



M.Tech

R24

Academic Regulations

PRAGATI ENGINEERING COLLEGE

(An Autonomous Institution)

ADB Road, Surampalem, Kakinada District, A.P.-533 437

(Approved by AICTE, New Delhi & Permanently Affiliated to JNTUK, Kakinada)

(Recognized by UGC under sections 2 (f) and 12 (b) of UGC act, 1956)



ACADEMIC REGULATIONS R24 FOR M. Tech (REGULAR) DEGREE COURSE

Applicable for the students of M. Tech (Regular) Course from the Academic Year 2024-25 onwards. The M. Tech Degree of Pragati Engineering College(Autonomous) 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 State Government and Affiliating University and College 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 he pursues a course of study in not less than two and not more than four academic years.

2.2 **The student shall register for all 68 credits and secure all the 68 credits.**

2.3 The minimum instruction days in each semester are 90.

3.0 A. PROGRAMMES OF STUDY

The following specializations are offered by various departments for the M. Tech Programme of study.

1. M.Tech- Power Electronics and Electrical Drives
2. M.Tech- CAD/CAM
3. M.Tech- VLSI System Design
4. M.Tech- Computer Science and Engineering

and any other course as approved by AICTE/ University from time to time.

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

EEE	M.Tech- Power Electronics and Electrical Drives
ME	M.Tech- CAD/CAM
ECE	M.Tech- VLSI System Design
CSE	M.Tech- Computer Science and Engineering

4.0 ATTENDANCE

- 4.1 A student shall be eligible to write End Semester Examinations if he 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 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.
- 4.5 A prescribed fee shall be payable towards condonation of shortage of attendance.
- 4.6 A student shall not be promoted to the next semester unless he 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, he shall not be eligible for readmission into the same class.

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.

- 5.1 For the **theory subjects** 60 marks shall be awarded based on the performance in the End Semester Examination and 40 marks shall be awarded based on the Internal Evaluation. The internal evaluation shall be made based on the **average** of the marks secured in the two Mid Term-Examinations conducted-one in the middle of the Semester and the other immediately after the completion of instruction. Each mid term examination shall be conducted for a total duration of 120 minutes with 4 questions (without choice) each question for 10 marks. Semester End Exam Paper contains FIVE mandatory questions (one question from one unit) with internal choice, each carrying 12 marks for a total of 60 marks.
- 5.2 For **Practical subjects**, 60 marks shall be awarded based on the performance in the End Semester Examinations and 40 marks shall be awarded as internal marks, based on the day to day work-10 marks, Record-10 marks and the remaining 20 marks to be awarded by conducting an internal laboratory test. The end examination shall be conducted by the examiners, with a breakup marks of Procedure-15, Experimentation-25, Results-10 , Viva-voce-10.
- 5.3 For **Technical 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 Project Review Committee consisting of Head of the Department, Supervisor and two other senior faculty members of the department. For Technical 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. Out of 100 marks, supervisor awards 40% marks and remaining 60% marks are awarded by the project review committee.

- 5.4 A candidate shall be deemed to have secured the minimum academic requirement in a subject if he 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 Evaluation taken together.
- 5.5 In case the candidate does not secure the minimum academic requirement in any subject (as specified in 5.4) he has to reappear for the End semester Examination in that subject. A candidate shall be given a chance to re-register for each subject provided the internal marks secured by a candidate are less than 50% and 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 his eligibility for writing the end examination in those subject(s). In the event of the student taking another chance, his internal marks and end examination marks obtained in the previous attempt stand cancelled. For re-registration the candidates have to apply to the college by paying the requisite fees before the start of the semester in which re-registration is required.
- 5.6 In case the candidate secures less than the required attendance in any re registered subject (s), he shall not be permitted to write the End Examination in that subject. He shall again re-register the subject when next offered
- 5.7 Laboratory examination for M. Tech. programmes must be conducted with two Examiners, one of them being the Laboratory Class Teacher or teacher from the same department and the second examiner shall be appointed by the Principal from the panel of examiners submitted by the respective HoD.
- 5.8 Student is allowed to register for 12 week SWAYAM / NPTEL MOOC courses (recommended by BoS Chairman) and obtain required credits during II Semester itself. In any case, if a student fails in obtaining credits, he is allowed to repeat the initially opted course / change to another MOOC course or regular course and will be considered as regular candidate only. After successful completion, by the end of III Semester, he needs to submit the course certificate (through HoD) to the exam section to perform credit transfer.
- 5.9 In addition to credit courses, for completing the programme and obtaining degree, a student needs to complete audit courses. Audit courses will be conducted, evaluated as normal credit courses, and the assessment will be graded as Pass or Fail.
- 5.10 Students shall undergo mandatory summer **internship** (2 credits) for a minimum of eight weeks duration at the end of II semester of the Programme/Summer Break. A student will be required to submit a summer internship report to the concerned department and appear for an oral presentation before the committee. The Committee comprises of Head of the Department and two faculty. The report and the oral presentation shall carry 40% and 60% weightages respectively. For internship, there will be only internal evaluation of 100 marks in the III semester. A candidate has to secure a minimum of 50% of marks to be declared successful.

6.0 EVALUATION OF PROJECT WORK(part-1 and Part-2)

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

- 6.1 For Project evaluation, out of 200 marks, 80 marks shall be for Internal Evaluation(40 internal marks for Project work Part-I and remaining 40 internal marks for project work Part-II) and 120 marks for the End Examination (Viva–Voce).
- 6.2 Student has to secure 40% of marks in the Viva–Voce examination and a minimum aggregate of 50% of total marks in Viva–Voce examination and Internal Evaluation taken together.
- 6.3 A Project Review Committee (PRC) shall be constituted with Head of the Department and two other senior faculty members.
- 6.4 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.
- 6.5 After satisfying 6.4, a candidate has to submit, in consultation with his project supervisor, the title, objective and plan of action of his project work for approval. The student can initiate the Project work, only after obtaining the approval from the Project Review Committee (PRC).
- 6.6 If a candidate wishes to change his supervisor or topic of the project, he can do so with the approval of the Project Review Committee (PRC). However, the Project Review Committee (PRC) shall examine whether or not the change of topic/supervisor leads to a major change of his initial plans of project 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.
- 6.7 A candidate shall submit his status report in two stages at least with a gap of 3 months between them.
- 6.8 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 all theory and practical course with the approval of PRC not earlier than 40 weeks from the date of registration of the project work. The candidate has to pass all the theory and practical subjects before submission of the Thesis.
- 6.9 The candidate may be allowed to submit the project report, if the project work is published or accepted in a reputed national or international journal or conference.
- 6.10 Three copies of the Project Thesis certified by the supervisor shall be submitted to the department along with plagiarism report (<40%).
- 6.11 The thesis shall be adjudicated by one examiner selected by the Principal. For this, the Head of the Department shall submit a panel of five examiners, eminent in that field, with the help of the guide concerned and other PRC Members.
- 6.12 If the report of the examiner is not favourable, the candidate shall revise and resubmit the Thesis, in the time frame as decided by the PRC. If the report of the examiner is still unfavorable, the thesis shall be summarily rejected. The candidate has to re-register for the

project and complete the project within the stipulated time after taking the approval from the Principal.

- 6.13 The Head of the Department shall coordinate and make arrangements for the conduct of Viva-Voce examination.
- 6.14 If the candidate failed in the Viva-Voce examination, the candidate shall retake the Viva-Voce examination only after three months. If he failed again the second Viva-Voce examination, the candidate has to re-register for the project and complete the project within the stipulated time after taking the approval from the Principal.

7.0 Cumulative Grade Point Average (CGPA)

Marks Range (Max – 100)	Letter Grade	Level (G)	Grade Point
≥ 90	S	Excellent (S)	10
≥80 to <90	A	Very Good (A)	9
≥70 to <80	B	Good (B)	8
≥60 to <70	C	Fair (C)	7
≥50 to <60	D	Satisfactory (D)	6
<50	F	Fail (F)	0
		Absent	0

Computation of SGPA

The following procedure is to be adopted to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

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

$$\text{SGPA (Si)} = \sum (\text{Ci X Gi}) / \sum \text{Ci}$$

Where Ci is the number of credits of the ith course and Gi is the grade point scored by the student in the ith course.

Computation of CGPA

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

$$\text{CGPA} = \sum (\text{Ci X Si}) / \sum \text{Ci}$$

Where Si is the SGPA of the ith semester and Ci is the total number of credits in that semester. The SGPA and CGPA shall be rounded off to TWO decimal points and reported in the transcripts.

8.0 AWARD OF DEGREE AND CLASS

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of M. Tech. Degree he shall be placed in one of the following four classes:

Class Awarded	CGPA to be secured	From the CGPA secured from 68 Credits.
First Class with Distinction	≥ 7.75 without backlog history	
First Class	≥ 6.75	
Second Class	≥ 5.75 to < 6.75	

9.0 WITHHOLDING OF RESULTS

If the student has not paid the dues, if any, or if any case of indiscipline is pending against him, the result of the student will be withheld. His degree will be withheld in such cases.

10.0 TRANSITORY REGULATIONS

Discontinued or detained candidates are eligible for re-admission into same or equivalent subjects at a time as and when offered.

11.0 GENERAL

- 11.1 Wherever the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.
- 11.2 The academic regulation should be read as a whole for the purpose of any interpretation.
- 11.3 In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Principal is final.
- 11.4 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.