VARDHAMAN
COLLEGE OF ENGINEERING

Academic Regulations

of

Bachelor of Technology (B.Tech.)

Under

Choice Based Credit System (CBCS)

B. Tech. - Regular Four-Year Degree Program

(For batches admitted from the Academic Year 2025 - 2026)

&

B. Tech. - Lateral Entry Scheme

(For batches admitted from the Academic Year 2026 - 2027)

August 2025

VARDHAMAN COLLEGE OF ENGINEERING
(Autonomous)
Affiliated to **JNTUH,** Approved by **AICTE,** Accredited by **NAAC** with **A++** Grade
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Academic Regulations of B.Tech. (Regular/Full Time) Programme Under Choice Based Credit System (CBCS) 2025–2026 (R25)

1.0 Preface

Vardhaman College of Engineering (VCE) offers a **four-year (eight-semester) full-time Bachelor of Technology (B.Tech.) degree programme** under the **Choice Based Credit System (CBCS)**. The regulations presented herein are applicable to students admitted from the academic year 2025-2026 onwards, until new regulations are officially notified. This set of regulations is referred to as **VCE B.Tech. R25**.

2.0 Eligibility for Admissions

2.1 Admissions to the undergraduate (UG) programme shall be made based on the merit rank obtained by qualified candidates in the entrance test conducted by the Telangana Government (EAPCET) or the University, or on the basis of any other merit list approved by the University, subject to reservations prescribed by the Government from time to time.

2.2 The medium of instruction for the entire undergraduate programme in Engineering and Technology shall be **ENGLISH** only.

3.0 B.Tech. Programme Structure

3.1 A student, after securing admission, shall complete the B.Tech. programme in a **minimum of four academic years** and a **maximum of eight academic years** from the commencement date of the first-year, first-semester. Failure to do so will result in forfeiture of the seat in the B.Tech. programme. Each student is required to secure a minimum of 160 credits out of 164 credits for the successful completion of the undergraduate programme and the award of the B.Tech. degree.

3.2 The definitions and descriptions specified by UGC/AICTE are appropriately adopted for various terms and abbreviations used in these academic regulations and norms.

3.3 Semester Scheme

The undergraduate programme spans four academic years, with two semesters in each academic year. Each semester shall include a minimum of 15 weeks of instruction, excluding continuous internal evaluation and semester-end examinations. For credit calculation, approximately 15 instruction hours for a theory course, 30 instruction hours for a practical course, and 45 hours of learning for a project work or field-based course or community related research work are considered per credit. Each semester shall have Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) under the Choice Based Credit System (CBCS). The curriculum and course structure recommended by AICTE are followed as a reference.

3.4 Credit Courses

Students are required to register for all courses offered in each semester. For each course listed in the course structure, the following pattern is defined: **L:T:P:SL:H:C**, where **L** represents lecture periods, **T** represents tutorial periods, **P** represents practical periods, **SL** represents self-learning hours, **H** represents total hours, and **C** represents credits. This pattern provides a comprehensive overview of the course workload and credit allocation.

- One credit is allocated for one hour per week in a semester for a lecture (L) or tutorial (T) session, and one hour per week of self-learning.
- For theory courses, one credit corresponds to 15 classroom instruction (lecture or tutorial) hours and

15 self-learning hours per semester.

- One credit is allocated for two hours per week in a semester for laboratory/practical (P) sessions.
- For practical courses, one credit corresponds to 30 laboratory instruction (LI) hours per semester.
- One credit is allocated for three hours per week in a semester for project/mini-project sessions.
- For experiential courses such as field work, internship, mini-project, capstone, or major project, one credit corresponds to 45 hours per semester.

For example, a theory course with three credit weightage requires three hours of classroom instruction per week, totaling approximately 45 hours of classroom instruction and 45 hours of self-learning over the entire semester.

3.5 Subject Course Classification

All subjects/courses offered for the undergraduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows.

S. No.	Broad Course Classification	Course Group/Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes Mathematics, Physics and Chemistry courses
		ES – Engineering Sciences	Includes Fundamental Engineering Courses
		HS – Humanities and Social Sciences	Includes courses related to Humanities, Social Sciences and Management
2	Core Courses (CoC)	PC – Professional Core	Includes core courses related to the parent branch of Engineering.
3	Elective Courses (EtC)	PE – Professional Electives	Includes elective courses related to the parent branch of Engineering.
		OE – Open Electives	Elective courses which include inter-disciplinary courses or courses in an area outside the parent branch of Engineering.
4	Project Core	Project Work	B.Tech. Project Work
5	Other Core Courses (OCC)	Industry Training/ Internship/ Industry Oriented Mini-Project/ Skill Development Courses	Industry Training/ Internship/ Industry Oriented Mini-Project/ Skill Development Courses
		Seminar	Seminar based on core contents related to parent branch of Engineering.
6	Skill Development Courses (SDC)	–	Courses designed to help individuals gain, improve, or refine specific skills
7	Value Added Courses (VAC)	–	Courses to build professional values, traditional knowledge and sensitization of societal issues

4.0 Mandatory Induction Programme

An induction program of one-week duration shall be conducted for undergraduate students entering the institution. Regular classes will commence only after the completion of the induction program. The program may include the following activities: physical activities, creative arts, imparting universal human values, literary activities, lectures by eminent personalities, visits to local areas, familiarization with the department

as well as the entire institute, and sessions to help students understand innovative practices at the college premises.

5.0 Course Registration

5.1 A faculty advisor or mentor shall be assigned to a group of approximately 20 students. The advisor will guide students regarding the undergraduate program, its program curriculum structure, and the selection of courses based on students' competence, progress, prerequisites, and interests.

5.2 The Academic Office of the College invites registration forms from students before beginning of the semester through online registration, ensuring date and time stamping. Registration for any current semester shall be completed at least two weeks before the commencement of Semester End Examinations (SEEs) of the preceding semester.

5.3 A student shall register for all courses offered in a semester as specified in the program curriculum structure.

5.4 Course options exercised through online registration are final and cannot be changed; alternative choices will not be considered. However, if a course listed for registration by the Head of the Department cannot be offered due to unforeseen or unavoidable circumstances, the student shall be allowed to select an alternative course, either a new course (subject to availability) or another existing course. Such alternative arrangements will be made by the Head of the Department, with due notification and a time-framed schedule, within a week but before the commencement of classwork for the semester.

5.5 The Head of the Department or Course Lead shall review vacant slots in the timetable of each section once every week or fortnight. These vacant slots may be allocated to course facilitators who were unable to conduct classes, in proportion to the number of weeks completed since the commencement of the semester.

5.6 Two faculty members may be assigned to tutorial sessions for courses with allotted tutorial hours in order to facilitate better interaction and practice and enhance the success rate.

5.7 Professional Electives:

Students are required to choose six Professional Electives (PE-I to PE-VI) from the six prescribed baskets of Professional Electives. Students have the flexibility to select these electives either from the list of Professional Electives offered by the Institute or to register for equivalent Massive Open Online Courses (MOOCs), as notified by the College from time to time.

5.8 Open Electives:

Students are required to choose three Open Electives (OE-I, OE-II, and OE-III) from among the Open Elective courses offered by departments other than their parent department. However, a student may opt for an Open Elective course offered by their parent department, provided that the student has not studied that course previously. Further, the Open Elective courses chosen should not duplicate any courses scheduled in the forthcoming semesters of the program. Students have the flexibility to select Open Electives either from the list of courses offered by the Institute or to register for equivalent Massive Open Online Courses (MOOCs), as notified by the College from time to time.

5.9 Provision for Early Registration of MOOCs:

For all professional and open electives in a semester, students are permitted to register for an equivalent MOOCs, as notified by the College from time to time, one semester in advance. For example, a Professional Elective offered in the III Year II Semester may be registered under a MOOCs platform during the III Year I Semester. The credits earned by completing the MOOCs one semester in advance may be submitted in the subsequent semester for assessment. Students who have registered in advance for an equivalent MOOCs and fail to secure a passing grade in the MOOCs may register for the corresponding regular course offered

in the subsequent semester of their program curriculum structure.

5.10 Conversion of Marks Secured in MOOCs into Grades:
Marks secured in the internal and external evaluations of a MOOCs shall be scaled to 40 and 60 marks, respectively. The sum of these two components shall be considered as the total marks out of 100. The corresponding grade shall then be determined in accordance with the marks-to-grade conversion rules specified in Clause 10.3.

5.11 MOOCs are permitted for all professional and open elective courses in the regular degree program, as well as for all courses under the Minor and Honors degree programs, subject to the availability of equivalent courses on the SWAYAM–NPTEL platform during the January–June or July–December sessions.

5.12 Additional Learning Resources:
Students are encouraged to enhance their course-related knowledge and skills by auditing MOOCs offered alongside their curriculum. These courses promote skill and knowledge enhancement by enabling students to learn advanced topics, gain in-depth understanding, and develop self-learning habits. They also contribute to career advancement by offering valuable certificates recognized by industry and universities, thereby strengthening résumés for employment or higher studies.

6.0 Rules to Offer Elective Courses

6.1 An elective course may be offered to students only if at least 25% of the class strength opts for it.

6.2 The same elective course for different sections may be offered by different faculty members. Student selection of an elective course will be based on a first-come, first-served basis and/or CGPA criterion.

6.3 If the number of student registrations exceeds the capacity of a single section, the department may offer the course in multiple sections, subject to the availability of resources.

7.0 Attendance Requirements

7.1 A student shall be eligible to appear for the semester-end examinations if they acquire a minimum of 75% aggregate attendance across all courses for that semester.

7.2 Shortage of attendance up to 10% (i.e., securing 65% or above but below 75%) in a semester may be condoned by the College Academic Committee on genuine and valid grounds, based on the student's representation with supporting evidence.

7.3 A stipulated fee shall be payable for the condonation of shortage of attendance, as notified by the competent authorities through an official circular or other approved communication.

7.4 Two hours of attendance for each theory course shall be credited if the student appears for the mid-term examination of that course.

7.5 Shortage of attendance below 65% in aggregate shall not be condoned under any circumstances.

7.6 Students whose shortage of attendance is not condoned in any semester shall not be eligible to appear for the semester-end examinations for that semester. Such students shall be detained and shall not be promoted to the next semester. Their registration for the semester shall stand cancelled, including internal assessment marks. They may seek readmission to the same semester in the next academic year.

7.7 A student fulfilling the attendance requirement in the current semester shall not be eligible for readmission into the same semester.

8.0 Criteria for Earning of Credits in a Course

8.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each course if they secure not less than 35% (21 marks out of 60) in the Semester End Examinations (SEE),

and a minimum of 40% (40 marks out of 100) in the sum total of the Continuous Internal Evaluation (CIE) and SEE taken together. In terms of letter grades, this corresponds to securing a 'C' grade or above in that course.

8.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Field-Based or Community Related Research Project, Industry-Oriented Mini Project, or Internship if they secure not less than 40% marks (i.e., 40 out of 100 allotted marks) in each component. The student shall be considered to have failed if they:

(i) Do not submit a report on the Field-Based or Community Related Research Project, Industry-Oriented Mini Project, or Internship, or

(ii) Do not make a presentation before the evaluation committee as per schedule, or

(iii) Secure less than 40% marks in the evaluation of the Field-Based or Community Related Research Project, Industry-Oriented Mini Project, or Internship.

8.3 A student eligible to appear in the semester-end examination for any course, but who is absent or fails to secure a 'C' grade or above, may re-appear for that course in the supplementary examination as and when it is conducted. In such cases, the internal marks assessed in CIE for that course will be carried over and added to the marks obtained in the SEE supplementary examination. If the student secures sufficient marks for passing, a 'C' grade or above shall be awarded, as specified in Clause 10.3.

9.0 Distribution of Marks and Evaluation

9.1 The performance of a student in every course, including Value-Added Courses, Skill Development Courses, Laboratory/Practical sessions, and Project Work, shall be evaluated out of 100 marks. Of these, 40 marks are allotted for Continuous Internal Evaluation (CIE) and 60 marks for the Semester End Examination (SEE), irrespective of the credits allocated to the course.

9.2 Continuous Internal Evaluation (CIE):

Theory Courses:

For theory courses, during a semester, there shall be two continuous assessments. Each continuous assessment consists of two parts: (i) **Part – A** for 10 marks and (ii) **Part – B** for 20 marks, totaling 30 marks. The total duration of the continuous assessment is two hours.

Continuous Assessment for 30 Marks:

(a) Part – A: Short answer-type questions for 10 marks.

(b) Part – B: Descriptive type questions for 20 marks.

The short answer–type questions shall be compulsory. The descriptive type section shall consist of six (6) questions, out of which the student shall be required to answer any four (4) questions, each carrying 5 marks. The average of the two Continuous Assessments shall be considered as the final Continuous Assessment marks (for 30 marks).

The first Continuous Assessment shall cover 50% of the syllabus, and the second Continuous Assessment shall cover the remaining 50% of the syllabus. Questions shall be set to ensure uniform coverage of all prescribed topics.

The remaining 10 marks of the Continuous Internal Evaluation (CIE) shall be distributed as follows:

(i) Five marks for assignments. Students shall submit two assignments, and the average of the two shall be considered. The first assignment shall be submitted before the first Continuous Assessment, and the second assignment shall be submitted before the second Continuous Assessment.

(ii) Five marks for Viva-Voce, Seminar or Poster Presentation, or Case Study/Complex Engineering

Problem related to a topic in the concerned subject. This assessment shall be completed before the second Continuous Assessment.

Engineering Drawing and Computer-Aided Engineering Graphics Course:

For this course, 20 marks are allocated for day-to-day assessments conducted during drawing practice sessions, and 20 marks for the mid-term examination. In the mid-term examination, students shall attempt any four out of six questions. The first mid-term examination will be conducted using a conventional drawing board, while the second mid-term examination will be conducted using a CAD package.

9.3 Continuous Internal Improvement (CII):

A Continuous Internal Improvement (CII) test is available in each course for students who meet either of the following conditions:

1. Missed one or both Continuous Assessments (CATs) due to unavoidable circumstances, or
2. Appeared for both CATs but wish to improve their continuous internal evaluation marks.

Students who are absent from a CAT will be awarded zero marks for that assessment. The CII test will be conducted at the end of the semester and will cover all five modules/units of the course. Marks obtained in the CII test will be treated as equivalent to the marks of one CAT.

The final continuous internal evaluation marks for a student who utilizes the opportunity for continuous internal improvement will be calculated by considering the best two scores out of the three assessments (CAT 1, CAT 2, and CII), combined with the Alternative Assessment (AAT).

The CII test will be conducted by the Examination Section of the Institute and will be paper-based, similar in format to the Continuous Assessments.

9.4 Semester End Examination for Theory Courses

Theory Courses:

The Semester End Examinations (SEE) for theory courses will be conducted for 60 marks, consisting of two parts: (i) **Part − A** for 10 marks and (ii) **Part − B** for 50 marks, totaling 60 marks.

Part – A is compulsory and consists of five short answer-type questions covering all units of the syllabus; each question carries 2 marks.

Part – B consists of five questions carrying 10 marks each. Two questions shall be asked from each unit with an either-or choice, and the student should answer either of the two. The student shall answer one question from each of the five units.

Engineering Drawing and Computer-Aided Engineering Graphics Course:

The question paper consists of five questions carrying 12 marks each. Two questions shall be asked from each unit/module with an either-or choice, and the student should answer either of the two. The student shall answer one question from each of the five units. There shall be no section with short answer questions. The duration of the Semester End Examination for both theory and drawing courses is 3 hours.

9.5 Semester End Examination for Practical Courses

For practical courses, there shall be a Continuous Internal Evaluation (CIE) during the semester for 40 marks and a Semester End Examination (SEE) for 60 marks. The breakup of the Continuous Internal Evaluation for 40 marks is as follows:

1. 10 marks for a write-up on day-to-day experiments in the laboratory, including objectives, apparatus or equipment or circuit diagram or flow chart or algorithm, procedure, and expected outcomes.
2. 10 marks for viva-voce, tutorial, case study, seminar or poster presentation related to the course.
3. 10 marks for the internal practical examination conducted by the laboratory teacher concerned.
4. 10 marks for laboratory project, report preparation and presentation, which may consist of design,

software/hardware model presentation, app development, or prototype submission. This evaluation is conducted after completion of the laboratory course and before the semester-end practical examination.

The Semester End Examination for practical courses shall be conducted by an external examiner and the laboratory course facilitator.

In the Semester End Examination for practical courses, which is held for 3 hours, the evaluation rubric for 60 marks is as follows:

1. 10 marks for write-up
2. 15 marks for experiment/program
3. 15 marks for evaluation of results
4. 10 marks for presentation on another experiment/program in the same laboratory course
5. 10 marks for viva-voce on the concerned laboratory course

For any change of experiment, 5 marks will be deducted from the total of 60 marks. If a second change is requested, another 5 marks will be deducted. No third change will be permitted.

9.6 Semester End Examination for Community Related Project Work

The evaluation of community related project work (Community Centered Design Thinking, Product Design and Development, Technology Entrepreneurship, Community Driven Product Evaluation) is as follows: The Continuous Internal Evaluation shall comprise 40 marks, distributed as follows:

1. Day-to-Day Evaluation - 10 Marks *(Assessment based on regular participation, progress, and engagement in project activities)*
2. Problem Identification and Design Process - 10 Marks *(Evaluation of clarity in problem definition, relevance to community needs, and systematic application of the design process)*
3. Departmental Committee Review – 10 Marks *(Assessment by a departmental review committee focusing on technical soundness, feasibility, and progress of the project)*
4. Supervisor / Course Instructor Review – 10 Marks *(Evaluation based on continuous mentoring, innovation, execution, and overall project development)*

In the Semester End Examination, total 60 marks are divided and allocated as shown below:

1. Problem Identification / Objectives of the Project or Field Work – 10 Marks *(Assessment of problem relevance, objectives, and understanding of field or community context)*
2. Idea Generation / Design Process / Comparative Analysis – 15 Marks *(Evaluation of ideation, design methodology, alternative solutions, and comparative analysis)*
3. Idea / Prototype / Model / Product Presentation and Demonstration – 15 Marks *(Assessment of innovation, functionality, presentation quality, and demonstration of the developed solution)*
4. Project Report Submission – 10 Marks *(Evaluation of documentation quality, structure, technical content, and clarity of presentation)*
5. Viva-Voce by External Examiner – 10 Marks *(Assessment of conceptual understanding, technical knowledge, and ability to articulate project outcomes)*

9.6 Internship/Industrial Training:

There shall be an Internship/Industrial Training in collaboration with an industry related to the student's specialization. Students shall register for this internship immediately after the II Year II Semester Examinations and pursue it during the summer vacation. The internship should be carried out at an organization or industry.

The Internship/Industrial Training shall be submitted in report form and presented before the evaluation committee in III Year I Semester, prior to the Semester End Examination. It shall be evaluated for a total

of 100 marks.

The evaluation will be divided as follows:

1. External evaluation by an examiner: 60 marks.
2. Internal evaluation by the departmental project review committee (PRC): 40 marks. The committee shall consist of the Head of the Department, Internship Coordinator, and a Senior Faculty Member.

A student shall be deemed to have failed if:

1. The report on the internship is not submitted.
2. The student does not make a presentation before the External Examiner as per the schedule.
3. The student secures less than 40% marks in the sum total of the CIE and SEE taken together.

For conducting the viva-voce of the internship, the Principal/Controller of Examinations shall select an external examiner from the list of experts in the relevant branch submitted by the Head of the Department.

9.7 Mini Project:

The Mini Project shall be initiated during the III Year I Semester and continued in the III Year II Semester without affecting regular coursework. The Mini Project shall be submitted in report form and presented before the evaluation committee in III Year II Semester, prior to the Semester End Examination. It shall be evaluated for a total of 100 marks.

The evaluation will be divided as follows:

1. External evaluation by an examiner: 60 marks.
2. Internal evaluation by the departmental project review committee (PRC): 40 marks, subdivided as:
   (i) Departmental project review committee (PRC) consisting of the Head of the Department, Project Supervisor, and a Senior Faculty Member: 20 marks.
   (ii) Project Supervisor: 20 marks.

A student shall be deemed to have failed if:

1. The report on the Mini Project is not submitted.
2. The student does not make a presentation before the External Examiner as per the schedule.
3. The student secures less than 40% marks in the sum total of the CIE and SEE taken together.

For conducting the viva-voce of the Mini Project, the Principal/Controller of Examinations shall select an external examiner from the list of experts in the relevant branch submitted by the Head of the Department.

9.8 UG Project Work:

UG project work shall be carried out in two stages: **Project Work Phase – I** during IV Year I Semester and **Project Work Phase – II** during IV Year II Semester. The student is required to submit two project work reports, one at the end of IV Year I Semester and the other at the end of the IV Year II Semester. Project Work Phase – I shall be evaluated for 100 internal marks prior to the commencement of SEE theory examinations. Project Work Phase – II shall be evaluated for 100 marks, of which 40 marks will be awarded through CIE and 60 marks through SEE.

The department shall constitute a Project Review Committee (PRC) comprising the Head of the Department, the Project Supervisor, and one faculty member from each domain/specialization of the department. The PRC shall conduct periodic reviews to ensure continuous monitoring of project progress. The PRC shall evaluate Project Work Phase – I for 50 marks, while the Project Supervisor shall independently evaluate the student for the remaining 50 marks. A student shall be deemed to have failed in Project Work Phase – I if they fail to submit the Phase – I report, fail to make a presentation before the PRC as per the prescribed schedule, or secure less than 40% of the total marks in this course.

The PRC shall evaluate Project Work Phase – II for 20 marks, while the Project Supervisor shall independently evaluate the student for the remaining 20 marks as part of the Continuous Internal Evaluation (CIE). The Semester End Examination (SEE) shall be conducted by an External Examiner for 60 marks. A student shall be deemed to have failed in Project Work Phase – II if they fail to submit the Phase – II report, fail to make a presentation and/or viva voce before the PRC and the External Examiner as per the prescribed schedule, or secure less than 40% of sum total of the CIE and SEE taken together.

The topics chosen for Project Work shall be distinct from and not a continuation of the topics undertaken for the Mini Project and/or Internship.

For the conduct of the viva voce examination of the Project Work, the Principal/Controller of Examinations shall appoint an External Examiner from a panel of experts in the relevant branch submitted by the Head of the Department and approved by the Departmental Board of Studies.

A student who has failed, may re-appear once for the above evaluation, when it is scheduled again; if student fails in such 'one re-appearance' evaluation also, he/she has to appear for the same in the next subsequent year, as and when it is scheduled.

9.9 Skill Development Courses:

Four Skill Development Courses are included in the curriculum during **II B.Tech. I Semester, II B.Tech. II Semester, III B.Tech. I Semester, and III B.Tech. II Semester**. Each Skill Development Course carries one credit. The evaluation pattern for these courses will follow the same scheme as that of laboratory courses, including both internal and external assessments.

The objective of Skill Development Courses is to enhance both cognitive and psychomotor skills of the students.

9.10 Value-Added Courses:

The evaluation of Value-Added Courses shall follow a scheme similar to that of theory courses. However, the scheduling of mid-term examinations and Semester End Examinations (SEE) for these courses may not coincide with the main-stream examinations. A proctored mid-term examination of one hour (or 45 minutes) shall be conducted in the regular class by the same subject teacher. The examination should be scheduled so as not to disrupt other classes on that day. The schedule for the Semester End Examinations shall be notified by the College from time to time.

10.0 Grading Procedure

10.1 An absolute grading system is followed for awarding grades in each course.

10.2 Grades are awarded to indicate the performance of students in each Theory, Laboratory, Industry-Oriented Mini Project, Internship, Skill Development Course, and Project Work. The grade is based on the percentage of marks obtained, calculated as the sum of Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) marks, as specified in Clause 8.

10.3 To measure student performance, a 10-point grading system is followed. The mapping between the percentage of marks secured and the corresponding letter grade is as follows:

% of Marks Secured in a Course (Class Intervals)	Letter Grade (UGC Guidelines)	Meaning	Grade Points
90% and above ($\geq$ 90% and $\leq$ 100%)	O	Outstanding	10
Below 90% but not less than 80% ($\geq$ 80% and <90%)	A+	Excellent	9

% of Marks Secured in a Course (Class Intervals)	Letter Grade (UGC Guidelines)	Meaning	Grade Points
Below 80% but not less than 70% (≥70% and <80%)	A	Very Good	8
Below 70% but not less than 60% (≥ 60% and <70%)	B+	Good	7
Below 60% but not less than 50% (≥ 50% and <60%)	B	Average	6
Below 50% but not less than 40% (≥ 40% and <50%)	C	Pass	5
Below 40% (<40%)	F	Fail	0
Absent	Ab	Absent	0

10.4 A student shall be declared successful, or "passed," in a semester if he/she secures a grade of 'C' or above in every course (i.e., Grade Point ≥ 5).

10.5 A student who has obtained an 'F' grade in any course shall be deemed to have "failed" and is required to re-appear for a supplementary examination as and when conducted. In such cases, the internal marks obtained earlier will be retained.

10.6 A student who has not appeared for an examination in any course shall be allocated an 'Ab' (Absent) grade and is deemed to have "failed." Such a student will be required to re-appear for the supplementary or make-up examination when conducted. The internal marks obtained earlier will be retained.

10.7 Students earn a Grade Point (G) in each course based on the letter grade secured. Every student who passes a course will receive a Grade Point GP ≥ 5 ('C' grade or above).

10.8 The Credit Points (C) for a course are computed by multiplying the Grade Point (GP) with the credits assigned to that course.

Credit Points (CP) = Grade Point (GP) x Credits For a course

10.9 The Semester Grade Point Average (SGPA) is calculated only when all the courses offered in a semester are cleared by a student. It is calculated by dividing the sum of credit points ($\sum CG$) secured from all courses registered in a semester by the total number of credits registered during that semester. SGPA is rounded off to two decimal places. SGPA for each semester is thus computed as,

$$\text{SGPA}(S_i) = \frac{\sum_{i=1}^{N} C_i \times G_i}{\sum_{i=1}^{N} C_i}$$

where 'i' is the course indicator index (considering all courses in a semester), 'N' is the no. of courses 'registered' for the semester (as specifically required and listed under the course structure of the parent department), C_i is the no. of credits allotted to the i^{th} course, and G_i represents the grade points (GP) corresponding to the letter grade awarded for that i^{th} course.

10.10 If a student earns more than 160 credits, only the courses corresponding to the best 160 credits shall be considered for the computation of the CGPA for the B.Tech. degree.

10.11 The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points

secured by a student for the courses correspond to best 160 credits out of **all** registered courses in **all** semesters, and the total number of credits correspond to those selected courses. CGPA is rounded off to **two** decimal places. CGPA is thus computed at the end of each semester, from the I year II semester onwards, as per the formula

$$\text{CGPA} = \frac{\sum_{j=1}^{M} C_j \times G_j}{\sum_j C_j}$$

(i.e., up to and inclusive of S semesters, S $\geq$ 2),

where 'M' is the total no. of courses corresponding to the best 160 credits from the courses registered in all eight semesters, 'j' is the course indicator index (takes into account all courses from 1 to 8 semesters), C_j is the no. of credits allotted to the j^{th} course, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that j^{th} course. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

Illustration of Calculation of SGPA:

Course (i)	**Credits (C_i)**	**Letter Grade**	**Grade Points (G_i)**	**Credit Points $C_i \times G_i$**
Course 1	4	A	8	$4 \times 8 = 32$
Course 2	3	O	10	$3 \times 10 = 30$
Course 3	3	C	5	$3 \times 5 = 15$
Course 4	3	B	6	$3 \times 6 = 18$
Course 5	3	A	8	$3 \times 8 = 24$
Course 6	2	A+	9	$2 \times 9 = 18$
Course 7	1	C	5	$1 \times 5 = 5$
Course 8	2	O	10	$1 \times 10 = 10$
	$\sum C_i$ =20			$\sum C_i \times G_i$= 152

SGPA = 152/20 = 7.6

Illustration of Calculation of CGPA up to 3rd Semester:

Semester	**Course**	**Credits Allotted**	**Letter Grade Secured**	**Grade Points**	**Credit Points (CP)**
I	Course 1	3	A	8	24
I	Course 2	3	O	10	30
I	Course 3	3	B	6	18
I	Course 4	4	A	8	32
I	Course 5	3	A+	9	27
I	Course 6	4	C	5	20
II	Course 7	4	B	6	24
II	Course 8	4	A	8	32
II	Course 9	3	C	5	15
II	Course 10	3	O	10	30

Semester	Course	Credits Allotted	Letter Grade Secured	Grade Points	Credit Points (CP)
II	Course 11	3	B+	7	21
II	Course 12	4	B	6	24
II	Course 13	4	A	8	32
II	Course 14	3	O	10	30
III	Course 15	2	A	8	16
III	Course 16	1	C	5	5
III	Course 17	4	O	10	40
III	Course 18	3	B+	7	21
III	Course 19	4	B	6	24
III	Course 20	4	A	8	32
III	Course 21	3	B+	7	21
Total Credits:		69	Total Credit Points:		518

CGPA = 518/69 = 7.51

The CGPA of the entire B.Tech. programme shall be calculated considering the best 160 credits earned by the student.

10.12 For merit ranking or comparison purposes or for any other listing, only the 'rounded off' values of the CGPAs will be used.

10.13 SGPA of a semester will be mentioned in the semester Memorandum of Grades if all courses of that semester are cleared in first attempt. Otherwise, the SGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester.

11.0 Declaration of Results and issue of Grade Memo

11.1 While declaring the results, the web-version should display the marks earned by the students with the internal and external marks break-up. However, in the memorandum of grades, the marks need not be shown.

11.2 After the completion of each semester, a certificate of memorandum of grades shall be issued to all the registered students, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, course title, no. of credits), letter grade and credits earned.

12.0 Withholding of Results

12.1 If the student has not paid the fees to the Institute at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.

13.0 Supplementary Examinations:

13.1 At the end of each semester, along with regular semester examinations, supplementary examinations shall be conducted for the students who have back-log subjects.

13.2 Advanced supplementary examinations in IV Year II Semester courses may be conducted for those who failed in any course offered in IV Year II Semester. It may enable the students to receive their B.Tech. provisional certificate at an early date. Advanced supply examinations may be scheduled within one month period after the declaration of the final semester results.

There shall be no supplementary examination in the successive semester. The students who could not secure any pass grade in advance supplementary examinations have to wait for regular series examination of next batch to write their back-log examination.

14.0 Promotion Rules

S. No	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester and fulfillment of attendance requirement.
2	First year second semester to Second year first semester	(i) Regular course of study of first year second semester and fulfillment of attendance requirement.
		(ii) Must have secured at least 25% of the total credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to Second year second semester	Regular course of study of second year first semester and fulfillment of attendance requirement.
4	Second year second semester to Third year first semester	(i) Regular course of study of second year second semester and fulfillment of attendance requirement.
		(ii)Must have secured at least 25% of the total credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to Third year second semester	Regular course of study of third year first semester and fulfillment of attendance requirement.
6	Third year second semester to Fourth year first semester	Regular course of study of third year second semester and fulfillment of attendance requirement.
7	Fourth year first semester to Fourth year second semester	Regular course of study of fourth year first semester and fulfillment of attendance requirement.

15.0 Re-admission after Detention:

i) A student detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required number of credits.

ii) A student detained due to shortage of attendance shall be admitted in the same semester in the successive academic years.

iii) When a student is readmitted in the following academic years, the academic regulations under which the student seeks re-admission shall only be applicable to this student, not the academic regulations in which he got admitted in his/her first year of study.

16.0 Credit Exemption:

A student (i) shall register for all courses covering 164 credits as specified and listed in the course structure and (ii) earn 160 or more credits to successfully complete the undergraduate programme.

i) Best 160 credits shall be considered for CGPA computation. The student can avail exemption of courses totaling up to 4 credits other than Professional core courses, Laboratory Courses, Seminars, Project Work and Field Based Research Project / Industry Oriented Mini Project / Internship, for optional drop out from these 164 credits registered;

ii) The semester grade point average (SGPA) of each semester shall be mentioned at the bottom of the grade card, when all the subjects in that semester have been passed by the student.

iii) Credits earned by the student in either a Minor or Honors program cannot be counted towards the required 160 credits for the award of the B.Tech. degree.

17.0 Award of Degree:

17.1 A student who registers for all the courses specified in the course structure and secures the required number of 160 credits within 8 academic years from the date of commencement of the first academic year, shall be declared to have qualified for the award of B.Tech. degree in the branch of Engineering selected at the time of admission.

17.2 A student who qualifies for award of the degree as listed in item 17.1 shall be placed in the following classes.

17.3 A student with final CGPA (at the end of the undergraduate programme) ≥ 7.5, and fulfilling the following conditions - shall be placed in **'First Class with Distinction'**:

i) Should have passed all the courses in **'First Appearance'**.

ii) Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.

A student not fulfilling any of the above conditions with final CGPA ≥ 7.5 shall be placed in **'First Class'**.

17.4 Students with final CGPA (at the end of the undergraduate programme) ≥ 6.5 but < 7.5 shall be placed in **'First Class'**.

17.5 Students with final CGPA (at the end of the undergraduate programme) ≥ 5.5 but < 6.5, shall be placed in **'Second Class'**.

17.6 All other students who qualify for the award of the degree (as per item 17.1), with final CGPA (at the end of the undergraduate programme) ≥ 5.00 but < 5.5, shall be placed in **'Pass Class'**.

17.7 Grace Marks:

Grace marks shall be given to those students who complete the course work of four year B. Tech. degree, not secured pass grade in not more than three subjects and adding a specified grace marks enables the student to pass the subject(s) as well as gets eligibility to receive the provisional degree certificate.

Grace marks for students admitted under the R-25 Academic Regulations should not exceed 0.15% of the total maximum marks in all eight semesters (excluding the marks allocated for value added courses and skill development courses).

18.0 Award of Gold Medals:

18.1 Students fulfilling the conditions listed under item 17.3 alone will be eligible for award of **'Gold Medal'**.

18.2 If more than one student secures the same highest CGPA, then the following tie resolution criteria, in the same order of preference shall be followed for selecting the Gold Medal winner,until the tie is resolved: 1) more number of times secured highest SGPAs, ii) more number of O and A+ grades in that order and iii)

highest SGPA in the order of first semester to eight semester.

19.0 Conversion of CGPA into equivalent Percentage of Marks:

19.1 The following formula shall be used for the conversion of CGPA into equivalent marks, whenever it is necessary

Percentage (%) of Marks = (Final CGPA − 0.5) x 10

20.0 Honours and Minor Degree Programs:

Honours and Minor Degree programs are available in all branches of the B.Tech. degree. Minor Degree programs commence from II B.Tech. II Semester and continue until IV B.Tech. I Semester, while Honours Degree programs commence from III B.Tech. I Semester and continue until IV B.Tech. II Semester.

21.0 Multiple Entry Multiple Exit Scheme (MEME):

21.1 Exit Option after Second Year:

Students enrolled in the 4-Year B.Tech. program are permitted to exit the program after the successful completion of the second year (B.Tech. II Year II Semester). Students who wish to exit after the second year must formally inform their intention to exit **one semester in advance**, i.e., at the commencement of II Year II Semester. Such students are required to fulfill the additional requirements specified in **Clause 21.2**. Upon fulfilling the requirements like earning all the credits up to II Year II Semester and successfully completing the additional requirements, the students will be awarded a 2-Year Undergraduate (UG) Diploma in the concerned engineering branch.

21.2 Additional Requirements for Diploma Award:

To qualify for the diploma under the exit option, students must also complete Two (2) additional credits through one of the following prescribed pathways:

Work-based Vocational Course:

Participation in a practical, hands-on vocational training program relevant to the engineering field, typically conducted during the summer term.

Internship/Apprenticeship:

Completion of a minimum 8-week internship or apprenticeship in their related field to gain practical industry exposure.

In addition, students must clear any associated course(s) and submit the internship/ apprenticeship report as per the schedule and guidelines.

21.3 Re-entry into the B.Tech. Program:

Students who have exited the B.Tech. program with a 2-Year UG Diploma may apply for re-entry into the Third Year (Fifth Semester) of the B.Tech. program. Re-entry is subject to the condition that the student surrenders the awarded UG Diploma Certificate. Students wishing to rejoin the III Year must enroll in the same B.Tech. program and the same college from which they exited; before rejoining, they should verify the continuation of the same branch at that college. If the specific branch is not available, the student should consult the University for possible alternative solutions. Re-registered students will be governed by the academic regulations in effect at the time of re-entry, regardless of the regulations under which they were originally admitted. Additionally, if a student opts to continue their studies without a gap after being awarded the diploma, they must register for the third-year courses before the commencement of classwork.

21.4 Break in Study and Maximum Duration:

Students are permitted to take a break of up to four years after the completion of II Year II Semester, subject to prior approval from the University through the Principal of the college. Re-entry following such

a break is allowed on the condition that the student completes all academic requirements within twice the duration of the program, i.e., within eight years for a 4-year B.Tech. program.

22.0 Transitory Regulations for the Students Readmitted in R25 Regulations:

22.1 Transitory regulations shall apply to students detained due to shortage of attendance or shortage of credits, who seek permission to re-join (re-admit) the B.Tech. program under R25 regulations.

22.2 A student detained due to shortage of attendance and re-admitted under R25 regulations shall be permitted to join the same semester under R25 regulations.

22.3 A student detained due to shortage of credits and re-admitted under R25 regulations shall be promoted to the next semester under R25 regulations only after acquiring the required number of credits as per the regulations of their previous semester.

22.4 A student who has failed in any course under a specific regulation must pass that course under the same regulation.

22.5 If a student is re-admitted under R25 regulations and any course has 80% or more of its syllabus in common with the student's previous regulation, that course in R22 regulations shall be substituted by an equivalent course from R25 regulations, as recommended by the equivalence Committee of the institution. All such substitutions shall be summarized in a set of lookup tables, one for each B.Tech. program.

22.6 Look Up Table of Equivalent Courses

A lookup table will be provided for the benefit of students. This lookup table will include all the courses to be registered by students who have been readmitted under the R25 Academic Regulations from the R22 Academic Regulations. Separate lookup tables will be provided for the following categories of students:

1. Students readmitted into the I Year II Semester of the R-25 Regulations
2. Students readmitted into the II Year I Semester of the R25 Regulations
3. Students readmitted into the II Year II Semester of the R25 Regulations
4. Students readmitted into the III Year I Semester of the R25 Regulations
5. Students readmitted into the III Year II Semester of the R25 Regulations
6. Students readmitted into the IV Year I Semester of the R25 Regulations
7. Students readmitted into the IV Year II Semester of the R25 Regulations

For every B.Tech. program there shall be separate set of seven lookup tables.

Applicability of Look-up Table: The above look-up table shall be applicable for i) students who seek readmission from R22 or prior regulations to R25 regulation and are going to be readmitted within Vardhaman College of Engineering and ii) detained students of any JNTUH affiliated autonomous/non-autonomous college who seek admission into Vardhaman College of Engineering (folowing the guidelines of transfer of students mentioned in Clause 23).

22.7 These look-Up Tables are not applicable for the students who seek transfer from i) other Universities to JNTUH affiliated colleges, ii) autonomous to non-autonomous colleges, III) one autonomous to another autonomous colleges and iv) non-autonomous to autonomous colleges under JNTUH. Such students should consult the University regarding equivalent courses, as was in previous practice.

22.8 The R-25 Academic Regulations are applicable to a student from the year of re-admission. However, the student is required to complete the study of B.Tech. degree within the stipulated period of eight academic years from the year of first admission.

23.0 Student Transfers

23.1 There shall be no branch transfers after the completion of admission process.

23.2 Students seeking transfer to Vardhaman College of Engineering (VCE) from other universities or institutions, who have backlogs at their previous university or institution, shall be required to pass the courses offered at VCE that are equivalent to the failed courses at the previous university or institution. Transferred students shall be given an opportunity to appear for CII examinations to obtain the CIE component in the equivalent course(s).

23.3 In case of repeated courses, the Equivalence Committee shall recommend substitute course(s) wherever required, based on the course lookup table. All such changes shall be endorsed by the respective Board of Studies (BoS) and the College Academic Council (CAC).

24.0 Value Added Courses

24.1 The following value-added courses shall be offered as part of the B.Tech. curriculum in III B.Tech. I Semester, III B.Tech. II Semester, and IV B.Tech. I Semester, each carrying one (1) credit:

i) Environmental Science

ii) Gender Sensitization, Human Values and Professional Ethics

iii) Indian Knowledge System (IKS)

These courses are intended to inculcate environmental awareness, social responsibility, ethical values, and an understanding of India's traditional knowledge systems among students.

24.2 To ensure quality delivery and standardization in the teaching of the Indian Knowledge System (IKS) course, faculty members assigned to teach the IKS course shall mandatorily undergo a Faculty Development Programme (FDP) organized by UGC-MMTTC (Malaviya Mission Teacher Training Centre) or any other recognized and competent institution or organization offering certified programmes in IKS.

25.0 Mapping with the Sustainable Development Goals

All courses specified in the course structure of each programme are aligned with one or more Sustainable Development Goals.

26.0 Scope

26.1 These academic regulations shall be interpreted as a whole for the purpose of clarification and understanding.

26.2 In the event of any doubt or ambiguity in the interpretation of these regulations, the decision of the Principal shall be final.

26.3 The Institution reserves the right to modify or amend the academic regulations, program curriculum structure, or syllabi at any time. Any such changes shall apply to all students from the dates notified by the College Academic Council.

26.4 Words denoting the masculine gender in these regulations shall be deemed to include the feminine gender as well; where the words "he", "him", and "his" occur, they include "she", "her", and "hers".

Academic Regulations of B.Tech. (Lateral Entry Scheme) Programme Under Choice Based Credit System (CBCS) 2026–2027 (R25)

Eligibility for the award of B.Tech. Degree (LES)

1. The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.
2. The student shall register for 123/124 credits and secure 120 credits with CGPA ≥ 5 from II year to IV-year B.Tech. programme (LES) for the award of B.Tech. degree.
3. The student can avail exemption of courses totaling up to 3/4 credits other than Professional core courses, Laboratory Courses, Seminars, Project Work and Field Based Research Project / Industry Oriented Mini Project / Internship, for optional drop out.
4. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
5. The attendance requirements of B.Tech. (Regular) shall be applicable to B.Tech. (LES).
6. **Promotion Rules**

S. No	Promotion	Conditions to be fulfilled
1.	Second year first semester to Second year second semester	Regular course of study of second year first semester and fulfillment of attendance requirement.
2	Second year second semester to Third year first semester	(i) Regular course of study of second year second semester and fulfillment of attendance requirement.
		(ii)Must have secured at least 25% of the total credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to Third year second semester	Regular course of study of third year first semester and fulfillment of attendance requirement.
4	Third year second semester to Fourth year first semester	Regular course of study of third year second semester and fulfillment of attendance requirement.
5	Fourth year first semester to Fourth year second semester	Regular course of study of fourth year first semester and fulfillment of attendance requirement.

7. All the other regulations as applicable to B.Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).
8. LES students are not permitted to exit the B.Tech. program after completion of second year (B.Tech. II Year II Semester).

Vision

To be a pioneer institute and leader in engineering education to address societal needs through education and practice.

Mission

To adopt innovative student centric learning methods.
To enhance professional and entrepreneurial skills through industry institute interaction.
To train the students to meet dynamic needs of the society.
To promote research and continuing education.

Quality Policy

We at Vardhaman College of Engineering, endeavor to uphold excellence in all spheres by adopting the best practices in effort and effect.

VCE
VARDHAMAN
COLLEGE OF ENGINEERING

VARDHAMAN COLLEGE OF ENGINEERING

(Autonomous)

Affiliated to **JNTUH,** Approved by **AICTE,** Accredited by **NAAC** with **A++** Grade
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