



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 of M.Tech. (Regular/Full Time) Programmes - R22, 2022-2023

1 Post-Graduate Degree Programmes (PGPs) in Engineering

Vardhaman College of Engineering (VCE) offers Two Years (Four Semesters) full-time Master of Technology (M. Tech.) Degree programmes, under Choice Based Credit System (CBCS) and the regulations published in this document are applicable to the students admitted from the academic year 2022-2023.

2 Eligibility for Admissions

- 2.1** Admission to the PGPs shall be made subject to eligibility, qualification and specializations prescribed by the University from time to time, for each specialization under each M.Tech programme.
- 2.2** Admission to the post graduate programme shall be made on the basis of either the merit rank or Percentile obtained by the qualified student in the relevant qualifying GATE Examination/ the merit rank obtained by the qualified student in an entrance test conducted by Telangana State Government (PGE CET) for M.Tech. programmes / an entrance test conducted by JNTUH/ on the basis of any other exams approved by the University, subject to reservations as laid down by the Govt. from time to time.
- 2.3** The medium of instructions for all PG Programmes will be ENGLISH only.

3 M. Tech. Programme Structure

- 3.1** The M.Tech. programs in Vardhaman College of Engineering are of semester pattern, with four semesters consisting of two academic years, each academic year having two semesters (First/Odd and Second/Even semesters). Each semester shall be of 22 weeks duration (inclusive of examinations), with a minimum of 90 instructional days per semester.
- 3.2** The two-year M.Tech. program consists of 68 credits and the student has to register for all 68 credits and earn all 68 credits for the award of M.Tech. degree. There is NO exemption of credits in any case.
- 3.3** The student shall not take more than four academic years to fulfill all the academic requirements for the award of M.Tech. degree from the date of commencement of first year first semester, failing which the student shall forfeit the seat in M.Tech. programme.
- 3.4** UGC/AICTE specified definitions/descriptions are adopted appropriately for various terms and abbreviations used in these PG academic regulations.

3.5 Semester Scheme

Each semester shall have ‘Continuous Internal Evaluation (CIE)’ and ‘Semester End Examination (SEE)’. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) are taken as ‘references’ for the present set of regulations. The terms ‘subject’ and ‘course’ imply the same meaning here and refer to ‘theory subject’, or ‘lab course’, or ‘design/drawing course’, or ‘mini-project with seminar’, or ‘Dissertation’, as the case may be.

3.6 Credit Courses

All subjects/courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/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
- One credit for two hours/ week/semester for laboratory/ practical (P) courses or tutorials (T)

Other student activities like study tour, guest lecture, conference/workshop participations, technical paper presentations and mandatory courses (Non-credit audit courses) will not carry any credits.

3.7 Course Classification

All subjects/courses offered for the Post-Graduate Programme in Engineering (M.Tech. Degree Programme) are broadly classified as follows.

| S. No. | Broad Course Classification | Course Group/ Category | Course Description |
|--------|-----------------------------|-----------------------------|--|
| 1 | Core Courses (CoC) | PC – Professional Core | Includes subjects related to the parent discipline/department/ branch of Engineering |
| 2 | | Dissertation | M.Tech. project or dissertation or major project |
| 3 | | Mini Project with Seminar | Seminar based on core contents related to parent discipline/ department/ branch of engineering |
| 4 | Elective Courses (EIE) | PE – Professional Electives | Includes elective courses related to the parent discipline/department/branch of Engineering |
| 5 | | OE – Open Electives | Elective courses which include interdisciplinary courses or courses in an area outside the parent discipline/department/ branch of engineering |

| | | | |
|---|-------------------|---|--------------------------|
| 6 | Mandatory Courses | - | Non-credit audit courses |
|---|-------------------|---|--------------------------|

4 Course Registration

- 4.1 A ‘faculty advisor or counselor’ shall be assigned to each specialization, who will advise on the Post Graduate Programme (PGP), its course structure and curriculum, choice/option for subjects/ courses, based on his competence, progress, pre-requisites and interest.
- 4.2 The academic section of the college invites ‘registration forms’ from students within 15 days from the commencement of class work through ‘online submissions’, ensuring ‘date and time stamping’. The online registration requests for any ‘current semester’ shall be completed 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 his faculty advisor, which should be submitted to the college academic section through the Head of Department (a copy of it being retained with Head of Department, Faculty Advisor and the Student).
- 4.4 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.
- 4.5 Course options exercised through online registration are final and cannot be changed, nor can they be inter-changed; further, alternate choices also will not be considered. However, if the course that has already been listed for registration by Institution in a semester could not be offered due to unforeseen or unexpected reasons, then the student will be allowed to have alternate choice either for a new course, if it is offered, or for another existing course (subject to availability of seats). Such alternate arrangements will be made by the Head of Department, with due notification and time-framed schedule, within the first week from the commencement of class-work for that semester.

5 Attendance Requirements

The programmes are offered based on a unit system with each subject being considered a unit. Attendance is calculated separately for each subject.

- 5.1 Attendance in all classes (Lectures/Laboratories) is compulsory. The minimum required attendance in each theory course (also for mandatory audit courses) including the attendance of mid-term examination / laboratory etc. is 75%. Two periods of attendance for each theory course shall be considered, if the student appears for the mid-term examination of that course. A student shall not be permitted to appear for the Semester End Examinations (SEE), if his attendance is less than 75%.
- 5.2 A student’s seminar report and presentation on mini-project shall be eligible for evaluation, only if he ensures a minimum of 75% of his attendance in seminar presentation

classes on mini-project during that semester.

- 5.3** Condoning of shortage of attendance (between 65% and 75%) up to a maximum of 10% (considering the days of attendance in sports, games, NCC, NSS activities and Medical grounds) in each subject (Theory/Lab/Mini-Project with Seminar) of a semester shall be granted by the College Academic Committee on genuine reasons.
- 5.4** A prescribed fee per course shall be payable for condoning shortage of attendance after getting the approval of College Academic Committee for the same. The College Academic Committee shall maintain relevant documents along with the request from the student.
- 5.5** Shortage of attendance below 65% in any course shall in no case be condoned.
- 5.6** A student, whose shortage of attendance is not condoned in any course(s) (Theory/Lab/Mini-Project with Seminar) in any semester, is considered as 'Detained in that course(s), and is not eligible to write Semester End Examination(s) of such course(s), (in case of Mini-Project with Seminar, his/her Mini-Project with Seminar Report or Presentation are not eligible for evaluation) in that semester; and he/she has to seek re-registration for those course(s) in subsequent semesters, and attend the same as and when offered.
- 5.7** A student fulfills the attendance requirement in the present semester, shall not be eligible for readmission into the same class.
- 5.8 a)** A student shall put in a minimum required attendance in at least three theory courses (excluding mandatory (non-credit audit) course) in first year I semester for promotion to first year II semester.
- b)** A student shall put in a minimum required attendance in at least three theory courses (excluding mandatory (non-credit audit) course) in first year II semester for promotion to second year I semester.

6 Academic Requirements

The following academic requirements must be satisfied, in addition to the attendance requirements mentioned in item no. 5. The performance of the candidate in each semester shall be evaluated subject- wise, with a maximum of 100 marks per subject / course (theory / practical), based on Continuous Internal Evaluation and Semester End Examination.

- 6.1** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/course, if he secures not less than:
- 40% of Marks (24 out of 60 marks) in the Semester End Examination;
 - 40% of Marks in Continuous Internal Evaluation (16 out of 40 marks allotted for CIE); and
 - A minimum of 50% of marks in the sum total of CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of Letter Grades this implies securing 'B' Grade or above in a course.
- 6.2** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Mini-Project with Seminar, if student secures not less than 50% marks (i.e. 50 out of 100 allotted marks). The student would be treated as failed, if student (i) does not submit a seminar report on Mini-Project or does not make a

presentation of the same before the evaluation committee as per schedule or (ii) secures less than 50% marks in Mini Project with seminar evaluation. The failed student shall reappear for the above evaluation when the notification for supplementary examination is issued.

- 6.3** A student shall register for all courses for total of 68 credits as specified and listed in the course structure for the chosen specialization, put in the required attendance and fulfill the academic requirements for securing 68 credits obtaining a minimum of 'B' Grade or above in each subject, and all 68 credits securing Semester Grade Point Average (SGPA) ≥ 6.0 (in each semester) and final Cumulative Grade Point Average (CGPA) (i.e., CGPA at the end of PGP) ≥ 6.0 , and shall pass all the mandatory audit courses to complete the PGP successfully.

Note:

(1) The SGPA will be computed and printed on the marks memo only if the candidate passes in all the courses offered and gets minimum B grade in all the courses.

(2) CGPA is calculated only when the candidate passes in all the courses offered in all the semesters.

- 6.4** Marks and Letter Grades obtained in all those courses covering the above specified 68 credits alone shall be considered for the calculation of final CGPA, which will be indicated in the Grade Card /Marks Memo of second year second semester.
- 6.5** If a student registers for extra course(s) (in the parent department or other departments/ branches of engineering) other than those listed courses totaling to 68 credits as specified in the course structure, the performance in extra course(s) (although evaluated and graded using the same procedure as that of the required 68 credits) will not be considered while calculating the SGPA and CGPA. For such extra course(s) 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 items 5 and 6.1 - 6.3.
- 6.6** When a student is detained due to shortage of attendance in any course(s) in any semester, no Grade allotment will be made for such course(s). However, he is eligible for re-registration of such course(s) in the subsequent semester(s), as and when next offered, with the academic regulations of the batch into which he is re-registered, by paying the prescribed fees per course. In all these re-registration cases, the student shall have to secure a fresh set of Continuous Internal Evaluation and Semester End Examination marks for performance evaluation in such course(s), and SGPA/CGPA calculations.
- 6.7** A student eligible to appear for the Semester End Examination in any course, but absent from it or failed (failing to secure 'B' Grade or above), may reappear for that course at the supplementary examination as and when conducted. In such cases, his CIE Marks assessed earlier for that course will be carried over, and added to the marks secured in the supplementary examination, for the purpose of evaluating his performance in that course.
- 6.8** A student who fails to earn 68 credits as per the specified course structure, and as

indicated above, within four academic years from the date of commencement of his first year first semester, shall forfeit his seat in M.Tech. programme and his admission shall stand cancelled.

7 Evaluation - Distribution and Weightage of Marks

The performance of a student in each semester shall be evaluated subject- wise (irrespective of credits assigned) for a maximum of 100 marks.

7.1 The performance of a student in every subject/course (including practicals and Project) will be evaluated for 100 marks each, with 40 marks allotted for CIE (Continuous Internal Evaluation) and 60 marks for SEE (Semester End-Examination). The Continuous Internal Evaluation shall be made based on the average of marks secured in the two Continuous Assessments (Mid-Term Examinations) conducted, first continuous assessment in the middle of the semester and second continuous assessment during the last week of instruction.

7.2 In Continuous Internal Evaluation (CIE), 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:
 - a. Part - A: Objective/Quiz/Short answer type questions for 10 marks
 - b. 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 Assessment (out of 40) are distributed as:

2. Assignment for 5 marks. (Average of 2 Assignments each for 5 marks)
3. Course Viva-Voce/PPT/Poster Presentation/ Case Study 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.
 - 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 details of the end semester question paper pattern are as follows:

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 course, shall have to earn 40% of marks (i.e. 16 marks out of 40 marks) in CIE, 40% of marks (i.e. 24 marks out of 60) in SEE and Overall 50% of marks (i.e. 50 marks out of 100 marks) both CIE and SEE marks taking together. The student is eligible to write Semester End Examination of the concerned course, if the student scores $\geq 40\%$ (16 marks) of 40 Continuous Internal Examination (CIE) marks.

In case, the student appears for Semester End Examination (SEE) of the concerned course but not scored minimum 40% of CIE marks (16 marks out of 40 internal marks), his performance in that course in SEE shall stand cancelled inspite of appearing the SEE.

7.3 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, 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.
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 from the other colleges which will be decided by the examination branch of the Institution based on the panel of examiners submitted by concerned 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 course, shall have to earn 40% of marks (i.e. 16 marks out of 40 marks) in CIE, 40% of marks (i.e. 24 marks out of 60) in SEE and Overall 50% of marks (i.e. 50 marks out of 100 marks) both CIE and SEE marks taking together. The student is eligible to write Semester End Examination of the concerned course, if the student scores $\geq 40\%$ (16 marks) of 40 Continuous Internal Examination (CIE) marks.

In case, the student appears for Semester End Examination (SEE) of the concerned course but not scored minimum 40% of CIE marks (16 marks out of 40 internal marks), his performance in that course in SEE shall stand cancelled inspite of appearing the SEE.

- 7.4** For conducting laboratory end examinations of all PG 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.
- 7.5** There shall be Mini-Project with Seminar during I year II semester for internal evaluation of 100 marks. The Departmental Academic Committee (DAC) will review the progress of the mini project during the seminar presentations and evaluate the same for 50 marks. Mini-Project Viva-Voce will be evaluated by the DAC for another 50 marks before the semester end examinations. Student shall carryout the mini project in consultation with the mini project supervisor which may include critically reviewing the literature, project implementation and submit it to the department in the form of a report and shall make an oral presentation before the DAC consisting of Head of the Department, Mini Project supervisor and two other senior faculty members of the department. The student has to secure a minimum of 50% of marks in i) seminar presentation and ii) mini-project viva voce, to be declared successful. If he fails to obtain the minimum marks, he has to reappear for the same as and when scheduled.
- 7.6** Every candidate shall be required to submit a dissertation on a topic approved by the Dissertation Review Committee.
- 7.7** Dissertation Review Committee (DRC) shall be constituted with the Head of the Department as Chairperson, Dissertation Supervisor and one senior faculty member of the Department offering the M.Tech. programme.

- 7.8** Registration of Dissertation Work: A candidate is permitted to register for the Dissertation Work after satisfying the attendance requirement in all the subjects, both theory and laboratory.
- 7.9** After satisfying 7.8, a candidate must present in Dissertation Work Review - I, in consultation with his Dissertation Supervisor, the title, objective and plan of action of his Dissertation work to the Dissertation Review Committee (DRC) for approval within four weeks from the commencement of Second year First Semester. Only after obtaining the approval of the DRC can the student initiate the Dissertation work.
- 7.10** If a candidate wishes to change his supervisor or topic of the Dissertation, he can do so with the approval of the DRC. However, the DRC shall examine whether or not the change of topic/supervisor leads to a major change of his initial plans of Dissertation proposal. If yes, his date of registration for the project work starts from the date of change of Supervisor or topic as the case may be.
- 7.11** A candidate shall submit his Dissertation progress report in two stages at least with a gap of three months between them.
- 7.12** The work on the Dissertation shall be initiated at the beginning of the II year and the duration of the Dissertation is two semesters. A candidate is permitted to submit Dissertation Thesis only after successful completion of all theory and practical courses with the approval of DRC not earlier than 40 weeks from the date of approval of the Dissertation work. For the approval of DRC, the candidate shall submit the draft copy of thesis to the Head of the Department and make an oral presentation before the DRC.
- 7.13** The Dissertation Work Review - II in II Year I Semester carries 100 internal marks. Evaluation should be done by the DRC for 50 marks and the Supervisor will evaluate the work for the other 50 marks. The Supervisor and DRC will examine the Problem Definition, Objectives, Scope of Work, Literature Survey in the same domain and progress of the Dissertation Work. A candidate has to secure a minimum of 50% of marks to be declared successful in Dissertation Work Review - II. If he fails to obtain the minimum required marks, he has to reappear for Dissertation Work Review - II as and when conducted.
- 7.14** The Dissertation Work Review - III in II Year II Sem. carries 100 internal marks. Evaluation should be done by the DRC for 50 marks and the Supervisor will evaluate it for the other 50 marks. The DRC will examine the overall progress of the Dissertation Work and decide whether or not the Dissertation is eligible for final submission. A candidate has to secure a minimum of 50% of marks to be declared successful in Dissertation Work Review - III. If he fails to obtain the required minimum marks, he has to reappear for Dissertation Work Review - III as and when conducted. For Dissertation Evaluation (Viva Voce) in II Year II Semester there are external marks of 100 and it is evaluated by the external examiner. The candidate has to secure a minimum of 50% marks in Dissertation Evaluation (Viva- Voce) examination.
- 7.15** Dissertation Work Reviews - II and III shall be conducted in phase I (Regular) and Phase II (Supplementary). Phase II will be conducted only for unsuccessful students

in Phase I. The unsuccessful students in Dissertation Work Review - II (Phase II) shall reappear for it at the time of Dissertation Work Review - III (Phase I). These students shall reappear for Dissertation Work Review - III in the next academic year at the time of Dissertation Work Review - II only after completion of Dissertation Work Review - II, and then Dissertation Work Review - III follows. The unsuccessful students in Dissertation Work Review - III (Phase II) shall reappear for Dissertation Work Review - III in the next academic year only at the time of Dissertation Work Review - II (Phase I).

- 7.16** After approval from the DRC, a soft copy of the thesis should be submitted for ANTI-PLAGIARISM check and the plagiarism report should be submitted to the Controller of Examination and be included in the final thesis.

The Thesis will be accepted for submission, if the similarity index is less than 30%. If the similarity index has more than the required percentage, the student is advised to modify accordingly and re-submit the soft copy of the thesis after one month. The maximum number of re-submissions of thesis after plagiarism check is limited to TWO. The candidate has to register for the Dissertation work and work for two semesters. After three attempts, the admission is liable to be cancelled. The college authorities are advised to make plagiarism check of every soft copy of theses before submissions.

- 7.17** Three copies of the Dissertation Thesis certified by the supervisor shall be submitted to the Institute, after submission of a research paper related to the Dissertation work in a UGC approved journal. A copy of the submitted research paper shall be attached to thesis.

- 7.18** The thesis shall be adjudicated by an external examiner selected by the Principal/Controller of Examination of the Institution. For this, Head of the Department shall submit a panel of three examiners from among the list of experts in the relevant specialization as submitted by the supervisor concerned and Project Coordinator.

- 7.19** If the report of the external examiner is unsatisfactory, the candidate shall revise and resubmit the Thesis. If the report of the examiner is unsatisfactory again, the thesis shall be summarily rejected. Subsequent actions for such dissertations may be considered, only on the specific recommendations of the external examiner and /or Dissertation Review Committee. No further correspondence in this matter will be entertained, if there is no specific recommendation for resubmission.

- 7.20** If the report of the examiner is satisfactory, the Head of the Department shall coordinate and make arrangements for the conduct of Dissertation Viva-Voce examination. The Dissertation Viva-Voce examination shall be conducted by a board consisting of the Supervisor, Head of the Department and the external examiner who adjudicated the Thesis. The candidate has to secure a minimum of 50% of marks in Dissertation Evaluation (Viva-Voce) examination.

- 7.21** If he fails to fulfill the requirements as specified in 7.21, he will reappear for the Dissertation Viva-Voce examination only after three months. In the reappeared examination also, if he fails to fulfill the requirements, he will not be eligible for the award of the

degree, unless he is asked to revise and resubmit his Dissertation Work by the board within a specified time period (within four years from the date of commencement of his first year first semester).

- 7.22** The Dissertation Viva-Voce External examination marks must be submitted to the Controller of Examination/Examination Branch on the day of the examination.
- 7.23** For mandatory non-credit Audit courses, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course. These marks should also be uploaded along with the internal marks of other subjects.
- 7.24** No marks or letter grades shall be allotted for mandatory non-credit Audit Courses. Only Pass/Fail shall be indicated in Grade Card.

8 Re-Admission/Re-Registration

- 8.1 Re-Admission for Discontinued Student:** A student, who has discontinued the M.Tech. degree programme due to any reason whatsoever, may be considered for 'readmission' into the same degree programme (with the same specialization) with the academic regulations of the batch into which he gets readmitted, with prior permission from the authorities concerned, subject to item 6.6.
- 8.2** If a student is detained in a subject (s) due to shortage of attendance in any semester, he may be permitted to re-register for the same subject(s) in the same category (core or elective group) or equivalent subject, if the same subject is not available, as suggested by the Board of Studies of that department, as and when offered in the subsequent semester(s), with the academic regulations of the batch into which he seeks re-registration, with prior permission from the authorities concerned, subject to item 3.2.
- 8.3** A candidate shall be given one chance to re-register and attend the classes for a maximum of two subjects, if the internal marks secured by a candidate are less than 40% and failed in those subjects but fulfilled the attendance requirement. A candidate must re-register for failed subjects within four weeks of commencement of the class work and secure the required minimum attendance. In the event of the student taking this chance, his Continuous Internal Evaluation (internal) marks and Semester End Examination marks obtained in the previous attempt stand cancelled.

9 Examinations and Assessment - The Grading System

- 9.1** Grades will be awarded to indicate the performance of each student in each Theory Subject, or Lab/Practicals, or Mini Project with Seminar, Dissertation, etc., based on the percentage of marks obtained in CIE + SEE (Continuous Internal Evaluation + Semester End Examination, both taken together) as specified in Item 7 above, and a corresponding Letter Grade shall be given.
- 9.2** As a measure of the student's performance, a 10-point Absolute Grading System using the following Letter Grades (UGC Guidelines) and corresponding percentage of marks shall be followed:

| Percentage of Marks Secured in a subject / Course (Class Intervals) | Letter Grade (UGC Guidelines) | Grade Points |
|---|-------------------------------|--------------|
| ≥ 90 | O (Outstanding) | 10 |
| ≥ 80 and < 90 | A+ (Excellent) | 9 |
| ≥ 70 and < 80 | A (Very Good) | 8 |
| ≥ 60 and < 70 | B+ (Good) | 7 |
| ≥ 50 and < 60 | B (Average) | 6 |
| Below 50 | F (Fail) | 0 |
| ABSENT | AB (Absent) | 0 |

- 9.3** A student obtaining ‘F’ Grade in any Subject is deemed to have ‘failed’ and is required to reappear as ‘Supplementary Candidate’ for the Semester End Examination (SEE), as and when conducted. In such cases, his Internal Marks (CIE Marks) in those subjects will remain as obtained earlier.
- 9.4** If a student has not appeared for the examinations, ‘Ab’ Grade will be allocated to him for any subject and shall be considered ‘failed’ and will be required to reappear as ‘Supplementary Candidate’ for the Semester End Examination (SEE), as and when conducted.
- 9.5** A Letter Grade does not imply any specific marks percentage; it is only the range of percentage of marks.
- 9.6** In general, a student shall not be permitted to repeat any Subject/ Course (s) only for the sake of ‘Grade Improvement’ or ‘SGPA/ CGPA Improvement’.
- 9.7** A student earns Grade Point (GP) in each Subject/ Course, on the basis of the Letter Grade obtained by him in that Subject/ Course. The corresponding ‘Credit Points’ (CP) are computed by multiplying the Grade Point with Credits for that particular Subject/ Course.

$$\text{Credit Points (CP)} = \text{Grade Point (GP)} \times \text{Credits For a course}$$

- 9.8** The student passes the Subject/ Course only when he gets $GP \geq 6$ (B Grade or above).
- 9.9** 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.

- 9.10** The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student over all Semesters considered for registration. The CGPA is

the ratio of the Total Credit Points secured by a student in ALL registered Courses 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 Second Semester onwards, at the end of each Semester, as per the formula

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

(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 1st semester onwards up to and inclusive of the Semester S (obviously $M > N$), 'j' is the course indicator index (takes into account all courses from 1 to S semesters), C_j is the no. of credits allotted to the jth course, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that jth 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 | 4 | O | 10 | $4 \times 10 = 40$ |
| Course 3 | 4 | B | 6 | $4 \times 6 = 24$ |
| Course 4 | 3 | B | 6 | $3 \times 6 = 18$ |
| Course 5 | 3 | A+ | 9 | $3 \times 9 = 27$ |
| Course 6 | 3 | B | 6 | $3 \times 6 = 18$ |
| | $\sum C_i = 21$ | | | $\sum C_i \times G_i = 159$ |

$$\text{SGPA} = 159/21 = 7.57$$

Illustration of calculation of CGPA

| Semester | Credits | SGPA | Credits * SGPA |
|--------------|---------|------|----------------|
| Semester I | 24 | 7 | $24*7 = 168$ |
| Semester II | 24 | 6 | $24*6 = 144$ |
| Semester III | 24 | 6.5 | $24*6.5 = 156$ |
| Semester IV | 24 | 6 | $24*6 = 144$ |
| | 96 | | 612 |

$$\text{CGPA} = 612/96 = 6.37$$

10 Award of Degree and Class

10.1 If a student who registers for all the specified Courses as listed in the Course Structure, satisfies all the Course Requirements, and passes the examinations prescribed in the entire PG Programme (PGP), and secures the required number of 68 Credits (with CGPA ≥ 6.0), shall be declared to have 'QUALIFIED' for the award of the M.Tech. Degree in the chosen Branch of Engineering and Technology with the specialization that he was admitted into.

10.2 Award of Class

After a student has earned the requirements prescribed for the completion of the programme and is eligible for the award of M.Tech. Degree, he shall be placed in one of the following three classes based on the CGPA:

| Class Awarded | CGPA |
|------------------------------|--------------------------------|
| First Class with Distinction | ≥ 7.75 |
| First Class | $6.75 \leq \text{CGPA} < 7.75$ |
| Second Class | $6.00 \leq \text{CGPA} < 6.75$ |

A student with final CGPA (at the end of the PGP) < 6.00 shall not be eligible for the Award of Degree.

11 Withholding of Results

If the student has not paid the dues, if any, to the Institution or if any case of indiscipline is pending against him, the result and degree of the student will be withheld and he will not be allowed into the next semester.

12 General

12.1 Credit: A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

12.2 Credit Point: It is the product of grade point and number of credits for a course.

12.3 Wherever the words "he", "him", "his", occur in the regulations, they shall include "she", "her".

12.4 The academic regulation should be read as a whole for the purpose of any interpretation.

12.5 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Institution is final.

12.6 The Institution may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the Institution.

Malpractices Rules
Disciplinary Action For Improper Conduct in Examinations

| # | Nature of Malpractices/Improper conduct | Punishment |
|----------|---|--|
| | If the student: | |
| 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. |

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| 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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| 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. |
| 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. |

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| 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. |
| 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. |

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| 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 through Principal for further action to award a suitable punishment. | |