

## **FOREWORD**

CMR Technical Campus, established in the year 2009, Approved by AICTE, New Delhi, Permanently Affiliated to JNTUH, twice Accredited by NBA and has been bestowed with NAAC 'A' Grade of 3.12 score on 04 scale in February 2019 for its remarkable academic accomplishments accompanied by its unflinching spirit and dedication to impart quality technical education to the deserving aspirants. The institution has commenced functioning independently within the set norms prescribed by UGC and AICTE. The performance of the institution manifests the confidence that the prestigious monitoring body, the UGC has on it, in terms of upholding its spirit and sustenance of the expected standards of functioning on its own consequently facilitating the award of degrees for its students. Thus, an autonomous institution is provided with the necessary freedom to have its own curriculum, examination system and monitoring mechanism, independent of the affiliating University but under its observance.

CMR Technical Campus takes pride for having won the confidence of such distinguished academic bodies meant for monitoring the quality in technology education. Besides, the institution is delighted to sustain the same spirit of discharging the responsibilities that it has been conveying since a decade to attain the current academic excellence, if not improving upon the standards and ethics. Consequently, statutory bodies such as the Academic Council and the Boards of Studies have been constituted under the supervision of the Governing Body of the College and with the recommendations of the JNTU Hyderabad, to frame the regulations, course structure and syllabi for autonomous status.

The autonomous regulations, course structure and syllabi have been framed in accordance with the vision and mission of the institution along with certain valuable suggestions from professionals of various ancillary fields such as the academics, the industry and the research, all with a noble vision to impart quality technical education and contribute in catering full-fledged engineering and management graduates to the society.

All the faculty members, the parents and the students are requested to study all the rules and regulations carefully and approach the Director to seek any clarifications, if needed, without presumptions, to avoid unwanted subsequent inconveniences and embarrassments. The cooperation of all the stake holders is sought for the successful implementation of the autonomous system in the larger interests of the institution and for brightening the career prospects of engineering and management graduates.

**DIRECTOR**

## CMR TECHNICAL CAMPUS

### **Vision:**

To impart quality education in serene atmosphere thus strive for excellence in Technology and Research.

### **Mission:**

- To create state of art facilities for effective Teaching – Learning process.
- Pursue and Disseminate knowledge based research to meet the needs of Industry & Society.
- Infuse Professional, Ethical and Societal values among Learning Community.

### **Quality Policy:**

- The management is committed in assuring quality service to all its stakeholders like parents, students, alumni, employees, employers and the community.
- Continual quality improvement by establishing and implementing mechanisms and modalities.
- Transparency in procedures and access to information and actions.

### **Core Values:**

The CMR Technical Campus is guided by the following core values in delivering its mission and pursuing its vision.

- **A**ccountability: Demonstrate responsibility for our actions; establish and communicate clearly defined and articulated goals and objectives.
- **B**enchmark: To develop and pursue high standards by encouraging skill development and entrepreneurship to meet industry and society needs.
- **C**ommitment: Focus on students and stakeholders needs; continuously evaluate and improve academics, research and infrastructure.
- **D**ignity: Recognize the expertise of all members of the institute and encourage individual contribution and also include stakeholders in the decisions that affect them.

**CMR TECHNICAL CAMPUS****UGC AUTONOMOUS****Kandlakoya (V), Medchal Road, Hyderabad-501401, Telangana State (India)****Academic Regulations of M. Tech (Regular/Full Time) Programmes [R22]****Choice Based Credit System (CBCS)****(Effective for the students admitted into I year from the Academic Year 2022-23 and onwards)****1.0 Post-Graduate Degree Programmes in Engineering & Technology:**

CMR Technical Campus (CMRTC) offers **Two Years (Four Semesters)** full-time Master of Technology (M. Tech) Degree programme, under CBCS in different branches of Engineering and Technology with different specializations.

**2.0 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 (PGECET) for M. Tech. programmes.
- 2.3** The medium of instructions for all PG Programmes will be ENGLISH only.

**3.0 M. Tech. Programme (PGP in E & T) Structure**

- 3.1** The M. Tech Programmes in E & T of JNTUH 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, as listed below:

**3.3.1 Semester Scheme**

Each Semester shall have 'Continuous Internal Evaluation (CIE)' and 'End Semester Examination (ESE)'. 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 Subject', or 'Mini Project with Seminar', or 'Dissertation', as the case may be.

**3.3.2 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 (*Audit Courses*) will not carry any credits.

### 3.3.3 Subject Course Classification

All subjects/courses offered for the Post-Graduate Programme in E & T (M. Tech Degree Programme) are broadly classified as follows. The institute has followed in general the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Core Courses (CC)	PC - Professional Core	Includes subjects related to the parent Discipline / department / branch of Engineering
		Dissertation	M. Tech Project or PG Project or Major Project
		Mini Project with Seminar	Seminar based on core contents related to Parent Discipline/ Department/ Branch of Engineering
2	Elective Courses (EC)	PE - Professional Electives	Includes elective subjects related to the parent discipline/department/branch of Engineering
		OE - Open Electives	Elective subjects which include interdisciplinary subjects or subjects in an area outside the parent discipline/ department / branch of Engineering
3	<i>Mandatory Courses</i>	--	<i>Non-Credit Audit Courses</i>

### 4. 0 Course Registration

- 4.1** A 'Faculty Advisor or Mentor' 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 'ON-LINE SUBMISSIONS', ensuring 'DATE and TIME Stamping'. The ON-LINE Registration Requests for any 'CURRENT SEMESTER' shall be completed BEFORE the commencement of ESEs (End Semester Examinations) of the 'PRECEDING SEMESTER'.
- 4.3** A Student can apply for ON-LINE 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 ON-LINE Registration for the Subject(s) / Course(s) under a given/ specified Course Group/ Category as listed in the Course Structure, only the first mentioned Subject/ Course in that Category will be taken into consideration.

**4.5** Subject/ Course Options exercised through ON-LINE Registration are final and CANNOT be changed, nor can they be inter-changed; further, alternate choices also will not be considered. However, if the Subject/ Course that has already been listed for Registration by the Institute 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 Subject, if it is offered, or for another existing Subject (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.

## **5.0 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 subject (*also mandatory (audit) courses*) including the attendance of mid-term examination / Laboratory etc. is 75%. Two periods of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject. *This attendance should also be included in the final attendance. The attendance of mandatory (audit) courses shall be considered.* A student shall not be permitted to appear for the End Semester Examinations (ESE), 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 subject 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 subject shall in **no case be condoned**.

**5.6** A Student, whose shortage of attendance is not condoned in any Subject(s) (Theory/Lab/Mini Project with Seminar) in any Semester, is considered as 'Detained in that Subject(s), and is not eligible to write End Semester Examination(s) of such Subject(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 Subject(s) in subsequent Semesters, and attend the same as and when offered.

5.7 A student fulfilling 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 subjects (excluding mandatory (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 subjects (excluding mandatory (audit) course)** in first Year II semester for promotion to second Year I Semester.

## 6.0 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 Internal Evaluation and End Semester 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 the internal examinations (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 ESE(End Semester Examination) taken together; in terms of Letter Grades this implies securing 'B' Grade or above in a subject.

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 subjects 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 subjects offered and gets minimum B grade in all the subjects.**

**(2) CGPA is calculated only when the candidate passes in all the subjects offered in all the semesters**

- 6.4** Marks and Letter Grades obtained in all those subjects 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 subject(s) (in the parent department or other departments/branches of Engineering) other than those listed subjects totaling to **68** credits as specified in the course structure, the performance in extra subject(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 subject(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 subject(s) in any semester, no Grade allotment will be made for such subject(s). However, he is eligible for re-registration of such subject(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 subject. In all these re-registration cases, the student shall have to secure a fresh set of internal marks and End Semester Examination marks for performance evaluation in such subject(s), and SGPA/CGPA calculations.
- 6.7** A student eligible to appear for the End Semester Examination in any subject, but absent from it or failed (failing to secure 'B' Grade or above), may reappear for that subject at the supplementary examination as and when conducted. In such cases, his Internal Marks assessed earlier for that subject will be carried over, and added to the marks secured in the supplementary examination, for the purpose of evaluating his performance in that subject.
- 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**.

**7.0 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 (End Semester Examination). The Continuous Internal Evaluation shall be made based on the average of the marks secured in the two Mid-Term Examinations conducted, first Mid-Term examinations in the middle of the Semester and second Mid-Term examinations during the last week of instruction.

7.2 In CIE, for theory subjects, during a semester, there shall be two mid-term examinations. Each Mid-Term examination 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. Mid-Term Examination for 30 marks:
  - a. Part - A: Descriptive paper for Part-A (10 marks) Consists of one compulsory question with 5 sub questions (2, 2, 1 questions from Units I, II, III respectively in I Mid-Term and 1, 2, 2 questions from Units III, IV, V respectively in II Mid-Term) carrying 2 marks each.
  - b. Part – B: Descriptive paper for Part-B (20 marks) consists of 3 questions (May contain sub questions) carrying 8 marks, 8 marks & 4 marks from Units I, II, III respectively in I Mid-Term and 4 marks, 8 marks & 8 marks from Units III, IV, V respectively in II Mid-Term with internal choice. The student has to answer all the questions.

The **average of the two Mid-Term examinations** (I Mid-Term & II Mid-Term) shall be taken as the final marks for Mid –Term examination (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. Subject Viva-Voce/PPT/Poster Presentation/ Case Study on a topic in the concerned subject for 5 marks.

While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus.

Five (5) marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-term examination, and the second assignment should be submitted before the conduct of the second mid-term examination. The average of the two assignments shall be taken as the final marks for assignment (for 5 marks).

Subject Viva-Voce/PPT/Poster Presentation/ Case Study on a topic in the subject concerned for 5 marks before II Mid-Term Examination.

The student, in each subject, 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 ESE and Overall 50% of marks (i.e. 50 marks out of 100 marks) both CIE and ESE marks taking together.

The student is eligible to write End Semester Examination of the concerned subject, if the student scores  $\geq 40\%$  (16 marks) of 40 Continuous Internal Evaluation (CIE) marks.

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

The details of the end semester question paper pattern are as follows:

7.3 The End Semester Examinations (ESE), for theory subjects, 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 (Two from each unit) carrying equal marks.



- Part-B consists of five questions (numbered from 2 to 11) 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 End Semester Examination is 3 hours.

**7.4** For practical subjects there shall be a Continuous Internal Evaluation (CIE) during the semester for 40 marks and 60 marks for End Semester Examination. Out of the 40 marks for internal evaluation:

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 End Semester Examination (ESE) for practical subject / course shall be conducted at the end of the semester by one internal and one external examiner appointed by the Head of the Institution as per the recommendation of the concerned Head of the Department.

In the End Semester 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 subject, 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 ESE and Overall 50% of marks (i.e. 50 marks out of 100 marks) both CIE and ESE marks taking together.

The student is eligible to write End Semester Examination of the concerned subject, if the student scores  $\geq 40\%$  (16 marks) of 40 Continuous Internal Evaluation (CIE) marks.

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

**7.5** 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. The external examiner should be selected from outside the College.

**7.6** 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 End Semester 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.
- 7.7** Every candidate shall be required to submit a dissertation on a topic approved by the Dissertation Review Committee.
- 7.8** A 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.
- 7.9** 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.
- 7.10** After satisfying 7.9, 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.
- 7.11** 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.
- 7.12** A candidate shall submit his Dissertation progress report in two stages at least with a gap of **three** months between them.
- 7.13** 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.
- 7.14** **The Dissertation Work Review - II** in II Year I Sem. carries internal marks of 100. 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.

- 7.15 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 Sem. 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.
- 7.16** 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).
- 7.17** 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 Institute 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.
- 7.18** Three copies of the Dissertation Thesis certified by the supervisor shall be submitted to the College/School/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.
- 7.19** The thesis shall be adjudicated by an external examiner selected by the Institute. For this, the Principal of the College/School/Institute shall select an examiner from the panel of **three** examiners among the list of experts in the relevant specialization as submitted by the supervisor concerned and Head of the Department.
- 7.20** 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.

- 7.21** 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.
- 7.22** 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).
- 7.23** The Dissertation Viva-Voce External examination marks must be submitted to the Institute on the day of the examination.
- 7.24** For mandatory (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.
- 7.25** No marks or letter grades shall be allotted for mandatory (audit) courses. Only Pass/Fail shall be indicated in Grade Card.

## **8.0 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 only one-time chance to re-register and attend the classes for a maximum of two subjects in a semester**, 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 End Semester Examination marks obtained in the previous attempt stand cancelled.

## 9.0 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 + ESE (Continuous Internal Evaluation + End Semester 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:

<b>% of Marks Secured (Class Intervals)</b>	<b>Letter Grade</b>	<b>Grade Points</b>
90% and above ( $\geq 90\%$ , $\leq 100\%$ )	O (Outstanding)	10
Below 90% but not less than 80% ( $\geq 80\%$ , $< 90\%$ )	A <sup>+</sup> (Excellent)	9
Below 80% but not less than 70% ( $\geq 70\%$ , $< 80\%$ )	A (Very Good)	8
Below 70% but not less than 60% ( $\geq 60\%$ , $< 70\%$ )	B <sup>+</sup> (Good)	7
Below 60% but not less than 50% ( $\geq 50\%$ , $< 60\%$ )	B (above Average)	6
Below 50% ( $< 50\%$ )	F (Fail)	0
Absent	AB	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 End Semester Examination (ESE), 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 End Semester Examination (ESE), 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.

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

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 Subjects/ 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

$$\text{SGPA} = \left\{ \sum_{i=1}^N C_i G_i \right\} / \left\{ \sum_{i=1}^N C_i \right\} \dots \text{For each Semester,}$$

where 'i' is the Subject indicator index (taking into account all Subjects in a Semester), 'N' is the no. of Subjects '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  $i^{\text{th}}$  Subject, and  $G_i$  represents the Grade Points (GP) corresponding to the Letter Grade awarded for that  $i^{\text{th}}$  Subject.

- 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

$$\text{CGPA} = \left\{ \sum_{j=1}^M C_j G_j \right\} / \left\{ \sum_{j=1}^M C_j \right\} \dots \text{for all S Semesters registered}$$

(ie., upto and inclusive of S Semesters, S 2),

where 'M' is the TOTAL no. of Subjects (as specifically required and listed under the Course Structure of the parent Department) the Student has 'REGISTERED' for from the 1<sup>st</sup> Semester onwards upto and inclusive of the Semester S (obviously  $M > N$ ), 'j' is the Subject indicator index (taking into account all Subjects from 1 to S Semesters),  $C_j$  is the no. of Credits allotted to the  $j^{\text{th}}$  Subject, and  $G_j$  represents the Grade Points (GP) corresponding to the Letter Grade awarded for that  $j^{\text{th}}$  Subject. After registration and completion of I Year I Semester however, the SGPA of that Semester itself may be taken as the CGPA, as there are no cumulative effects.

#### Illustration of calculation of SGPA

Course/Subject	Credits	Letter Grade	Grade points	Credit Points
Course 1	4	A	8	4*8 = 32
Course 2	4	O	10	4*10 = 40
Course 3	4	B	6	4*6 = 24
Course 4	3	B	6	3*6 = 18
Course 5	3	A+	9	3*9 = 27
Course 6	3	B	6	3*6 = 18
	21			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

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

## 10.0 Award of Degree and Class

**10.1** If a student who registers for all the specified Subjects/ 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  $\geq 6.0$ ), 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	$\geq 7.75$
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.

## 11.0 Withholding of Results

If the student has not paid the dues, if any, to the institute 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.

## 12.0 MALPRACTICES RULES

### DISCIPLINARY ACTION FOR IMPROPER CONDUCT IN EXAMINATIONS

S. No.	Nature of Malpractices / Improper Conduct	Punishment
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 subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.

1(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate 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 subject only of all the candidates 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 subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester/year. The Hall Ticket of the candidate shall be cancelled.
3	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the examination (including practical's and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject 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 subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject 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 subject.



6	<p>Refuses to obey the orders of the Controller of examinations / 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 addl. Controller of examinations 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 addl. Controller of examinations, 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.</p>	<p>In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The candidates 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.</p>
7	<p>Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.</p>

8	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.
9	If student of the college, who is not a candidate 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.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the College will be handed over to 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 subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects 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 subject and all other subjects the candidate has appeared 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 Chief Superintendent for further action to award suitable punishment.	

### 13.0 Scope

**13.1 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.

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

**13.3** Wherever the words 'he, him, his' occur in the regulations, they shall include 'she, her'.

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

- 13.5** The above mentioned rules and regulations are applicable in general to M.Tech (Regular) unless and otherwise specific.
- 13.6** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the College Academic Committee is final.
- 13.7** The Academic Council may revise 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 Academic Council.
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