

**HINDUSTHAN INSTITUTE OF TECHNOLOGY, COIMBATORE - 641032**

(An Autonomous Institution)

Approved by AICTE, New Delhi, Permanently affiliated to Anna University, Chennai, Accredited by NAAC with 'A' Grade

**REGULATIONS 2020 (Revised) – R 2020 (A)**

**B.E. / B.Tech. DEGREE PROGRAMMES**

**(CHOICE BASED CREDIT SYSTEM)**

The regulations hereunder are effective from the academic year 2021 - 2022 and applicable to students admitted in Hindusthan Institute of Technology, an Autonomous Institution Affiliated to Anna University, Chennai from the academic year 2021 - 2022. The regulations are subject to amendments as may be made by the Academic Council of the Institution from time to time. Any or all such amendments will be effective from such date to such batches of students (including those already in the middle of the programme) as may be decided by the Academic Council.

**1. (a) PRELIMINARY DEFINITIONS AND NOMENCLATURE**

In the following Regulations, unless the context otherwise requires

- i) **“Programme”** means Degree Programme that is B.E/B.Tech Degree Programme.
- ii) **“Choice Based Credit System”**: The choice based credit system provides a ‘cafeteria’ type approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.
- iii) **“Branch”** means specialization or discipline of B.E/B.Tech Degree Programme, like Computer Science Engineering, Mechanical Engineering, etc.
- iv) **“Course”** means a theory or practical course that is normally studied in a semester, like Mathematics, Physics, etc.
- v) **“Head of the Institution”** and **“Chairman- Academic Council”** mean the Principal of the College who is responsible for all academic activities for the implementation of relevant rules and regulations.
- vi) **“Head of the Department”- HoD** means Head of the Department concerned.
- vii) **“Controller of Examinations”**- means the authority of the institution who is responsible for all activities of the Examinations of all the departments and hereafter called CoE.
- viii) **“University”** means Anna University, Chennai.

## **(b) CONDITION FOR ADMISSION**

Students for admission to the B.E/B.Tech degree Programme will be required to satisfy the conditions of admission thereto prescribed by the University and Government of Tamil Nadu.

## **2. DURATION OF THE PROGRAMME**

- i) **Minimum Duration:** The programme will extend over a period of Four years leading to the Degree of Bachelor of Engineering (B.E) / Bachelor of Technology (B.Tech) of the Anna University. The four Academic years will be divided into eight semesters with two semesters per year. Each semester shall normally consist of 90 working days including examination days.
- ii) **Maximum Duration:** The total period for completion of the programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period of 8 years (7 years for lateral entry) which includes one year of authorized break of study.

## **3. PROGRAMMES OFFERED**

The following are the programmes of study offered

### **B.E**

1. Aeronautical Engineering
2. Automobile Engineering
3. Computer Science and Engineering
4. Electronics and Communication Engineering
5. Mechanical Engineering

### **B.Tech**

1. Information Technology
2. Pharmaceutical Technology
3. Artificial Intelligence and Data Sciences

## **4. STRUCTURE OF THE PROGRAMME**

Every B.E / B.Tech. Programme will have a curriculum with syllabi consisting of theory and Practical courses that shall be categorized as follows

- i) **Humanities and Social Sciences (HS)** courses include Technical English, Engineering Ethics and Human Values, Communication skills, Environmental Science and Engineering.
- ii) **Basic Sciences (BS)** courses include Engineering Mathematics, Physics, Chemistry, etc.
- iii) **Engineering Sciences (ES)** courses include the Engineering Practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering etc.

- iv) **Professional Core (PC)** courses include the core courses relevant to the chosen specialization/ branch.
- v) **Professional Elective (PE)** courses include the elective courses relevant to the chosen specialization/ branch.
- vi) **Open Elective (OE)** courses include the courses from other branches which a student can choose from the list specified in the curriculum of the students B.E / B.Tech. Programmes.
- vii) **Mandatory Courses (MC)** includes some of the courses as prescribed in the AICTE model curriculum Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Traditional Knowledge.
- viii) **Fast Track Courses:** The students shall undergo the eighth semester elective courses in sixth and seventh semester provided they shall have 7.5 CGPA with no history of arrears at the end of fourth semester. The Head of Department, in consultation with the faculty handling the said courses shall forward the proposal recommended by the Head of Institution to the Controller of Examinations for approval at least 4 weeks before the commencement of the sixth semester of the programme for approval.
- ix)
  - a) **B.E./B.Tech. Honours:**
    - a. The student should have earned additionally a minimum of 18 credits from a vertical of the same programme.
    - b. Should have passed all the courses in the first attempt.
    - c. Should have earned a minimum CGPA of 7.50.
  - (b) **B.E./B.Tech. (Minor in other specialization)**
    - a. The student should have earned additionally a minimum of 18 credits in any one of the verticals of other B.E/B.Tech programmes.
    - b. Should have passed all the courses in the first attempt.
    - c. Should have earned a minimum CGPA of 7.50.
- x) **Employability Enhancement Courses (EEC)** includes Project Work and / or Internship, Seminar, Professional Practices, Case Study and Industrial/Practical Training.
  - a. **Project Work:** Every student shall be required to undertake a suitable project in industry / research organization / department in consultation with the Head of the Department and the faculty guide and submit the project report thereon at the end of the semesters in which the student registered, on dates announced by the College/Department. A student shall register for the Project Work in 8<sup>th</sup> semester.
  - b. **Offline courses and Transfer of Credits:** Students can permitted to optionally enroll and study a maximum of three off campus courses in physical / online / hybrid mode under UG programme with the approval of Head of the Institution as per the Regulations. The successful

completion of these courses through any of the following modes shall be considered in lieu of professional elective / open elective courses of curriculum as approved by the Head of the Institution.

Students are permitted to optionally enroll and study these courses through SWAYAM - NPTEL platforms and credit transfer is to be done based on the marks and certificate provided by the NPTEL. The number of credits and transfer of credits are based on the procedure explained in Table 1 and the Mapping of the marks with the grades is explained in Table 2. The mapping of marks with grades is applicable, only if the student passes the course as per the guidelines of NPTEL.

**Table 1: Duration of the course and Number of credits**

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

**Table 2: Mapping of Marks scored in NPTEL course and Credits earned**

Letter Grade	Marks
O	90-100
A+	80-89
A	70-79
B+	60-69
B	50-59
C	40-49

(i) Students are permitted to optionally enroll and study the courses in physical / hybrid / online modes offered by reputed Central / State funded Universities / Institutions which are in the top 20 positions in the latest NIRF ranking and also conducting examination towards award of marks and grades. (NIRF Ranking of any of the last three years with respect to the year in which course is to be registered; NIRF ranking is based on respective stream for professional elective courses and based on any stream for open elective courses).

(ii) Students are also permitted to enroll and undergo such courses in online mode at Universities abroad in top 500 in QS ranking in the last three years.

(iii) Students are also permitted to study courses of a particular semester in a University / Institution abroad based on MoU. A learning agreement shall be evolved to map all the courses offered in the programme and the courses offered in University abroad as per

the procedure outlined by the Head of the Institution The credits earned by the students in the University abroad shall be transferred as per the learning agreement.

(iv) In the case of (i), the students can enroll for the courses with the approval of the Head of the institution only if the course is offered directly by Institution and not with the edutech platforms.

(v) The marks/credits earned by the student shall be transferred based on the decision of a committee constituted by Office of the Controller of Examinations and approved by the Head of the Institution.

(vi) Students are also permitted to enroll and study the courses in physical/hybrid mode (not less than 50% in physical mode) that are offered by (i) National/State funded research institutions/laboratories and (ii) Reputed companies (manufacturing or software) related to the programme, and (b) reputed companies involved in transfer of knowledge provided the knowledge transferring company is a spinoff from an Engineering / Technology practicing Industry and sharing the work experience of the respective industry. The companies mentioned in (vi) (ii) (a) and the company with which the knowledge transfer company associated in the case of (iv) (ii) (b) should have average annual turnover of more than 200 Crores over a period of 5 years. However, the academic content and delivery shall be in consonance with the University academic standards and norms.

(vii) The minimum qualification of the course instructor from the company as mentioned in (vi) (ii) shall be B.E./B.Tech with 10 years of research / industrial experience . Such courses shall be offered through MOU / MOA between Anna University and such institutions/organizations/ companies. The design of the courses with regard to the syllabus content, duration of each course and number of credits offered for each course shall be discussed and recommended by the Office of the Controller of Examinations and approved by the Head of the Institution as per the Regulations

(viii) For the offer of each course under (vi), a course coordinator shall be nominated from the Department who shall also attend such course and shall coordinate the question paper setting and answer script evaluation with the course instructor from research institution /laboratories /industry/ company for the continuous assessment and end semester examination conducted by the Institution. The passing requirements are as per regulations.

c. **Industrial Training / Internship:** The students may undergo Industrial training for a period as specified in the Curriculum during summer / winter vacation. In this case the training has to be undergone continuously for the entire period. The students may undergo Internship at Research organization / University (after due approval from the Department Academic Committee) for the period prescribed in the curriculum during summer / winter vacation, in lieu of Industrial training.

- d. **Industrial Visit:** Every student is required to go for at least one Industrial Visit every year starting from the second year of the Programme. The Heads of Departments shall ensure that necessary arrangements are made in this regard.
- e. **Value Added Courses:** The Students may optionally undergo Value Added Courses and the credits earned through the Value Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. Two / Three credit courses shall be offered by a Department with the prior approval from the Head of the Institution. The details of the syllabus, time table and faculty may be sent to the Controller of Examinations after approval from the Head of the Institution concerned at least one month before the course is offered. Students shall be allowed to take these courses offered in other Departments also, but with the permission of the Head of the Institution of student and Head of the Department offering the course
- f. **Personality and Character Development:** All students shall enroll, on admission, in any one of the personality and character development activities (NCC / NSS / YRC/Sports & Games) and undergo training for 40 hours during the first year.

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

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

**Youth Red Cross (YRC)** society activities will include peace time activities like health & hygiene, international friendship, awareness camps etc.

**Sports & Games** activities will include preparation for inter-collegiate sports events. While the training activities will normally be during weekends, the camps will normally be during vacation period.

The students getting admitted into the programme should involve himself / herself at least in any one of the personality and character development activity mentioned.

#### **xi) Medium of Instruction**

The medium of instruction, examination, project report etc. shall be English.

### **5. COURSE ENROLLMENT AND REGISTRATION**

- a) Each student, on admission shall be assigned to a Tutor who shall advice and counsel the student about the details of the academic programme and the choice of courses considering the student's academic background and career objectives.
- b) Every student shall enroll for all the courses (including additional courses and excluding dropping courses) at the end of current Semester for the next Semester of study. Students who

rejoined the Programme after availing permitted Break of Study or Readmitted by DOTE/University need not submit new Enrollment Form, but they have to submit the course registration form within the first 10 working days after the publication of results of the previous semester examinations. The student shall enroll for the courses with the guidance of the Tutor.

c) From third semester onwards, (fourth semester in the case of lateral entry students) a student has the option to drop a maximum of 20 % of the credits (except Professional Core Courses) in a semester and a student has to study courses which shall be open electives/ online courses / one credit courses.

d) In case of a student dropping a course of study (other than professional core courses) in one semester, he/she shall register for that course in the next given opportunity and earn necessary attendance in that course exclusively to become eligible to appear for the semester examination in that course.

e) The courses to be offered in a semester for candidates, who need to reappear or having attendance shortage etc., will be decided by HoD.

f) After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Continuous Assessment marks and appear for the end semester examinations.

g) B.E. / B. Tech. (Hons) and B.E. / B. Tech. minor with specialization in another discipline.

**(i) B.E / B.Tech. (Hons.)**

- a. The students should have taken additional courses from a specified group of Professional Electives (vertical) or from any of the verticals of the same programme and earned a minimum of 18 credits.
- b. Should have passed all the courses prescribed in the curriculum and additional courses in the first attempt.
- c. Should have earned a minimum of 7.50 CGPA taking into account of all the courses prescribed in the curriculum and additional courses.

**(ii) B.E./B.Tech. Minor with specialization in another discipline**

The student should have earned additionally a minimum of 18 credits in any one of the verticals offered from Engineering Disciplines / Science and Humanities / Management

- a. For these 18 credits students can optionally enroll and study a maximum of 6 credits in online mode from SWAYAM- NPTEL platform (in addition to the three online courses permitted for courses of curriculum), as approved by the Office of the Controller of Examinations.
- b. B.E / B.Tech. (Hons.) and B.E./B.Tech. minor with specialization in another discipline will be optional for students and the students shall be permitted to select any one of them only.
- c. For the categories (g) (i), the students, including Lateral Entry, shall be permitted to register for

the courses from Semester V onwards provided the students have earned a minimum CGPA of 7.50 until Semester III and have cleared all the courses in the first attempt.

For the category (g) (ii), the students, including Lateral Entry, will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above.

- d. B.E/B.Tech. (Hons.) or B.E./ B.Tech. Minor shall be offered by the Department irrespective of the number of students enrolled.
- e. If a student decides not to opt for Honours, after completing certain number of additional courses, such additional courses studied shall be considered instead of the Professional Elective courses which are part of the curriculum.
- f. If the student has studied more number of such courses than the number of Professional Elective courses required as per the curriculum, the courses with higher grades shall be considered for the calculation of CGPA. Remaining courses shall be printed in the grade sheet however, they will not be considered for calculation of CGPA and the same shall be indicated in a foot note appropriately.
- g. If the student has failed in the additional courses or faced shortage of attendance, they will not be printed in the grade sheet and will not be considered for CGPA calculation and classification of degree.
- h. If a student decides not to opt for Minor, after completing certain number of courses, the additional courses studied shall be considered instead of Open Elective courses which are part of the curriculum.
- i. If the student has studied more number of such courses than the number of open electives required as per the curriculum, the courses with higher grades shall be considered for calculation of CGPA. Remaining courses shall be printed in the grade sheet, however, they will not be considered for calculation of CGPA and the same shall be indicated in a foot note appropriately.
- j. If the student has failed in the additional courses or faced shortage of attendance, they will not be printed in the grade sheet and will not be considered for CGPA calculation and classification of degree.
- k. The student has to enroll for these additional courses separately and pay a tuition fee for studying these six additional courses and pay additional exam fee.

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

Table 5.1 Credit Assignment

Contact Period per week	Credits
1 Lecture Period	1
1 Tutorial Period	1
2 Practical Periods (Laboratory / Project Work/ etc.)	1

The Contact Periods per week for Practical shall be in multiples of 2.

The minimum prescribed credits required for the award of the degree is specified below:

Table 5.2 Minimum Credit Requirement

Programme	Prescribed Credit Requirement
B.E. Aeronautical Engineering	169
B.E. Automobile Engineering	165
B.E. Computer Science and Engineering	168
B.E. Electronics and Communication Engineering	167
B.E. Mechanical Engineering	165
B.Tech Information Technology	164
B.Tech Pharmaceutical Technology	166
B.Tech Artificial Intelligence and Data Sciences	168

## 6 REQUIREMENTS OF ATTENDANCE AND PROCESS

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

Ideally every student is expected to attend all classes of all the courses and secure 100% attendance. However, in order to give provision for certain unavoidable reasons such as Medical / participation in sports, the student is expected to attend at least 75% of the classes.

Therefore, he/she shall secure not less than 75% (after rounding off to the nearest integer) of overall attendance as calculated.

6.2 However, a candidate who secures overall attendance between 65% and 74% in the current semester due to medical reasons (prolonged hospitalization / accident / specific illness) / Participation in Sports events may be permitted to appear for the current semester examinations subject to the condition that the candidate shall submit the medical certificate / sports participation certificate attested by the Head of the Institution. The same shall be forwarded to the Controller of Examinations for record purposes.

6.3 Candidates who **secure less than 65% overall attendance and candidates who do not satisfy the clause 6.1 and 6.2** shall not be permitted to write the End Semester Examination and not

permitted to move to the next semester. They are required to repeat the incomplete semester in the next academic year, as per the norms prescribed.

## **7 CLASS ADVISOR**

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

- To act as the channel of communication between the HoD and the students of the respective class.
- To collect and maintain various statistical details of students.
- To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- To monitor the academic performance of the students including attendance and to inform the class committee.
- To attend to the students' welfare activities like awards, medals, scholarships and industrial visits.

## **8 CLASS COMMITTEE**

8.1 Every class shall have a class committee consisting of teachers of the class concerned, student representatives and a chairperson who is not teaching the class. It is like the 'Quality Circle' (more commonly used in industries) with the overall goal of improving the teaching-learning process. The functions of the class committee include

- Solving problems experienced by students in the class room and in the laboratories.
- Clarifying the regulations of the degree programme and the details of rules therein particularly (clause 2 and 6) which should be displayed on college Notice-Board.
- Informing the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- Informing the student representatives the details of Regulations regarding weightage used for each assessment. In the case of practical courses (laboratory / drawing / project work / seminar etc.) the breakup of marks for each experiment / exercise / module of work, should be clearly discussed in the class committee meeting and informed to the students.

- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any.
  - Identifying the weak students, if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students.
- 8.2 The class committee for a class under a particular branch is normally constituted by the Head of the Department. However, if the students of different branches are mixed in a class (like the first semester which is generally common to all branches), the class committee is to be constituted by the Head of the Institution.
- 8.3 The class committee shall be constituted within the first week of each semester.
- 8.4 At least 4 student representatives (usually 2 boys and 2 girls) shall be included in the class committee.
- 8.5 The Chairperson of the class committee may invite the Class adviser(s) and the Head of the Department to the class committee meeting.
- 8.6 The Head of the Institution may participate in any class committee of the institution.
- 8.7 The chairperson is required to prepare the minutes of every meeting, submit the same to Head of the Institution within two days of the meeting and arrange to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the Management by the Head of the Institution.
- 8.8 The first meeting of the class committee shall be held within one week from the date of commencement of the semester, in order to inform the students about the nature and weightage of assessments within the framework of the Regulations. Two or three subsequent meetings may be held in a semester at suitable intervals. The Class Committee Chairman shall put on the Notice Board the cumulative attendance particulars of each student at the end of every such meeting to enable the students to know their attendance details to satisfy the clause 6 of this Regulation. During these meetings the student members representing the entire class, shall meaningfully interact and express the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.

## **9. COURSE COMMITTEE FOR COMMON COURSES**

Each common theory course offered to more than one discipline or group shall have a “Course

Committee” comprising all the teachers teaching the common course with one of them nominated as Course Coordinator. The nomination of the Course Coordinator shall be made by the Head of the Department / Head of the Institution depending upon whether all the teachers teaching the common course belong to a single department or to several departments. The ‘Course committee’ shall meet in order to arrive at a common scheme of evaluation for the test and shall ensure a uniform evaluation of the tests. Wherever feasible, the course committee may also prepare a common question paper for the internal assessment test(s).

## **10. SYSTEM OF EXAMINATION**

10.1 Performance in each course of study shall be evaluated based on (i) continuous internal assessment throughout the semester and (ii) End Semester examination at the end of the semester.

10.2 Each course, both theory and practical (including project work & viva voce Examinations) shall be evaluated for a maximum of 100 marks.

For all theory the continuous internal assessment will carry **40 marks** while the End semester examinations will carry **60 marks**.

For all practical courses including project work, the continuous internal assessment will carry **60 marks** while the End - Semester examination will carry **40 marks**.

For Theory Integrated Practical courses, the continuous internal assessment will carry **50 marks** and End semester examinations will carry **50 marks**.

10.3 Industrial training and seminar shall carry 100 marks and shall be evaluated through internal assessment only.

10.4 The End Semester examination (theory and practical) of 3 hours duration shall ordinarily be conducted between October and December during the odd semesters and between April and June during the even semesters.

10.5 The End Semester examination for project work shall consist of evaluation of the final report submitted by the student or students of the project group (of not exceeding 4 students) by an external examiner and an internal examiner, followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner, the supervisor of the project group and an internal examiner.

10.6 For the End Semester examination in both theory and practical courses including project work the internal and external examiners shall be appointed by the Controller of Examinations.

## 11. PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT

For all theory and practical courses (including project work) the continuous assessment shall be for a maximum of 40 and 60 marks. The above continuous assessment shall be awarded as per the procedure given below:

### 11.1 THEORY COURSES

Two assessments each carrying 100 marks shall be conducted during the semester by the Department concerned. The total marks obtained in all assessments put together out of 200, shall be proportionately reduced for 40 marks and rounded to the nearest integer.

Table 11.1 Procedure for Internal Assessment (Theory)

Description	Marks
<b>Continuous Internal Assessment I</b>	
Written Test	60
Individual Assignment /Case Study /Seminar / Mini Project	40
<b>Continuous Internal Assessment II</b>	
Written Test	60
Individual Assignment /Case Study /Seminar / Mini Project	40
<b>Total</b>	<b>200</b>

### 11.2 LABORATORY COURSES

The maximum marks for Internal Assessment shall be 100 marks in case of practical courses. Every practical exercise / experiment shall be evaluated based on conduct of experiment / exercise and records to be maintained. There shall be at least one test. The criteria for arriving at the Internal Assessment marks of 100 are as follows: 75 marks shall be awarded for successful completion of all the prescribed experiments done in the Laboratory and 25 marks for the test. The total mark shall be converted into a maximum of 60 marks and rounded to the nearest integer.

Table 11.2 Procedure for Internal Assessment (Practical)

<b>Internal Assessment (100 Marks)</b>	
Evaluation of Laboratory Observation, Record	Test
75	25

### 11.3 Theory Courses with Laboratory/Project Component

If there is a theory course with laboratory component, there shall be two assessments: the first assessment (maximum mark is 100) will be similar to assessment of theory course and the second assessment (maximum mark is 100) will be similar to assessment of

laboratory course / Project course respectively. The weighted average of these two assessments shall be converted into 50 marks and rounded to the nearest integer.

## 11.4 PROJECT WORK

The Project Work for B.E. / B.Tech. Programmes in the 8<sup>th</sup> semester will be evaluated by continuous evaluation and end semester viva-voce examination. The objective of Project Work & Dissertation is to enable the student to extend further investigative a study on the project. Three reviews shall be conducted with subject expert and the student(s) shall make a presentation on the progress made by him / her / them during the reviews. Student(s) shall submit a project technical report comprising of title, problem statement, importance of work, methodology, experimental work and outcome of the work carried out during the 3<sup>rd</sup> review. The work carried out may be either fully theoretical/practical or involving both theoretical and practical work, under the guidance of a supervisor from the department or jointly with a supervisor drawn from other department / academic institution / R& D laboratory / Industry. This is expected to provide a good training for the students in R& D work and technical leadership.

The project reviews (R1+R2+R3) shall carry a maximum of 100 marks. The project report shall be submitted as per the approved guidelines given by the college, the viva-voce examination shall carry 100 marks. Marks are awarded to each student of the project group based on the individual performance in the viva-voce examination.

Table 11.3 Procedure for Internal Assessment & End Semester Assessment (Project)

Review I	Review II	Review III	End Semester Examinations			
			Project Report		Viva-Voce Examination	
20	40	40	Internal	External	Internal	External
			20	20	20	40

\*The weighted average for the internal assessment shall be converted into 60 % and end semester assessment into 40%.

11.4.1 The last date for submission of the project report is on the last working day of the semester. If a student fails to submit the project report on or before the specified deadline, it will be considered as fail in the Project Work and the student shall re-register for the same in the subsequent semester.

## 12. EMPLOYABILITY ENHANCEMENT COURSES

i) **The Seminar / Case Study** are to be considered as purely INTERNAL (with 100% internal marks only). Every student is expected to present a minimum of 2 seminars per semester before the evaluation committee and for each seminar, marks can be equally apportioned. The three member committee appointed by Head of the Department will evaluate the seminar and at the end of the semester the marks can be consolidated and taken as the final mark. The evaluation shall be based on the seminar paper (40%), presentation (40%) and response to the questions asked during presentation (20%).

ii) The Industrial / Practical Training, Summer Project, Internship, shall carry 100 marks and shall be evaluated through internal assessment only. At the end of Industrial / Practical training / internship / Summer Project, the candidate shall submit a certificate from the organization where he / she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Department. The certificates (issued by the organization) submitted by the students shall be attached to the mark list sent by the Head of the Department to the Controller of Examinations.

**iii) ASSESSMENT FOR VALUE ADDED COURSE**

The value added course shall carry 100 marks and shall be evaluated through continuous assessments only. Two Assessments shall be conducted during the semester by the Department concerned. The total marks obtained in the tests shall be reduced to 100 marks and rounded to the nearest integer. A committee consisting of the Head of the Department, staff handling the course and a senior faculty member nominated by the Head of the Institution shall do the evaluation process. The list of students along with the marks and the grades earned shall be forwarded to the Controller of Examinations for appropriate action at least one month before the commencement of End Semester Examinations. The grades earned by the students for Value Added Courses will be recorded in the Grade Sheet, however the same shall not be considered for the computation of CGPA.

**13. REQUIREMENT FOR APPEARING FOR END SEMSTER EXAMINATIONS**

A candidate shall normally be permitted to appear for the End Semester Examinations for all the courses registered in the current semester (vide clause 5) if he/she has satisfied the semester completion requirements (subject to Clause 6).

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

## **14. PASSING REQUIREMENTS**

**14.1** A student who secures not less than 50% of total marks prescribed for the course [Internal Assessment + End Semester Examinations] with a minimum of 45% of the marks prescribed for the End Semester Examination for theory courses and theory courses with laboratory / project component, practical course and project work, shall be declared to have passed the course and acquired the relevant number of credits.

**14.2** If a student fails to secure a pass in a theory course / laboratory course (except electives), the student shall register and appear only for the end semester examination in the subsequent semester. In such case, the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the student secures a pass. However, from the third attempt onwards if a student fails to obtain pass marks (IA + End Semester Examination), then the student shall be declared to have passed the examination if he/she secures a minimum of 50% marks prescribed for the End semester examinations alone.

**14.3** If the course, in which the student has failed, is a Professional Elective or an Open Elective course, the student may be permitted to complete the same course. In such case, the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secures a pass.

**14.4** If a student has submitted the project report but absent in the end semester examination of project work, the student is deemed to be failed. In this case and also if a student attends and fails in the End semester examination of Project work of B.E. / B.Tech, he/she shall attend end semester examination again within 60 days from the date of declaration of the results. The subsequent viva-voce examination will be considered as reappearance with payment of exam fee. In case, the student fails in the subsequent viva-voce examination also, the student shall redo the course again, when offered next.

**14.5** The passing requirement for the courses which are assessed only through purely internal assessments (EEC courses except Project Work and laboratory), is 50% of the internal assessment (Continuous Assessment) marks only.

**14.6** A student can apply for revaluation of the student's semester examination answer paper in a theory course, as per the guidelines of the COE on payment of a prescribed fee along with prescribed application to the COE through the Head of the Department. The COE will arrange for the revaluation and the results will be intimated to the student concerned through

the Head of the Department. Revaluation is not permitted for laboratory course and EEC courses.

## 15. AWARD OF LETTER GRADES

**15.1** The award of letter grades will be decided based on relative grading principle. The relative grading is applicable to ONLY those students who have passed the examination as per the passing requirements enumerated above. For those students who have not passed the examination, Reappearance (RA) shall be awarded as shown in the below Table. For those students who have passed the course, the relative grading shall be done. The marks of those students who have passed only shall be inputted in the software developed for relative grading. The evolved relative grading method normalizes the results data using the BOX-COX transformation method and computes the grade range for each course separately and awards the grade to each student. For a given course, if the students' strength is greater than 30, the relative grading method shall be adopted. However, if the students' strength is less than 30 then the fixed grading shall be followed with the grade range as specified below.

Table 15.1 Grade Assignment when student strength in below 30

<b>O</b>	<b>A+</b>	<b>A</b>	<b>B+</b>	<b>B</b>	<b>C</b>	<b>U</b>
<b>91 -100</b>	<b>81 – 90</b>	<b>71 – 80</b>	<b>61 – 70</b>	<b>56 – 60</b>	<b>50 – 55</b>	<b>&lt;50</b>

The performance of a student shall be reported using letter grades, each carrying certain points as detailed in table 15.2

Table 15.2 Grade Assignment after relative grading

<b>Letter Grade</b>	<b>Grade Points</b>
O (Outstanding)	10
A + (Excellent)	9
A (Very Good)	8
B + (Good)	7
B (Average)	6
C (Satisfactory)	5
U (Re-appearance)	0
W (Withdrawal)	0

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

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

If the grade U is given to Theory Courses/ Laboratory Courses it is not required to satisfy the attendance requirements, but has to appear for the end semester examination and fulfill the passing requirements to earn a pass in the respective courses.

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

- 15.1.1 In all the courses, if the number of students who have passed the course is less than or equal to 30 then absolute grading shall be followed with the grade range as specified in the Table. For the Project Work / Internship and Laboratory Courses, absolute grading procedure shall be followed as given in the Table below irrespective of the number of students who have passed the course.

**Table – Grade range for absolute grading**

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

- 15.1.2 If a student study more number of professional and open electives than required as per the student's Programme curriculum, the calculation of final CGPA shall be as per 4.1.6 and 4.1.7.

- 15.1.3 In the consolidated grade sheet the CGPA earned shall be converted into percentage of marks as follows:

$$\text{Percentage of Marks} = \text{CGPA} \times 10.$$

**15.2** For the Co-curricular activities such as National Cadet Corps (NCC)/ National Service Scheme (NSS) / NSO / YRC, a satisfactory / not satisfactory grading will appear in the mark sheet. Every student shall put in a minimum of 75% attendance in the training and attend the camp compulsorily. The training and camp shall be completed during the first year of the programme. However, for valid reasons, the Head of the Institution may permit a student to complete this requirement in the second year. A satisfactory grade in the above co-curricular activities is compulsory for the award of degree.

**15.3** The grades O, A+, A, B+, B obtained for the one credit course shall figure in the Mark sheet under the title 'Value Added Courses'. The Courses for which the grades are RA, SA will not figure in the mark sheet.

## **Grade sheet**

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

- The college in which the candidate has studied
- The list of courses enrolled during the semester and the grade scored.
- The Grade Point Average (GPA) for the semester and
- The Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards.
- List of courses studied for Hons., minor and any other additional courses in which the student has passed with the grades under the Hons., or Minor courses.
- The Grade Point Average (GPA) for the semester considering only the courses of curriculum (not the additional courses) and
- The Cumulative Grade Point Average (CGPA) of all courses registered from first semester onwards considering only the courses of curriculum (not the additional courses). However, for the students who have successfully completed the requirements of B.E. / B. Tech. (Hons) and B.E. / B.Tech. Minor vide Clause 4 (ix), grades scored in the six additional courses shall be taken into account for the computation of CGPA.
- During each semester, the list of curricular courses (not the additional courses) registered and the grades scored in each course are used to compute the Grade Point Average (GPA). GPA is the ratio of the sum of the products of the number of credits of curricular courses (not the additional courses) registered and the grade points corresponding to the grades scored in those courses, taken for all the courses, to the sum of the number of credits of all the courses in the semester. U grades will be excluded for calculating GPA and CGPA.

$$\text{GPA / CGPA} = \frac{\sum_{i=1}^n C_i GP_i}{\sum_{i=1}^n C_i}$$

where  $C_i$  is the number of Credits assigned to the course

$GP_i$  is the point corresponding to the grade obtained for each course

$n$  is number of all courses successfully cleared during the particular semester in the case of GPA and during all the semesters in the case of CGPA

- If a student studies more number of professional and open electives than required as per the student's programme curriculum, the calculation of final CGPA shall be as per Clause 5 (e) and (f)
- If a student successfully completes all the requirements of the programme and also meets the requirements of B.E. / B. Tech. (Hons) or B.E. / B. Tech. Minor but desires not to opt for the additional qualification, then he/she has to submit a declaration with regard to the same 30 days before the completion of semester VIII.
- In the consolidated grade sheet the CGPA earned shall be converted into percentage of marks as follows: Percentage of Marks = CGPA X 10.

## **16. CLASSIFICATION OF DEGREE**

### **i. FIRST CLASS WITH DISTINCTION:**

- A student who successfully gained the required number of credit as specified in the curriculum of corresponding programme of study and satisfies the following conditions shall be declared to have passed the examination in First class with Distinction.
- Should have passed the end semester examination in all the courses of all the eight semesters in his/her First appearance within 5 years and 4 years in case of lateral entry, which includes authorized break of study of one year. Withdrawal from examination will not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50
- Should not have been prevented from writing end semester examination due to lack of attendance in any of the courses.

### **ii. FIRST CLASS:**

A student who successfully gained the required number of credit as specified in the curriculum of corresponding programme of study and satisfies the following condition shall be declared to have passed the examination in First Class.

- Should have passed the end semester examination in all the courses of all eight semesters within 5 years and 4 years in case of lateral entry, which includes one year of authorized break of study (if availed) or prevention from writing the end semester examination due to lack of attendance (if applicable)
- Should have secured a CGPA of not less than 6.50

### **iii. SECOND CLASS:**

- Students who pursue B.E./B.Tech. in Regular mode or lateral entry mode or B.E./B.Tech. minor in specialization of another discipline and who are not covered in clauses 16(i) and 16(ii) and who qualify for the award of the degree (vide Clause

16.1) shall be declared to have passed the examination in **Second Class**.

- A student who is absent in the End Semester Examination in a course / project work after having registered for the same shall be considered to have appeared in that examination (except approved withdrawal from end semester examinations as per clause 15) for the purpose of classification.

#### **RANK :**

A student shall be eligible for award of ranking only if he/she has passed the examination in first class with distinction or first class in having passed all the courses in first attempt. Those who have availed the provision of break of study / withdrawal will not be eligible for rank.

#### **Photocopy / Revaluation**

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

### **17. WITHDRAWAL FROM EXAMINATION**

- i. A student may, for valid reasons, be granted permission to withdraw from appearing for the examination in any course or courses of only one semester if he/she does not have any history of arrears at the time of request for withdrawal. Prior permission for withdrawal from semester examinations is to be obtained from Principal. Also, only one application for withdrawal is permitted for that semester examination in which withdrawal is sought. Withdrawal may be granted only once during one semester examination throughout the period of study what so ever the reasons may be.

- ii. Withdrawal application shall be valid only if the student is otherwise eligible to write the examination and if it is made prior to the commencement of the examination in that course or courses and also recommended by the Head of the Department.

## **18. AUTHORIZED BREAK OF STUDY**

**18.1** A student may be permitted to go on a break of study for a maximum period of one year as a single spell.

**18.2** Break of study shall be granted only for valid reasons for a maximum of one year during the entire period of study of the degree programme. However, in extraordinary situations, the candidate may apply for additional break of study not exceeding another one year by paying the prescribed fee for the break of study.

**18.3** If a candidate intends to temporarily discontinue the programme in the middle of the semester for valid reasons, and to rejoin the programme in a subsequent year, permission may be granted based on the merits of the case provided that he / she applies to the Principal through the Head of the Department in advance, but not later than the last working day of the semester in question stating the reasons thereof and the probable date of rejoining the programme.

**18.4** The candidates permitted to rejoin the programme after a break of study / prevention due to lack of attendance, shall be governed by the curriculum and regulations in force at the time of rejoining. The students rejoining in a new Regulation shall apply to the Principal in the prescribed format through the Head of the department before the commencement of the readmitted semester itself for prescribing additional courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in force and the old curriculum.

**18.5** The period of the authorized break of study would not be counted towards the duration specified for passing all the courses for the purpose of classification vide clause 10.2.

**18.6** The total period for the completion of the programme, when reckoned from, the 1 day of commencement of the 1 semester to which the candidate was admitted shall not exceed the maximum period specified in clause 2 (ii). Irrespective of the period of break of study in order that he / she may be eligible for the award of the degree.

## **19. DISCIPLINE**

Every student is required to observe discipline and decorous behaviour both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the College and the University. The Principal shall constitute a disciplinary committee consisting of

Heads of Departments, two faculty members of which one should be a class advisor of the student, to enquire into acts of indiscipline and report to the Principal. If a student indulges in malpractice in any of the end semester / Internal examination he / she shall be liable for punitive action as prescribed by the University and College from time to time.

## **20. MALPRACTICE**

If a student indulges in malpractice in the ESE he / she shall be liable for punishment as prescribed in the book of Examination Rules and Regulations.

## **21. REVISION OF REGULATION AND CURRICULUM**

The College may from time to time revise, amend or change the Regulations, scheme of examinations and syllabi if found necessary, through the approval of BoS and Academic Council of the College.

## **22. SPECIAL CASES**

In the event of any clarification in the interpretation of the above rules and regulations, they shall be referred to the Standing Committee. The Standing Committee will offer suitable interpretation/ clarifications/ amendments required for special case on such references and get them ratified in the next meeting of the academic council. The decision of the academic council is final.



## HINDUSTHAN INSTITUTE OF TECHNOLOGY

### REGULATIONS 2020 A

#### CHOICE BASED CREDIT SYSTEM Common to all B. E. / B. Tech. Full-Time Programmes

(For the students admitted during the Academic Year 2021-2022)

#### ANNEXURE I



#### 4.1 B.E. / B. Tech. (Hons), and B.E. / B. Tech. minor in other specialization.

##### (i) *B.E./B.Tech. Honours:*

- a. The student should have earned additionally a minimum of 18 credits from a vertical of the same programme.
- b. Should have passed all the courses in the first attempt.
- c. Should have earned a minimum CGPA of 7.50.

##### (ii) *B.E./B.Tech. (Minor in other specialization)*

- a. The student should have earned additionally a minimum of 18 credits from a vertical of the same programme.
- b. Should have passed all the courses in the first attempt.
- c. Should have earned a minimum CGPA of 7.50.

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

4.1.1 Students can earn maximum of 6 credits in online mode (SWAYAM platform), out of these 18 credits as approved by respective BoS and Academic council of the institute.

4.1.2 B.E./ B. Tech. (Hons) Specialization in the same discipline, B.E / B.Tech. Honors and B.E./B.Tech. Minor in other specialization degree will be optional for students.

4.1.3 For the categories (i) to (ii), the students will be permitted to register the courses from V Semester onwards provided the marks earned by the students until III semester should be of CGPA 7.50 and above and cleared all the courses in the first attempt.

4.1.4 For the category (iii), the students will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is 7.50 CGPA and above.

4.1.5 For the category 4.10 (i), the students, including Lateral Entry, will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above until Semester III and have cleared all the courses in the first attempt.

For the category (ii), the students, including Lateral Entry, will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above.

4.1.6. If a student decides not to opt for Honours, after completing certain number of additional courses, such additional courses studied shall be considered instead of the Professional Elective courses which are part of the curriculum.

If the student has studied more number of such courses than the number of Professional Elective courses required as per the curriculum, the courses with higher grades shall be considered for the calculation of CGPA. Remaining courses shall be printed in the grade sheet however, they will not be considered for calculation of CGPA and the same shall be indicated in a foot note appropriately.

If the student has failed in the additional courses or faced shortage of attendance, they will not be printed in the grade sheet and will not be considered for CGPA calculation and classification of degree.

4.1.7 If a student decides not to opt for Minor, after completing certain number of courses, the additional courses studied shall be considered instead of Open Elective courses which are part of the curriculum.

If the student has studied more number of such courses than the number of open electives required as per the curriculum, the courses with higher grades shall be considered for calculation of CGPA. Remaining courses shall be printed in the grade sheet, however, they will not be considered for calculation of CGPA and the same shall be indicated in a foot note appropriately.

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

16.1 A student shall be declared to be eligible for the award of the B.E. / B.Tech. Degree provided the student has

- i. Successfully gained the required number of total credits as specified in the curriculum corresponding to the student's programme within the stipulated time.
- ii. Successfully completed the course requirements, appeared for the End Semester examinations and passed all the subjects within the period as prescribed in clause 2 (ii).
- iii. Successfully passed any additional courses prescribed by the Academic Council and respective BoS whenever the student is readmitted under Regulations R-2022 from the earlier Regulations.
- iv. Successfully completed the NCC / NSS / NSO / YRC / Science Club / Literature Club / Fine Arts Club requirements.
- v. No disciplinary action pending against the student.
- vi. The award of Degree must have been approved by the Syndicate of the University.

## 16.2 Classification of Degree Awarded

### 16.2.1 First Class with Distinction

Degree	Duration of Programme	Duration permitted	Additional credits above the requirement of curriculum	CGPA	Pass in	Break of study	Prevention due to lack of attendance	Withdrawal from writing end semester examination
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(v)	(viii)	(ix)
B.E./B.Tech (Lateral / Regular)	3 / 4 Years (Lateral / Regular)	4 / 5 Years (Lateral / Regular)	Nil	8.50	First Attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. (Honours)	3 / 4 years (Lateral / Regular)	4 / 5 years (Lateral / Regular)	18 credits from more than one verticals of the same programme	8.50	First Attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E/B.Tech. Minor in other specialization	3 / 4 years (Lateral / Regular)	4 / 5 years (Lateral / Regular)	18 credits from any one vertical of the other programme	8.50	First Attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt

### 16.2.2 First Class

Table 16.2 First Class

Degree	Duration of Programme	Duration permitted	Additional credits above the requirement of curriculum	CGPA	Pass in	Break of study	Prevention due to lack of attendance	Withdrawal from writing end semester examination
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
B.E./B.Tech (Lateral / Regular)	3 / 4 Years (Lateral / Regular)	4 / 5 Years (Lateral / Regular)	Nil	6.50	-	One year authorized break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-
B.E./B.Tech. (Honours)	3 / 4 years (Lateral / Regular)	4 / 5 years (Lateral / Regular)	18 credits from more than one verticals of the same programme	7.50	First Attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E/B.Tech. Minor in other specialization	3 / 4 years (Lateral / Regular)	4 / 5 years (Lateral / Regular)	18 credits from any one vertical of the other programme	6.50	First Attempt	One year authorized break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-

### **16.2.3 SECOND CLASS:**

All other students (not covered in clauses 16.2.1 and 16.2.2) who qualify for the award of the degree (vide Clause 16.1) shall be declared to have passed the examination in **Second Class**.

- 16.2.4** Student earned additional 18 credits as per Clause 4.1 (i) and (ii) but does not satisfy the conditions mentioned in 16.2.1 or 16.2.2 shall not be awarded B.E./B.Tech. Honours. In such case if the student becomes eligible for First Class, while computing CGPA with the Professional Elective / Open Elective courses with higher grades the student shall be awarded B.E. / B.Tech. in First Class only.