters, the Academic Class Advisor or the advisement team must judge whether the student's request is in order, is in the student's best interest, and is feasible under existing regulations.

**C.6.0.2 Student Mentors & Faculty Advisors:** In order to motivate the students personally and provide counselling on academic and non-academic matters, a faculty member called Student Mentor shall be assigned for every 20-25 students. In addition, Faculty Advisors also would advise students time to time.

## C.7.0. Conduct and Discipline

**C.7.0.1 Expected Conduct and Discipline:** Every student is required to:

- (a) Demonstrate ethical, professional and exemplary conduct and decorous behavior both inside and outside BIHER campus and not to indulge in any activity that will tend to bring down the prestige of the BIHER.
- (b) Be self-motivated and to be self-disciplined
- (c) Make the most of their ability and to contribute to the happiness and well-being of BIHER community by supporting others.
- (d) Treat others in the way that they would wish to be treated themselves
- (e) Abide by the orders of the Honorable Supreme Court of India, and not to get involved in any acts of ragging in any form. Ragging is absolutely and completely prohibited in BIHER.
- (f) Avoid Plagiarism, cut and paste jobs, malpractices of any kind in learning assignments including project work and its reports.

**C.7.0.2 Act of Indiscipline:** A student who does not conduct in the manner expected and as stated above is considered to be performing an act of Indiscipline.

- (a) Acts of Indiscipline are dealt with at zero tolerance
- (b) Any acts of Indiscipline of a student are first to be considered by the Discipline and Welfare Committee of the Department/School for necessary action. If the issue demands more serious consideration, the act of indiscipline will be reported to the Dean, Faculty of Eng. & Tech. and he will refer it to the Discipline and Welfare Committee of BIHER, constituted by the Vice Chancellor. The Committee will enquire into the charges and recommend suitable action if the charges are substantiated. The Dean,

Faculty of Eng. & Tech will take appropriate action on the recommendation of the Discipline and Welfare Committee of BIHER.

- (c) Anyone found indulging in ragging or any such acts is liable to be dismissed forthwith.

**C.7.0.3 Suspension:** Dean, Faculty of Engineering and Technology may suspend a student pending inquiry depending upon the prima facie evidence.

**C.7.0.4 Appeal:** The aggrieved student may appeal to the Vice Chancellor whose decision will be final and binding.

## C.8.0 Attendance

**C.8.0.1** Attendance is the physical presence and active learning participation of a student in the class / laboratory / field work etc.,. It is a well-observed fact that the students who score good grades are those who attend and participate in all the assigned learning activities in the class / laboratory / field work, regularly. Therefore, the students must strive to attend and sincerely participate in all the assigned learning activities without fail.

**C.8.0.2** Every faculty member facilitating a course will take notice of student attendance and their learning participation till the last instruction day in the Term. The percentage of attendance, calculated up to this point, will be indicated by a code number/letter as follows:

Attendance rounded to	Code
95% and above	H
85 to 94%	9
75 to 84%	8
Below 75%	L

**C.8.0.3** A student must maintain an attendance record of at least 75% in individual courses, exclusive of leave of absence due to medical reasons, on-duty, extra- curricular / extramural activities, permitted assignments such as job interviews, unforeseen emergencies etc. Without the minimum attendance of 75%, in any course, students become ineligible to appear for the end term examination in that course. His / Her registration for that course will be treated as cancelled, and he/she shall be awarded 'I' grade (I stands for Incomplete or registration cancelled for want of minimum attendance) in that course. This grade shall appear in the grade card until the course is successfully completed. A student shall register under "Compensatory Courses (C.3.0.5)" for the courses in which he/she has attendance less than 75% and complete the same.

**C.8.0.4** A student must strive to attend all the classes without fail. However, the minimum attendance requirement of 75% allows a student the facility to use the balance 25% to account for illnesses, permitted assignments such as job interviews, inter university sports meets, inter-collegiate/inter-university competitions, accidents, unforeseen emergencies etc. An attendance of 75% in a course is considered to be the minimum required for a student to get just enough input on the course syllabus through class room contact hours to make him / her eligible to appear in the end Term examination for that course.

It is the responsibility of each and every student to keep track / monitor his / her percentage of attendance for each course and ensure that he / she satisfies the attendance norms prescribed by BIHER. If the student finds any discrepancy / error in the attendance status, he /she should immediately bring it to the attention of the concerned faculty member and seek redressal.

**C.8.0.5** The teacher shall prepare the particulars of all students who have attendance less than 75% in his / her course. Copies of the same should also be sent to the Dean, Faculty of Eng. & Tech., and Heads of Schools/ Departments concerned. The students who have less than 75% attendance will not be permitted to appear in end term examination, and the same will be informed to the student's parents.

**C.8.0.6 Condonation of Attendance:** In rare and genuine cases, a committee consisting of Dean and Head of the Department of the concerned department will examine the case, based on the documents submitted by the student, facts and circumstances. Assessment will be done, by the committee, on the merit of the case and spell out their recommendation to the Vice Chancellor. The Vice Chancellor, based on the recommendation of the committee may then give condonation of attendance, only if the Vice Chancellor deems it fit and deserving but, in any case, the condonation cannot exceed 10%.

## C.9.0. Learning Assessment Procedure

**C.9.0.1** The learning of a student is assessed and evaluated in-house by the course facilitating faculty member/ department except in the case of project work where an external examiner shall be nominated for conducting the viva- voce. All assessments are designed based on Revised Bloom's Taxonomy levels of thinking and learning.

**C.9.0.2** The student's learning in each course, in general, is assessed (formative) and evaluated (summative) based on in-Term continuous learning assessment (internal assessment) and end-Term final examination. An in-Term continuous learning assessment (also known as internal assessment / comprehensive assessment) is spread through the duration of course and is done by the faculty member facilitating the course. In order to verify the different skills acquired in a student, the continuous learning assessments are (as appropriately) performed through:

- (a) Oral Learning Assessments
- (b) Written Learning Assessments
- (c) Demonstrative Learning Assessments

The end-Term final examination shall have learning assessments from the following perspectives with respect to all courses:

- (a) Evaluation with respect to knowledge
- (b) Evaluation with respect to Understanding
- (c) Evaluation with respect to skill
- (d) Evaluation with respect to Applications and/or
- (e) Higher Order Thinking Skills

The learning assessment weightage in percentages for every course is provided for each course in the respective course syllabus, and follows the template:

	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)						Final Examination (50% weightage)	
		CLA-1 (10%)		CLA-2 (15%)		CLA-3 (15%)		CLA-4 (10%)	
		Theory	Practice	Theory	Practice	Theory	Practice		
Level 1	Remember	%	%	%	%	%	%	%	%
Level 2	Understand	%	%	%	%	%	%	%	%
	Apply	%	%	%	%	%	%	%	%
Level 3	Analyze	%	%	%	%	%	%	%	%
	Evaluate	%	%	%	%	%	%	%	%
Total		100 %		100 %		100 %		100 %	

**Note :** For a Pure Theory Course, the Practice Part would be zero and similarly for a Pure Practice Course, the theory part would be appropriately zero.

- a. The ratio between Continuous Learning Assessments and Final Examinations for all courses is 50:50.
- b. A student should definitely attend the Final Examination to be eligible to Pass the Course.
- c. For a student to PASS in a course, a student has to score a minimum of 50 marks aggregate.
- d. For the Theory Part of a course or a pure theory course; Continuous Assessments CLA-1 (normally in two learning units / modules or as prescribed by the Course Coordinator), CLA-2 (in two learning units / modules not covered in CLA-1 or as prescribed by the Course Coordinator) and CLA-3 (in all the five learning units / modules) are generally conducted as Written Tests of duration 100 minutes, 100 minutes and 180 minutes respectively each and the final examination is conducted for 180 minutes.
- e. For the Practice Part of a course or a pure Practice course; Continuous Learning Assessments CLA-1, CLA-2 and CLA-3 are generally conducted at periodic intervals, and for certain courses that needs learning verification of oral and skill demonstrative abilities, there would be appropriate oral tests and tests for demonstrations respectively.
- f. CLA-4 is generally a combination from among one or more of these options:

Assignments	Surprise Tests	Seminars	Multiple Choice Quizzes
Tech. Talks	Field Visits	Self-Study	NPTEL/MOOC/Swayam
Mini-Projects	Case-Study	Group Activities	Online Certifications
Presentations	Debates	Conference Papers	Group Discussions

- g) Student learning from the theory and practice portions in a course shall be assessed separately for 100 marks each and consolidated by assigning a weightage of 50% for theory component and 50% for practical component. Grading shall be done for this consolidated mark.
- h) For the Practice Part (Laboratory/Practical) of a course or a pure Practice (Laboratory/Practical) course; due weightage for carrying out experiments, such as observations, collection of data, analysis, interpretation of results, inferences and also timely submission of record work done would all carry due weightage based on the type of laboratories and the course and constitute the CLA-1, CLA- 2, CLA-3. The nature of the end Term final examination shall be informed to the students at the commencement of the course.
- i) The Final examination (both theory and practice (Laboratory/Practical)) would be conducted only after the last working day of the Term.
- j) Final Term Project Work: The projects undertaken as far as possible should be socially relevant and product oriented. B.Tech. projects can be carried out by individual students or by a group of students with a maximum of five students in a group.
- k) The assessment method for the project work consists of in-Term and end-Term evaluations as detailed below:

	Continuous Learning Assessment (50% weightage)			Final Evaluation (50% weightage)	
	Review – 1	Review – 2	Review – 3	Project Report	Viva-Voce
Project Work / Full Internship	5 %	20 %	25 %	20 %	30 %

**C.9.0.3** Whenever there is a deviation from procedures stated under C.15.0.3, as warranted by the unique nature of the course, the same will be specified by the concerned Course Coordinator and approved by the Dean, Faculty of Eng. & Tech.

### C.10.0 Re-appearing for Examination

- (a) Students who have secured 'F'(Fail)/'Ab' (Absent) grade in a particular course can reappear when the end Term examination for that course is again conducted provided they satisfy other eligibility conditions such as lack of attendance overcome by attending Compensatory courses and minimum credit / appearance in end Term examinations requirements, Temporary withdrawal from the programme and Discipline.
- (b) For the first two attempts, the internal marks obtained in the first attempt will only be considered and it will be combined with the marks obtained in the end Term examinations for the award of appropriate grade.
- (c) The first attempt is that which corresponds to the first registration for the course. If a student gets 'F' or 'Ab' in an attempt that is treated as an attempt.
- (d) However, if a student obtains 'F'(Fail)/'Ab' (Absent) grade in a course in the first two attempts, from the third attempt onwards, full weightage (100%) shall be assigned to marks scored in the end Term examinations and the internal assessment marks they have scored during the regular course of study will be ignored.
- (e) If a student obtains "F" grade or "Ab" grade or "I" grade in a course for which only internal assessment is applicable like (i) Seminars (ii) Industrial training (iii) and other notified courses from time to time he/she should register for compensatory courses for such courses and earn the internal marks as he/she would have earned normally.
- (f) Similarly, for project work, if a student gets a 'F' or 'Ab' or 'I' grade he/she should register under compensatory course, earn marks for reviews and project report as applicable and then appear for the final viva. Under the compensatory course the student shall choose a new project topic (other than the one he/she had been associated with earlier) under the guidance of the allotted faculty member.
- (g) If a course has both theory and practical component, then the student shall appear in the end Term examinations of both the theory and practical components.
- (h) All applicable fees charged for the purpose of examination will apply for re-appearance courses as well.

## C.11.0 Course Wise Grading of Students

**C.11.0.1 Letter Grades and Grade Points (GP)** Based on the aggregate of marks obtained through internal assessment and external assessment, each student is awarded a final letter grade at the end of the Term, in each Course. The letter grades and the corresponding grade points, as recommended by UGC, are as follows:

Letter Grade	Grade Points	Mark Range
O (Outstanding)	10	91 - 100
A+ (Excellent)	9	81 - 90
A (Very Good)	8	71 - 80
B+ (Good)	7	61 - 70
B (Above Average)	6	56 - 60
C (Average)	5	50 - 55
F (Fail)	0	<50 Failure due to insufficient marks in the course
Ab (Absent)	0	Failure due to non-appearance in examination
I (Incomplete)	0	Failure due to insufficient attendance in the course.

**C.11.0.2** A student is considered to have successfully completed a course and earned the credits if he / she secured a letter grade other than F or Ab or I in that course. A letter grade F or Ab or I in any course implies a failure in that course.

**C.11.0.3** A course successfully completed cannot be repeated.

## C.12.0 Method of Awarding Letter Grades

**C.12.0.1** The internal marks awarded to the students are first normalized and combined with the normalized marks of end Term examination. Subsequently letter grades are awarded for the normalized marks as indicated in the table under section C.16.0.1: The detailed methodology of normalization of internal marks as well as marks in the end-Term final examinations shall be formulated by the Controller of Examinations

**C.12.0.2** To pass in a course with earnable credits a student has to score a minimum of 50% of the total normalized marks secured in both the internal and end Term examination. Grades "Ab" and "I" will be as per C.16.0.1.

## C.13.0 Declaration of Results

**C.13.0.1** Normalized marks are referred to the Result Passing Board for the finalization of results. Controller of Examinations assigns letter grades and announces the results.

**C.13.0.2** The "Ab" / "I" grade once awarded stays in the record of the student and is deleted when he/she completes the course successfully. later, The grade acquired by the student will be indicated in the grade card of the appropriate academic year with an indication of the month and the year of passing of that course.

**C.13.0.3** 'F' grade obtained by a student will be deleted in the grade card once that course is successfully completed. The pass grade acquired by the student will be indicated in the grade card of the appropriate year with an indication of the month and the year of passing. The CGPA will be accordingly revised.

## C.14.0 Re-view of answer scripts

**C.14.0.1** In case any student feels aggrieved on the final outcome of the learning assessment in any course, the student shall apply to the Controller of Examinations, along with the prescribed fee, for the review of end Term examination answer script, within the stipulated time after the announcement of the results of the examinations. The Controller of Examinations shall facilitate the review of the answer script jointly to be carried out by the student and the faculty detailed for this purpose. If any discrepancy is noticed during review the same shall be rectified and the originally awarded grade accordingly amended.

## C.15.0 Grade Card

**C.15.0.1** The grade card issued by the Controller of Examinations to each student, after the announcement of the results will contain the following:

- The credits for each course registered for that Term.
- The letter grade obtained in each course
- The attendance code in each course
- The total number of credits earned by the student up to the end of that Term in each of the course categories
- The Cumulative Grade Point Average (CGPA) of all the courses taken from the first Term onwards for regular students and from Third Term onwards for lateral entry students. For lateral entry students, the grades awarded in the bridge courses shall also be taken into consideration.

**C.15.0.2** Computation of Term Grade Point Average (TGPA) and Cumulative Grade Point Average (CGPA)

- TGPA** will be calculated according to the formula:  $TGPA = \frac{\sum_{i=1}^n (C_i \times GP_i)}{\sum_{i=1}^n C_i}$  Where  $C_i$  = credit for the  $i$ th course,  $(GP)_i$  = the grade point obtained for the  $i$ th course,  $n$  = total number of courses and the sum is over all the courses taken in that Term, including those in which the student has secured F grades.
- CGPA** (Cumulative Grade Point Average) is calculated using:  $CGPA = \frac{\sum_{i=1}^r (T_i \times (TGPA)_i)}{\sum_{i=1}^r T_i}$  where  $T_i$  = Sum of credits in  $i$ th Term,  $(TGPA)_i$  = Term Grade Point Average earned in  $i$ th Term and  $r$  = number of Terms and the sum is over all the Terms under consideration.
- The TGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

**C.15.0.3** Class/Distinction will be awarded to the students after they successfully complete the B.Tech. programme as per the norms stipulated in the following table:

**Regular Student:**

Category	CGPA (From I - VIII Terms)	Class / Distinction
Students who successfully complete the B.Tech. programme within the time duration of 8 Term	$\geq 5.0$ & $< 5.5$	Pass
	$\geq 5.5$ & $< 6.0$	Second Class
	$\geq 6.0$ & $< 8.0$	First Class
	$\geq 8.0$ (without 'Ab' or 'F' or 'I' or 'temporary withdrawal' in any Term)	First Class with Distinction
	$\geq 8.0$ (with 'Ab' or 'F' or 'I' in any Term but obtained pass grade ('O' to 'P') subsequently)	First Class
Students who cannot complete the B.Tech. program in 8 Terms but complete it successfully within the time duration of 9 Terms	$\geq 5.0$ & $< 5.5$	Pass
	$\geq 5.5$ & $< 6.0$	Second Class
	$\geq 6.0$	First Class
Students who cannot complete the B.Tech. program in 9 Terms but complete it successfully within the time duration of 12 Terms	$\geq 5.0$ & $< 5.5$	Pass
	$\geq 5.5$	Second Class

**Lateral Entry Student:**

Category	CGPA (From III - VIII Terms including bridge courses)	Class / Distinction
Students who successfully complete the B.Tech. programme within the time duration of 6 Terms	$\geq 5.0$ & $< 5.5$	Pass
	$\geq 5.5$ & $< 6.0$	Second Class
	$\geq 6.0$ & $< 8.0$	First Class
	$\geq 8.0$ (without 'Ab' or 'F' or 'I' or 'temporary withdrawal' in any Term)	First Class with Distinction
	$\geq 8.0$ (with 'Ab' or 'F' or 'I' in any Term but obtained pass grade ('O' to 'P') subsequently)	First Class
Students who cannot complete the B.Tech. program in 6 Terms but complete it successfully within the time duration of 7 Terms	$\geq 5.0$ & $< 5.5$	Pass
	$\geq 5.5$ & $< 6.0$	Second Class
	$\geq 6.0$	First Class
Students who cannot complete the B.Tech. program in 7 Terms but complete it successfully within the time duration of 10 Terms	$\geq 5.0$ & $< 5.5$	Pass
	$\geq 5.5$	Second Class

**C.16.0 Academic Dishonesty**

**C.16.0.1** When a student is found responsible for a violation of the BIHER code of conduct pertaining to academic dishonesty (Malpractice in Examinations), the Office of Controller of Examinations will initiate action based on the pre-approved procedures. Appropriate penalty or punishment will be awarded to the student and Communication sent to the concerned Head of the Department/School. The matter will be informed to the students' parents duly.

**C.17.0 Eligibility for Award of the B.Tech. Degree**

**C.17.0.1** A student shall be declared to be eligible for the award of the B.Tech degree, if he/she has

- Registered and successfully completed the courses and projects as per the curriculum and obtaining an aggregate of learning credit totaling 160.
- Successfully acquired the required learning credits as specified in the curriculum corresponding to the branch of his/her study within the stipulated time duration.
- No disciplinary action is pending against him/her.

**C.18.0 Eligibility for Award of the Minor Certificate**

**C.18.0.1** A student to become eligible for the Award of the Minor Certificate in the chosen area of specialization, he/she has to acquire an additional of 20 credits in the chosen Minor subject area, over and above the credits required for the award of the B. Tech Degree.



## **C.19.0 Change of Regulations**

**C.19.0.1** Any regulation can be modified by the Academic Council of BIHER.