



# **VARDHAMAN COLLEGE OF ENGINEERING**

(AUTONOMOUS)

Affiliated to JNTUH, Approved by AICTE, Accredited by NAAC with A++ Grade, ISO 9001:2015 Certified  
Kacharam, Shamshabad, Hyderabad - 501218, Telangana, India

## **Academic Regulations (R22) For B.Tech Regular Students With Effect From The Academic Year 2022-23**

### **1 Under-Graduate Degree Programme in Engineering**

Vardhaman College of Engineering (VCE) offers a 4-year (8 semesters) Bachelor of Technology (B.Tech.) degree programme, under Choice Based Credit System (CBCS) and the regulations published in this document are applicable to the students admitted in B.Tech programme from the academic year 2022-2023.

### **2 Eligibility for Admission**

- 2.1** Admission to the undergraduate(UG) programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the Government from time to time.
- 2.2** The medium of instructions for the entire undergraduate programme in Engineering will be English only.

### **3 B. Tech. Programme Structure**

- 3.1** A student after securing admission shall complete the B.Tech. programme in a minimum period of four academic years (8 semesters), and a maximum period of eight academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech programme. Each student shall secure 160 credits (with CGPA  $\geq 5$ ) required for the completion of the undergraduate programme and award of the B.Tech. degree.
- 3.2** UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms.
- 3.3 Semester Scheme** - Each undergraduate programme is of 4 academic years (8 semesters) with the academic year divided into two semesters of 22 weeks ( $\geq 90$  instructional days) each and in each semester - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)' under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure suggested by AICTE are followed.
- 3.4 Credit Courses** - All courses are to be registered by the student in a semester to earn credits which shall be assigned to each course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for Theory/ Lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for Laboratory/ Practical (P) courses.

**3.5 Mandatory Courses** - Courses like Environmental Science and Technology, Indian Constitution, Universal Human Values 2: Understanding Harmony, Gender Sensitization and Research Methodology are mandatory courses. These courses will not carry any credits.

**3.6 Course Classification** - All courses offered for the undergraduate programme in Engineering (B.Tech. degree programmes) are broadly classified as follows. The Institution has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes Mathematics, Physics and Chemistry Courses
2		ES - Engineering Sciences	Includes Fundamental Engineering Courses
3		HS – Humanities and Social Sciences	Includes courses related to Humanities, Social Sciences and Management
4	Core Courses (CoC)	PC – Professional Core	Includes core courses related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective courses related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective courses which include interdisciplinary courses or courses in an area outside the parent discipline/ department/ branch of Engineering.
7	Project Work (PW)	Internship/Mini-Project/Project Work	Industry Training/ Internship/Industry Oriented Mini-Project/Mini-Project/Skill Development Courses/Project Work Phase-I & II
8	Mandatory Courses (MC)	-	Mandatory Courses (non-credit)

#### 4 Course Registration

- 4.1** A ‘faculty advisor or counselor’ shall be assigned to a group of 20 students, who will advise the students about the undergraduate programme, its course structure and curriculum, choice/option for courses, based on their competence, progress, pre-requisites and interest.
- 4.2** The academic office of the college invites ‘registration forms’ from students before the beginning of the semester through ‘online registration’, ensuring ‘date and time stamping’. **The online registration requests for any ‘current semester’ shall be com-**

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pleted before the commencement of SEEs (Semester End Examinations) of the ‘preceding semester’.

- 4.3 A student can apply for online registration, only after obtaining the ‘written approval’ from faculty advisor/counselor, which should be submitted to the college academic office through the Head of the Department. A copy of it shall be retained with the Head of the Department, Faculty Advisor/ Mentor and the student.
- 4.4 A student may be permitted to register for all the courses in a semester as specified in the course structure **with maximum additional course(s) limited to 6 Credits (any 2 elective courses)**, based on progress and SGPA/ CGPA, and completion of the ‘pre-requisites’ as indicated for various courses, in the department course structure and syllabus contents.
- 4.5 Choice for ‘additional courses’, not more than any 2 elective courses in any Semester, must be clearly indicated, which needs the specific approval and signature of the Faculty Advisor/Mentor/HOD.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during online registration for the course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned course in that category will be taken into consideration
- 4.7 Course options exercised through online registration are final and cannot be changed or interchanged; further, alternate choices also will not be considered. However, if the course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any inevitable or unexpected reasons, then the student shall be allowed to have alternate choice either for a new courses (subject to offering of such a course), or for another existing courses (subject to availability of seats). Such alternate arrangements will be made by the Head of the Department, with due notification and time-framed schedule, within a week after the commencement of class-work for that semester.
- 4.8 Dropping of courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor ‘within a period of 15 days’ from the beginning of the current semester.
- 4.9 Open Electives: The students have to choose three Open Electives (OE-I, II & III) from the list of Open Electives given by other departments. However, the student can opt for an Open Elective courses offered by his own (parent) department, if the student has not registered and not studied that course under any category (Professional Core, Professional Electives, Mandatory Courses etc.) offered by parent department in any semester. Open Elective courses already studied should not repeat/should not match with any category (Professional Core, Professional Electives, Mandatory Courses etc.) of courses even in the forthcoming semesters.
- 4.10 Professional Electives: The students have to choose six Professional Electives (PE-I to VI) from the list of professional electives given.

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## 5 Courses to be Offered

- 5.1 A course may be offered to the students, only if a minimum of 15 students opt for it.
- 5.2 More than one faculty member may offer the same course (lab/ practical may be included with the corresponding theory course in the same semester) in any semester. However, selection of choice for students will be based on - 'first come first serve basis and CGPA criterion' (i.e. the first focus shall be on early online entry from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- 5.3 If more entries for registration of a course come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a course for two (or multiple) sections.
- 5.4 In case of options coming from students of other departments/ branches/ disciplines (not considering open electives), first priority shall be given to the student of the 'parent department'.

## 6 Attendance Requirements

- 6.1 A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the courses (including attendance in mandatory courses like Environmental Science and Technology, Gender Sensitization, Universal Human Values 2 : Understanding Harmony, Indian Constitution and Research Methodology) for that semester. Two periods of attendance for each theory course shall be considered, if the student appears for the continuous assessments of that course.
- 6.2 Shortage of attendance in aggregate upto 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3 A stipulated fee shall be payable for condoning of shortage of attendance.
- 6.4 Shortage of attendance below 65% in aggregate shall in NO case be condoned.
- 6.5 Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand canceled, including all academic credentials (internal marks etc.) of that semester. They will not be promoted to the next semester. They may seek re-registration for all those courses registered in that semester in which the student is detained, by seeking re-admission into that semester as and when offered; if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the same set of elective courses offered under that category.
- 6.6 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

## 7 Academic Requirements

The following academic requirements have to be satisfied, in addition to the attendance

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requirements mentioned in Item No. 6.

**7.1** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each course, if student secures not less than 35% (14 marks out of 40 marks) in the Continuous Internal Evaluation(CIE), not less than 35% (21 marks out of 60 marks) in the Semester End Examination(SEE) and a minimum of 40% (40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that course.

**7.2** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Social Innovation / Engineering Exploration / Engineering Design / Product Realization / Industry Oriented Mini Project (or) Internship, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report, or (ii) not make a presentation of the same before the evaluation committee as per schedule, or (iii) secures less than 40% marks in Social Innovation / Engineering Exploration / Engineering Design / Product Realization / Industry Oriented Mini Project (or) Internship evaluations. A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such 'one reappearance' evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

### **7.3 Promotion Rules**

<b>S. No</b>	<b>Promotion</b>	<b>Conditions to be fulfilled</b>
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to Second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 20 credits out of 40 credits i.e., 50% 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.

S. No	Promotion	Conditions to be fulfilled
4	Second year second semester to Third year first semester	(i) Regular course of study of second year second semester.
		(ii) Must have secured at least 48 credits out of 80 credits i.e., 60% 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.
6	Third year second semester to Fourth year first semester	(i) Regular course of study of third year second semester.
		(ii) Must have secured at least 72 credits out of 120 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to Fourth year second semester	Regular course of study of fourth year first semester.

- 7.4** A student (i) shall register for all courses covering 160 credits as specified and listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA  $\geq 5.0$  (in each semester), and CGPA  $\geq 5$  (at the end of 8 semesters), (iv) passes all the mandatory courses, to successfully complete the undergraduate programme. The performance of the student in these 160 credits shall be considered for the calculation of the final CGPA (at the end of undergraduate programme), and shall be indicated in the grade card / marks memo of IV-year II semester.
- 7.5** If a student registers for ‘extra courses’ (in the parent department or other departments/branches of Engg.) other than those listed courses totaling to 160 credits as specified in the course structure of his department, the performances in those ‘extra courses’ (although evaluated and graded using the same procedure as that of the required 160 credits) will not be considered while calculating the SGPA and CGPA. For such ‘extra courses’ registered, percentage of marks and letter grade alone will be indicated in the grade card / marks memo as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations Items 6 and 7.1 – 7.4 above.
- 7.6** A student eligible to appear in the semester end examination for any course, but absent from it or failed (thereby failing to secure ‘C’ grade or above) may reappear for that course in the supplementary examination as and when conducted. In such cases, internal

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marks (CIE) assessed earlier for that course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that course.

- 7.7** A student detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements. The academic regulations under which a student has been re-admitted shall be applicable. Further, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.
- 7.8** A student detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required number of academic credits. The academic regulations under which the student has been readmitted shall be applicable to him.

## **8. Evaluation - Distribution and Weightage of Marks**

- 8.1** The performance of a student in every course (including practicals and project work phase – I & II) will be evaluated for 100 marks each, with 40 marks allotted for CIE (Continuous Internal Evaluation) and 60 marks for SEE (Semester End Examination).
- 8.2** In Continuous Internal Evaluation, for theory courses, during a semester, there shall be two continuous assessments (mid-term examinations). Each continuous assessment consists of two parts i) Part – A for 10 marks ii) Part – B for 20 marks with a total duration of 2 hours as follows:

**1. Continuous Assessment (Mid-Term Examination) for 30 Marks**

Part – A: Objective/Quiz/Short answer type questions for 10 marks

Part – B: Descriptive paper for 20 marks

- The quiz/objective paper is set with multiple choice, fill-in the blanks and match the following or other short answer type of questions for a total of 10 marks.
- The descriptive paper shall contain 6 full questions out of which, student has to answer 4 questions, each carrying 5 marks. The average of the two continuous assessments (mid-term examinations) shall be taken as the final marks for continuous assessment (for 30 marks).

The remaining 10 marks of Continuous Internal Evaluation (out of 40) are considered for Alternative Assessment and are distributed as:

- 2. Assignment for 5 Marks. (Average of 2 Assignments)**
- 3. Course Viva-Voce/PPT/Poster Presentation/Case Study or any other assessment on a topic in the concerned course for 5 marks.**
- Five (5) marks are allotted for assignments (as specified by the course instructor concerned). The first assignment should be submitted before the conduction of first mid-term examinations and the second assignment should be submitted before the conduction of second mid-term examinations. The average of two assignments is taken as the final marks for assignment (for 5 marks).
  - Course Viva-Voce/PPT/Poster Presentation/ Case Study or any other assessment on a topic in the concerned course for 5 marks shall be evaluated before the second mid-term examinations.

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- While the first continuous assessment shall be conducted on 50% of the syllabus, the second continuous assessment shall be conducted on the remaining 50% of the syllabus.

The semester end examinations (SEE), for theory courses, will be conducted for 60 marks consisting of two parts viz. i) Part- A for 10 marks, ii) Part - B for 50 marks.

- Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.
- Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from each unit and may contain sub-questions. For each question there will be an 'either or' choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- The duration of Semester End Examination is 3 hours.

**The student, in each theory course, shall have to earn 35% of marks (i.e. 14 marks out of 40 marks) in CIE, 35% of marks (i.e. 21 marks out of 60 marks) in SEE and overall 40% of marks (i.e. 40 marks out of 100 marks) in both CIE and SEE put together.**

**The student is eligible to write Semester End Examination of the concerned course, if the student scores 35% (14 marks) of 40 in Continuous Internal Evaluation (CIE).**

**In case, the student appears for SEE of the concerned course but not secured 35% of CIE marks, his performance in that course in SEE shall stand canceled in spite of appearing the SEE.**

The semester end examination (SEE) question papers shall be set by the external examiners. The SEE answer scripts shall be evaluated by two examiners (E1 and E2). Examiner E1 is the internal examiner and examiner E2 is the external examiner. The marks awarded for a course are the average of E1 and E2 if the difference in marks is less than 15% of maximum marks i.e., 9 marks for 60 marks paper. If the difference in marks obtained during E1 and E2 evaluations is greater than or equal to 9, then the answer script is evaluated by the third examiner (E3). The final mark in such a case is the average of nearest two evaluations. If the difference of marks is equal, then the average of the best two evaluations is considered as final marks.

**8.3** For practical courses there shall be a Continuous Internal Evaluation (CIE) during the semester for 40 marks and 60 marks for Semester End Examination (SEE). The 40 marks for Continuous Internal Evaluation are divided as follows:

1. A write-up on day-to-day experiment in the laboratory (in terms of aim, components, procedure and expected outcome) which shall be evaluated for 10 marks
2. 10 marks for viva-voce (or) tutorial (or) case study (or) application (or) poster presentation of the course concerned.
3. Internal practical examination conducted by the laboratory teacher concerned shall be evaluated for 10 marks.



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4. The remaining 10 marks are for Laboratory Project, which consists of the Design (or) Software / Hardware Model Presentation (or) App Development (or) Prototype Presentation submission which shall be evaluated after completion of laboratory course and before semester end practical examination.

The Semester End Examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed and decided by the Principal/Controller of Examinations based on the panel of examiners submitted by the respective Head of the Department.

In the Semester End Examination held for 3 hours, total 60 marks are divided and allocated as shown below:

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

**The student, in each practical course, shall have to earn 35% of marks (i.e. 14 marks out of 40 marks) in CIE, 35% of marks (i.e. 21 marks out of 60 marks) in SEE and overall 40% of marks (i.e. 40 marks out of 100 marks) in both CIE and SEE put together.**

**The student is eligible to write Semester End Examination of the concerned course, if the student scores 35% (14 marks) of 40 in Continuous Internal Evaluation (CIE).**

**In case, the student appears for SEE of the concerned course but not secured 35% of CIE marks, his performance in that course in SEE shall stand canceled in spite of appearing the SEE.**

- 8.4 For conducting laboratory end examinations of all UG Programmes, one internal examiner and one external examiner are to be appointed by the Principal of the College, before commencement of the lab end examinations. The external examiner should be selected from the six panel of examiners identified from outside the college and submitted by Head of the Department.
- 8.5 The evaluation of field-based/real-time/research project based courses like Social Innovation, Engineering Exploration, Engineering Design and Product Realization are as follows:

In continuous Internal Evaluation, total 40 marks are divided and allocated as shown below:

1. 10 Marks for day to day evaluation
2. 10 Marks for problem identification and design process
3. 10 Marks by departmental committee review
4. 10 Marks by supervisor/course instructor review

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

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1. 10 Marks for problem identification/ objectives of the project/field work
  2. 15 Marks for idea generation / design process/comparative analysis
  3. 15 Marks for Idea/ prototype/ model/ product presentation and demonstration
  4. 10 Marks for report submission
  5. 10 Marks for viva-voce by external examiner

**The student, in each field/research based course, shall have to earn 35% of marks (i.e. 14 marks out of 40 marks) in CIE, 35% of marks (i.e. 21 marks out of 60 marks) in SEE and overall 40% of marks (i.e. 40 marks out of 100 marks) in both CIE and SEE put together.**

**The student is eligible to write Semester End Examination of the concerned course, if the student scores 35% (14 marks) of 40 in Continuous Internal Evaluation (CIE).**

**In case, the student appears for SEE of the concerned course but not secured 35% of CIE marks, his performance in that course in SEE shall stand canceled in-spite of appearing the SEE.**

- 8.6** There shall be an Industry training (or) Internship (or) Industry oriented Mini-project (or) Skill Development Courses (or) Paper presentation in reputed journal (or) Industry Oriented Mini Project in collaboration with an industry of their specialization. Students shall register for this immediately after II-Year II Semester Examinations and pursue it during summer vacation/semester break & during III Year without effecting regular course work. Internship at reputed organization (or) Skill development courses (or) Paper presentation in reputed journal (or) Industry Oriented Mini Project shall be submitted in a report form and presented before the committee in III-year II semester before end semester examination. It shall be evaluated for 100 marks. The external examiner shall evaluate the project work for 60 marks and the internal project committee shall evaluate it for 40 marks. Out of 40 internal marks, the departmental committee consisting of Head of the Department, Project Supervisor and a Senior Faculty Member shall evaluate the project work for 20 marks and Project Supervisor shall evaluate for 20 marks. The student is deemed to have failed, if he (i) does not submit a report on the Project, or (ii) does not make a presentation of the same before the External Examiner as per schedule, or (iii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

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

- 8.7** 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. Student has to submit project work report at the end of IV Year II Semester. The project work phase-I shall be evaluated for 100 internal marks before commencement of SEE Theory examinations and project work phase-II shall be evaluated for 100 marks out of which 40 marks are through CIE and 60 marks through SEE.
- 8.8** The UG project shall be initiated during the IV Year I Semester and the duration

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of the project work is two semesters. The student must present Project Work Phase – I during IV Year I Semester before II Mid-Term examination, in consultation with his Supervisor, the title, objective and plan of action of his/her project work to the departmental committee for approval before commencement of IV Year II Semester. It shall be evaluated for 100 internal marks. Only after obtaining the approval of the departmental committee, the student can start his project work.

- 8.9** For Project Work Phase – I, the departmental committee consisting of Head of the Department, project supervisor and a senior faculty member shall approve the project work to begin before Mid-Term examinations - II of IV Year I Semester. Department committee members shall evaluate the project work phase-I for 50 marks and Project Supervisor shall evaluate for 50 marks. The student is deemed to be not eligible to register for the Project work phase-II, if he does not submit a report on Project Work Phase - I or does not make a presentation of the same before the evaluation committee as per schedule or secure less than 40% of marks in this course.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he/she fails in such ‘one reappearance’ evaluation also, he/she has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.10** For Project Work Phase – II, the external examiner shall evaluate the project work for 60 marks and the internal project committee shall evaluate it for 40 marks. Out of 40 internal marks, the departmental committee consisting of Head of the Department, Project Supervisor and a Senior Faculty Department committee members shall evaluate the project work for 20 marks and Project Supervisor shall evaluate for 20 marks. The topics for Industry Oriented Mini-Project/ Internship/SDC etc. and the Project Work shall be different from the topic already taken. The student is deemed to have failed, if he (i) does not submit a report on the Project, or (ii) does not make a presentation of the same before the External Examiner as per schedule, or (iii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

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

A student who has failed, may reappear once for the above evaluation, when it is scheduled again; if student fails in such ‘one reappearance’ evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.11** A student can re-register for courses in a semester:
- If the internal marks secured by a student in the Continuous Internal Evaluation for 40 marks (average of two mid-term examinations consisting of objective and descriptive parts, average of two assignments and Course Viva-voce/ PPT/Poster Presentation/ Case Study or any other on a topic in the concerned course) are less than 35% and failed in those courses.
  - They may seek re-registration for all those courses registered in that semester in which the student is failed. The student has to re-appear for CIE and SEE as and when offered.

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- A student must re-register for the failed course(s) for 40 marks within four weeks of commencement of the classwork in next academic year. His Continuous Internal Evaluation marks for 40 obtained in the previous attempt stand cancelled. The student has to obtain fresh set of marks for 40 allotted for CIE (Sum of average of two mid-term examinations consisting of Objective & descriptive parts, Average of two Assignments & Course Viva-voce/PPT/ Poster presentation/ Case Study on a topic in the concerned course). Head of the Dept. will take care of this.
- 8.12** For mandatory courses of Environmental Science and Technology, Gender Sensitization, Universal Human Values 2 : Understanding Harmony, Indian Constitution and Research Methodology a student has to secure 40 marks out of 100 marks (i.e., 40% of the 100 marks allotted) in the Continuous Internal Evaluation for passing the course.
- 8.13** No marks or letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

## 9. Grading Procedure

- 9.1** Grades will be awarded to indicate the performance of students in each Theory Course, Laboratory/Practicals/ Industry-Oriented Mini Project/Internship/SDC and Project Stage. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- 9.2** As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

Percentage of Marks Secured in a Course	Letter Grade	Meaning	Grade Points
$\geq 90$	O	Outstanding	10
$\geq 80$ and $< 90$	A+	Excellent	9
$\geq 70$ and $< 80$	A	Very Good	8
$\geq 60$ and $< 70$	B+	Good	7
$\geq 50$ and $< 60$	B	Average	6
$\geq 40$ and $< 50$	C	Pass	5
Below 40	F	Fail	0
Absent	AB	Absent	0

- 9.3** A student who has obtained an 'F' grade in any course shall be deemed to have 'failed' and is required to reappear as a 'supplementary student' in the semester end examination, as and when offered. In such cases, internal marks in those courses will remain the same as those obtained earlier.

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- 9.4** To a student who has not appeared for an examination in any course, ‘Ab’ grade will be allocated in that course, and he is deemed to have ‘Failed’. A student will be required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered next. In this case also, the internal marks in those courses will remain the same as those obtained earlier.
- 9.5** A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6** A student earns Grade Point (GP) in each course, on the basis of the letter grade secured in that course. The corresponding ‘Credit Points’ (CP) are computed by multiplying the grade point with credits for that particular course.

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

- 9.7** A student passes the course only when  $GP \geq 5$  (‘C’ grade or above)
- 9.8** The Semester Grade Point Average (SGPA) is calculated by dividing the sum of credit points ( $\sum CP$ ) 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 is thus computed as

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

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..

- 9.9** 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 in all registered courses (of 160) in all semesters, and the total number of credits registered in all the semesters. CGPA is rounded off to two decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

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

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

where ‘M’ is the total no. of courses (as specifically required and listed under the course structure of the parent department) the student has ‘registered’ i.e., from the 1<sup>st</sup> semester onwards up to and inclusive of the 8<sup>th</sup> semester, ‘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 <sub>i</sub> )	Letter Grade	Grade Points (G <sub>i</sub> )	Credit Points C <sub>i</sub> × G <sub>i</sub>
Course 1	4	A	8	4 × 8 = 32
Course 2	4	O	10	4 × 10 = 40
Course 3	4	C	5	4 × 5 = 20
Course 4	3	B	6	3 × 6 = 18
Course 5	3	A+	9	3 × 9 = 27
Course 6	3	C	5	3 × 5 = 15
	Σ C <sub>i</sub> = 21			Σ C <sub>i</sub> × G <sub>i</sub> = 152

$$\text{SGPA} = 152/21 = 7.24$$

### Illustration of Calculation of CGPA up to 3<sup>rd</sup> 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
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

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$$\text{CGPA} = 518/69 = 7.51$$

The calculation process of CGPA illustrated above will be followed for each subsequent semester until 8th semester. The CGPA obtained at the end of 8th semester will become the final CGPA secured for entire B.Tech. programme.

- 9.10** For merit ranking or comparison purposes or any other listing, only the 'rounded off' values of the CGPAs will be used.
- 9.11** SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all courses of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.

## 10 SGPA, CGPA and Percentage of Marks

- 10.1** Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9
- 10.2** For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

## 11 Passing Standards

- 11.1** A student shall be declared successful or 'passed' in a semester, if he secures a GP  $\geq 5$  ('C' grade or above) in every course in that semester (i.e. when the student gets an SGPA  $\geq 5.0$  at the end of that particular semester); and he shall be declared successful or 'passed' in the entire undergraduate programme, only when gets a CGPA  $\geq 5.00$  ('C' grade or above) for the award of the degree as required.
- 11.2** After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.) and credits earned. There is NO exemption of credits in any case.

## 12 Award of Degree

- 12.1** A student who registers for all the specified courses as listed in the course structure and secures the required number of 160 credits (with CGPA  $\geq 5.0$ ), 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.
- 12.2** A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.2.1** A student with final CGPA (at the end of the undergraduate programme)  $\geq 8.00$ , and fulfilling the following conditions - shall be placed in 'First Class with Distinction'. However, he/she
- Should have passed all the courses in 'First Appearance' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of

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first year first semester.

- 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  $\geq 8$  shall be placed in 'First Class'.

12.2.2 Students with final CGPA (at the end of the undergraduate programme)  $\geq 7.0$  but  $< 8.00$  shall be placed in 'First Class'.

12.2.3 Students with final CGPA (at the end of the undergraduate programme)  $\geq 6.00$  but  $< 7.00$ , shall be placed in 'Second Class'.

12.2.4 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the undergraduate programme)  $\geq 5.00$  but  $< 6$ , shall be placed in 'pass class'.

12.2.5 A student with final CGPA (at the end of the undergraduate programme)  $< 5.00$  will not be eligible for the award of the degree.

12.2.6 Students fulfilling the conditions listed under item 12.2.1 alone will be eligible for award of 'Gold Medal'

### **12.3 Award of 2-Year B.Tech. Diploma Certificate**

12.3.1 A student is awarded 2-Year UG Diploma Certificate in the concerned engineering branch on completion of all the academic requirements and earned all the 80 credits (within 4 years from the date of admission) upto B. Tech. – II Year – II Semester, if the student wants to exit the 4-Year B. Tech. program and requests for the 2-Year B.Tech. (UG) Diploma Certificate.

12.3.2 The student once opted and awarded for 2-Year UG Diploma Certificate, the student will be permitted to join in B. Tech. III Year – I Semester and continue for completion of remaining years of study for 4-Year B. Tech. Degree ONLY in the next academic year along with next batch students. However, if any student wishes to continue the study after opting for exit, he/she should register for the courses in III Year I Semester before the commencement of classwork for that semester.

12.3.3 The students, who exit the 4-Year B.Tech. program after II Year of study and wish to re-join the B.Tech. program, must submit the 2-Year B.Tech. (UG) Diploma Certificate awarded to him, subject to the eligibility for completion of the degree.

12.3.4 A student may be permitted to take one year break after completion of II Year – II Semester or B. Tech. – III Year – II Semester (with university permission through the principal of the college well in advance) and can re-enter the program in next Academic Year in the same college and complete the course on fulfilling all the academic credentials within a stipulated duration i.e. double the duration of the program (Ex. within 8 Years for 4-Year program).

## **13 Withholding of Results**

**13.1** If the student has not paid the fees to the College at any stage, or has dues pending



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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.

## **14 Transitory Regulations**

### **14.1 For students detained due to shortage of attendance**

- 14.1.1 A Student who has been detained in I year of R21 Regulations due to lack of attendance, shall be permitted to join I year I Semester of R22 Regulations and he is required to complete the study of B.Tech./B. Pharmacy programme within the stipulated period of eight academic years from the date of first admission in I Year.
- 14.1.2 A student who has been detained in any semester of II, III and IV years of R18-R20 regulations for want of attendance, shall be permitted to join the corresponding semester of R22 Regulations and is required to complete the study of B.Tech./B. Pharmacy within the stipulated period of eight academic years from the date of first admission in I Year. The R22 Academic Regulations under which a student has been readmitted shall be applicable to that student from that semester. See rule (14.3) for further Transitory Regulations

### **14.2 For students detained due to shortage of credits**

- 14.2.1 A student of R21 Regulations who has been detained due to lack of credits, shall be promoted to the next semester of R22 Regulations only after acquiring the required number of credits as per the corresponding regulations of his/her first admission. The total credits required are 160 including both R21 & R22 regulations. The student is required to complete the study of B.Tech. within the stipulated period of eight academic years from the year of first admission. The R22 Academic Regulations are applicable to a student from the year of readmission. See rule (14.3) for further Transitory Regulations.

### **14.3 For readmitted students in R22 Regulations:**

- 14.3.1 A student who has failed in any course under any regulation has to pass those courses in the same regulations.
- 14.3.2 The maximum credits that a student acquires for the award of degree, shall be the sum of the total number of credits secured in all the regulations of his/her study including R22 Regulations. There is NO exemption of credits in any case
- 14.3.3 If a student is readmitted to R22 Regulations and has any course with 80% of syllabus common with his/her previous regulations, that particular course in R22 Regulations will be substituted by another course to be suggested by the Institution

Note: If a student readmitted to R22 Regulations and has not studied any courses/topics in his/her earlier regulations of study which is prerequisite for further courses in R22 Regulations, the college Principal shall conduct remedial classes to cover those courses/topics for the benefit of the students.

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## **15 Student Transfers**

- 15.1** There shall be no branch transfers after the completion of admission process.
- 15.2** The students seeking transfer to Vardhaman College of Engineering from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of Vardhaman College of Engineering, and also pass the subjects of Vardhaman College of Engineering which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of Vardhaman College of Engineering, the students have to study those subjects in VCE in spite of the fact that those subjects are repeated.
- 15.3** The transferred students from other Universities/Institutions to Vardhaman College of Engineering who are on rolls are to be provided one chance to write the CBT (for internal marks) in the equivalent subject(s) as per the clearance letter issued by the University.
- 15.4** The Vardhaman College of Engineering shall provide one chance to write the internal examinations in the equivalent course(s) to the students transferred from other universities/institutions to Vardhaman College of Engineering who are on rolls, as per the clearance (equivalence) letter issued by the Institution.

## **16 Scope**

- 16.1** The academic regulations should be read as a whole, for the purpose of any interpretation.
- 16.2** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Principal is final.
- 16.3** The Institution may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the College Academic Council.
- 16.4** Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.



# VARDHAMAN COLLEGE OF ENGINEERING

(AUTONOMOUS)

Affiliated to JNTUH, Approved by AICTE, Accredited by NAAC with A++ Grade, ISO 9001:2015 Certified  
Kacharam, Shamshabad, Hyderabad - 501218, Telangana, India

## Academic Regulations for B.Tech (Lateral Entry Scheme) from the Academic Year 2023-24

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

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 120 credits and secure 120 credits with CGPA  $\geq 5$  from II year to IV-year B.Tech. programme (LES) for the award of B.Tech. degree.

3 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.

4 The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

### 5 Promotion rule

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.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 24 credits out of 40 credits i.e., 60% 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.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 48 credits out of 80 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

6 All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

7 LES students are not eligible for 2-Year B. Tech. Diploma Certificate.

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**Malpractices Rules**  
**Disciplinary Action For Improper Conduct in Examinations**

#	Nature of Malpractices/Improper conduct	Punishment
	<b>If the student:</b>	
1 (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the course of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the course of the examination)	Expulsion from the examination hall and cancellation of the performance in that course only.
1 (b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that course only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the course of the examination (theory or practical) in which the student is appearing.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the courses of that semester/year. The hall ticket of the student is to be cancelled and sent to the Controller of Examinations.

#	Nature of Malpractices/Improper conduct	Punishment
3.	Impersonates any other student in connection with the examination. The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the courses of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining courses of that semester/year.	The student is also debarred for two consecutive semesters from class work and all SEE examinations. The continuation of the course by the student is course to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that course and all the other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred for two consecutive semesters from class work and all SEE examinations. The continuation of the course by the student is course to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that course.

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#	Nature of Malpractices/Improper conduct	Punishment
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that course and all other courses the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the courses of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.

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#	Nature of Malpractices/Improper conduct	Punishment
7.	Leaves the exam hall taking away answer script or intentionally tears off the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that course and all the other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred for two consecutive semesters from class work and all SEE examinations. The continuation of the course by the student is course to the academic regulations in connection with forfeiture of seat.
8.	Possesses any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred and forfeits the seat.

#	Nature of Malpractices/Improper conduct	Punishment
9.	If student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the student has already appeared for including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that course and all other courses the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award a suitable punishment.	