

# MASTER OF TECHNOLOGY POSTGRADUATE PROGRAM

## ACADEMIC REGULATIONS-R20

(Batches admitted from the academic year 2020 - 2021)



## MALLA REDDY ENGINEERING COLLEGE FOR WOMEN

**(Autonomous Institution-UGC, Govt. of India)**

Affiliated to JNTUH, Approved by AICTE, ISO 9001:2015 Certified Institution

Accredited by NBA & NAAC with 'A' Grade UGC, Govt. of India

NIRF Indian Ranking, Accepted by MHRD, Govt. of India

AAA+ Rated by Careers 360 Magazine, National Ranking-Top 100 Rank band by Outlook

Maisammaguda, Dhullapally, Secunderabad, Kompally-500100

**ACADEMIC REGULATIONS R-20 FOR M. Tech. (REGULAR) DEGREE COURSE**

Academic Regulations of R-18 are applicable for the students of M. Tech. (Regular) Course from the Academic Year 2020-21 and onwards. The M.Tech Degree of Malla Reddy Engineering College for Women (MRECW), Secunderabad shall be conferred on candidates who are admitted to the program and who fulfill all the requirements for the award of the Degree.

**1.0 ELIGIBILITY FOR ADMISSIONS**

Admission to the above program shall be made subject to eligibility, qualification and specialization as prescribed by the University from time to time.

Admissions shall be made on the basis of merit/rank obtained by the candidates at the qualifying Entrance Test conducted by the University (or) State Government (or) on the basis of any other order of merit as approved by the University, subject to norms as laid down by the State Govt. from time to time.

**2.0 AWARD OF M. Tech. DEGREE**

- 2.1. A student shall be declared eligible for the award of the M. Tech. Degree, if she pursues a course of study in not less than two and not more than four academic years.
- 2.2. A student, who fails to fulfill all the academic requirements for the award of the degree within four academic years from the year of her admission, shall forfeit her seat in M. Tech. course.
- 2.3. The student shall register for all 76 credits and secure all the 76 credits.
- 2.4. The minimum instruction days in each semester are 90.

**3.0 A. COURSE OF STUDY**

The following specializations are offered at present for the M. Tech. course of study.

1. Computer Science and Engineering
  2. Embedded Systems
- and any other course as approved by the MRECW from time to time.

**3.0 B. Departments offering M. Tech. Programmes with specializations are noted below:**

Computer Science and Engineering	Computer Science and Engineering
Electronics & Communication Engineering	Embedded Systems

**4.0 ATTENDANCE**

The programs are offered on a unit basis with each subject being considered a unit.

- 4.1 A student shall be eligible to write University examinations if she acquires a minimum of 75% of attendance in aggregate of all the subjects.
- 4.2 Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester shall be granted by the College Academic Committee.
- 4.3 Shortage of Attendance below 65% in aggregate shall not be condoned.
- 4.4 Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class and their registration shall stand cancelled.
- 4.5 A prescribed fee as determined by the examination branch shall be payable towards condonation of shortage of attendance.
- 4.6 A student shall not be promoted to the next semester unless she satisfies the attendance requirement of the present semester, as applicable. They may seek readmission into that semester when offered next. If any candidate fulfills the attendance requirement in the present semester, she shall not be eligible for readmission into the same class.
- 4.7 In order to qualify for the award of the M. Tech. Degree, the candidate shall complete all the academic requirements of the subjects, as per the course structure.
- 4.8 A student shall not be promoted to the next semester unless she satisfies the minimum academic requirements of the previous semester.

**5.0 EVALUATION**

The performance of the candidate in each semester shall be evaluated subject-wise, with a maximum of 100 marks for theory and 100 marks for practicals, on the basis of Internal Evaluation and End Semester Examination.

For the theory subjects 70 marks shall be awarded based on the performance in the End Semester Examination and 30 marks shall be awarded based on the Internal Examination Evaluation. The internal evaluation consists of two mid-term examinations each covering descriptive paper 30 marks which consists of five questions and answers any three questions, each carrying 10 marks a total duration of 2 hours. Average of the two mid-term examinations shall be taken as the final marks secured by each candidate. The total mark secured by the student in mid-term examination is evaluated for 30 marks.

However, any student scoring internal marks less than 40% will be given a chance to write the internal exam once again after she re-registering for the concerned subject and paying stipulated fees as per the norms.

- 5.1 The end semesters examination will be conducted for 70 marks with 5 questions consisting of two questions each (a) and (b), out of which the student has to answer either (a) or (b), not both and each question carries 14 marks.
- 5.2 For practical subjects, there shall be a continuous evaluation during a semester for 30 internal marks and 70 end semester examination marks. Out of the 30 marks for

internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 15 marks conducted by the laboratory teacher concerned. The end semester examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the Principal of the College

- 5.3** 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.
- 5.4** There shall be four (4) Technical seminar presentations during I, II, III and IV semesters respectively. For seminar, a student under the supervision of a faculty member, shall collect the literature on a topic and critically review the literature and submit it to the department in a report form and shall make an oral presentation before the Departmental Academic Committee consisting of Head of the Department, Supervisor and two other senior faculty members of the department. For each Seminar there will be only internal evaluation of 100 marks. A candidate has to secure a minimum of 50% of marks to be declared successful.
- 5.5** A candidate shall be deemed to have secured the minimum academic requirement in a subject if she secures a minimum of 40% of marks in the End semester Examination and a minimum aggregate of 50% of the total marks in the End Semester Examination and Internal Examination taken together.
- 5.6** In case the candidate does not secure the minimum academic requirement in any subject (as specified in 5.4) she has to reappear for the End semester Examination in that subject.
- 5.7** A candidate shall be given one chance to re-register for each subject provided the internal marks secured by a candidate are less than 50% and so has failed in the end examination. In such a case, the candidate must re-register for the subject(s) and secure the required minimum attendance. The candidate's attendance in the re-registered subject(s) shall be calculated separately to decide upon her eligibility for

writing the end examination in those subject(s). In the event of the student taking another chance, her internal marks and end examination marks obtained in the previous attempt stand cancelled.

- 5.8** In case the candidate secures less than the required attendance in any subject, he shall not be permitted to write the End Examination in that subject. She shall re-register the subject when next offered.
- 5.9** For mandatory (audit) courses, a student has 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 subject.
- 5.10** No marks or letter grades shall be allotted for mandatory (audit) courses. Only Pass/Fail shall be indicated in Grade Card.

**6.0** EVALUATION OF PROJECT/DISSERTATION WORK

Every candidate shall be required to submit a thesis or dissertation on a topic approved by the Project Review Committee.

- 6.1** A Project Review Committee (PRC) shall be constituted with Principal as Chairperson, Heads of all the Departments offering the M. Tech. programs and two other senior faculty members.
- 6.2** Registration of Project Work: A candidate is permitted to register for the project work after satisfying the attendance requirement of all the subjects, both theory and practical.
- 6.3** After satisfying 6.2, a candidate has to submit, in consultation with her project supervisor, the title, objective and plan of action of her project work to the Departmental Academic Committee for approval. Only after obtaining the approval of the Departmental Academic Committee, the student can initiate the Project work.
- 6.4** If a candidate wishes to change her supervisor or topic of the project, she can do so with the approval of the Departmental Academic Committee. However, the Departmental Academic Committee shall examine whether or not the change of topic/supervisor leads to a major change of her initial plans of project proposal. If yes, her date of registration for the project work starts from the date of change of Supervisor or topic as the case may be.
- 6.5** A candidate shall submit her status report in a bound-form in two stages at least with a gap of 3 months.
- 6.6** The work on the project shall be initiated at the beginning of the II year and the duration of the project is two semesters. A candidate is permitted to submit Project Thesis only after successful completion of theory and practical course with the approval of PRC not earlier than 40 weeks from the date of registration of the project work. For the approval of PRC the candidate shall submit the draft copy of thesis to the Principal through Head of the Department and make an oral presentation before the PRC.

- 6.7** Three copies of the Project Thesis certified by the supervisor shall be submitted to the College/Institute.
- 6.8** The thesis shall be adjudicated by one examiner selected by the Principal of the College. For this, the Head of the Department of the College shall submit a panel of 5 examiners, eminent in that field, with the help of the guide concerned.
- 6.9** If the report of the examiner is not favorable, the candidate shall revise and resubmit the Thesis, in the time frame as decided by the PRC. If the report of the examiner is unfavorable again, the thesis shall be summarily rejected.
- 6.10** If the report of the examiner is favorable, Viva-Voce examination shall be conducted by a board consisting of the Supervisor, Head of the Department and the examiner who adjudicated the Thesis. The Board shall jointly report the candidate's work as one of the following:
- A. Excellent
  - B. Good
  - C. Satisfactory
  - D. Unsatisfactory

The Head of the Department shall coordinate and make arrangements for the conduct of Viva- Voce examination.

If the report of the Viva-Voce is unsatisfactory, the candidate shall retake the Viva-Voce examination only after three months. If she fails to get a satisfactory report at the second Viva- Voce examination, she will not be eligible for the award of the degree.

## 7.0 AWARD OF DEGREE AND CLASS

In assessing the performance of the students in examinations, the usual approach is to award marks based on the examinations conducted at various stages (mid-term, end-semester etc.,) in a semester. As per UGC Autonomous guidelines, the following system is implemented in awarding the grades and CGPA under the Credit Based Semester System (CBCS).

### 7.1 Letter Grades and Grade Points:

The UGC recommends a 10-point grading system with the following letter grades as given below:

Letter Grade	Points	% of Marks secured in a subject or course (Class Intervals)
O (Outstanding)	10	Greater than or equal to 85%
A+(Excellent)	9	75 and less than 85%
A(Very Good)	8	65 and less than 75%
B+(Good)	7	60 and less than 65%
B(Average)	6	55 and less than 60%
C (Pass)	5	50 and less than 55%
F(Fail)	0	Below 50%
AB (Absent)	0	-

A student obtaining Grade F shall be considered failed and will be required to reappear in the examination

### 7.2 Computation of SGPA and CGPA

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

**Credit points (CP) = grade point (GP) x credits .... For a course**

i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e

$$SGPA(S_i) = \left\{ \sum_{i=1}^N C_i G_i \right\} / \left\{ \sum_{i=1}^N C_i \right\}$$

where  $C_i$  is the number of credits of the  $i^{\text{th}}$  course and  $G_i$  is the grade point scored by the student in the  $i^{\text{th}}$  course.

ii. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \left\{ \sum_{i=1}^M C_i S_i \right\} / \left\{ \sum_{j=1}^M C_i \right\}$$

where  $S_i$  is the SGPA of the  $i$ th semester and  $C_i$  is the total number of credits in that semester.

iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

7.3 A student obtaining 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a 'supplementary student' in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.

7.4 A student who has not appeared for examination in any subject 'AB' grade will be allocated in that subject, and student shall be considered 'failed'. Student will be required to reappear as a 'supplementary student' in the semester end examination, as and when offered.

7.5 A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.

7.6 A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding 'credit points' (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

**Credit points (CP) = grade point (GP) x credits .... For a course**

7.7 The student passes the subject/ course only when **GP  $\geq$  5 ('C' grade or above)**

#### Illustration of calculation of SGPA

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	4 x 8 = 32
Course 2	4	O	10	4 x 10 = 40
Course 3	4	C	5	4 x 5 = 20
Course 4	3	B	6	3 x 6 = 18
Course 5	3	A+	9	3 x 9 = 27
Course 6	3	C	5	3 x 5 = 15
	21			152

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



## Illustration of calculation of CGPA:

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
<b>I Year I Semester</b>				
Course 1	4	A	8	4 x 8 = 32
Course 2	4	A+	9	4 x 9 = 36
Course 3	4	B	6	4 x 6 = 24
Course 4	3	O	10	3 x 10 = 30
Course 5	3	B+	7	3 x 7 = 21
Course 6	3	A	8	3 x 8 = 24
<b>I Year II Semester</b>				
Course 7	4	B+	7	4 x 7 = 28
Course 8	4	O	10	4 x 10 = 40
Course 9	4	A	8	4 x 8 = 32
Course 10	3	B	6	3 x 6 = 18
Course 11	3	C	5	3 x 5 = 15
Course 12	3	A+	9	3 x 9 = 27
	Total Credits = 42			Total Credits Points = 327

$$\text{CGPA} = 327/42 = 7.79$$

- 7.8 For merit ranking or comparison purposes or any other listing, **only** the 'rounded off' values of the CGPAs will be used.
- 7.9 For calculations listed in regulations 7.2 to 7.7, performance in failed subjects/ courses (securing **F** grade) will also be taken into account, and the credits of such subjects/courses will also be included in the multiplications and summations. After passing the failed subject(s) newly secured letter grades will be taken into account for calculation of SGPA and CGPA.

### 8.0 Passing standards

In assessing the performance of the students in examinations, the usual approach is to award marks based on the examinations conducted at various stages ( mid-term, end-semester etc.,) in a semester. As per UGC Autonomous guidelines, the following system is implemented in awarding the grades and CGPA under the **Choice Based Credit System (CBCS)**.

- 8.1 student shall be declared successful or 'passed' in a semester, if student secures a GP  $\geq$  5 ('C' grade or above) in every subject/course in that semester (i.e. when student gets an SGPA  $\geq$  5.00 at the end of that particular semester); and a student shall be declared successful or 'passed' in the entire post graduate programme, only when gets a CGPA  $\geq$  5.00 for the award of the degree as required.
- 8.2 After the completion of each semester, a grade card or grade sheet (or transcript) shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, and grade earned etc.), credits earned, SGPA, and CGPA.

A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 90 credits (with CGPA  $\geq$  5.0), within 4 academic years from the date of commencement of the first academic year, shall be declared to have 'qualified' for the award of the M.Tech. degree in the chosen branch of Engineering as selected at the time of admission.

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

Students with final CGPA (at the end of the post graduate programme)  $\geq$  7.50, shall be placed in 'first class with distinction'.

Students with final CGPA (at the end of the post graduate programme)  $\geq$  6.50 but  $<$  7.50, shall be placed in 'first class'.

Students with final CGPA (at the end of the post graduate programme)  $\geq$  5.50 but  $<$  6.50, shall be placed in 'Second class'.

All other students who qualify for the award of the degree (listed above), with final CGPA (at the end of the post graduate programme)  $\geq$  5.00 but  $<$  5.50, shall be placed in 'pass class'.

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

Students fulfilling the conditions listed above alone will be eligible for award of 'university rank' and 'gold medal'.

## 9.0 Declaration of results

- 9.1 Computation of SGPA and CGPA are done using the procedure listed in 7.2 to 7.7.
- 9.2 For final percentage of formula marks equivalent to the computed final CGPA, the following formula maybe used.

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

## 10.0 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 her, the result of the student will be withheld and she will not be allowed into the next semester. Her degree will be withheld in such cases.

**11.0 TRANSITORY REGULATIONS**

11.1 A student who has discontinued for any reason, or has been detained for want of attendance or lack of required credits as specified, or who has failed after having undergone the degree programme, may be considered eligible for readmission to the same subjects/ courses (or equivalent subjects/ courses, as the case may be), and same professional electives/ open electives (or from set/category of electives or equivalents suggested, as the case may be) as and when they are offered (within the time-frame of 8 years from the date of commencement of student's first year first semester).

**12. GENERAL**

- 12.1 The academic regulation should be read as a whole for the purpose of any interpretation.
- 12.2 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Academic Council of the College is final.
- 12.3 The College 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 College Authorities.

**MALPRACTICES RULES****DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS**

S.No	Nature of Malpractices/Improper conduct	Punishment
	<i>If the candidate:</i>	
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 she 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.
(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, she 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 is to be cancelled and sent to the University.
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 practicals 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 University 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, She 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 University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Using objectionable, abusive or offensive language in the answer paper or in letters to the	Cancellation of the performance in that subject.

	examiners or writes to the examiner requesting him to award pass marks.	
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 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.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	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 University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with

		forfeiture of seat.
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 University for further action to award suitable punishment.	

**Malpractices identified by squad or special invigilators**

1. Punishments to the candidates as per the above guidelines.
2. Punishment for institutions: (if the squad reports that the college is also involved in encouraging malpractices)
  - i. A show cause notice shall be issued to the college.
  - ii. Impose a suitable fine on the college.
  - iii. Shifting the examination centre from the college to another college for a specific period of not less than one year.

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