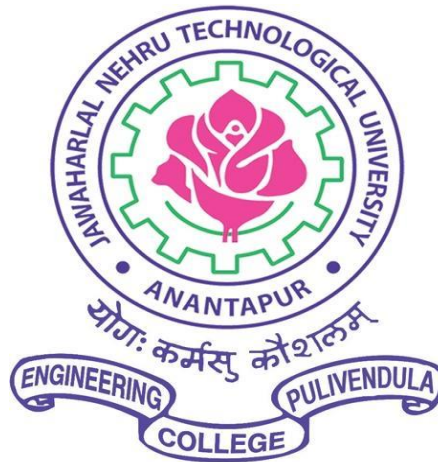


***REGULATIONS
AND
COURSE STRUCTURE
FOR
M.TECH (PTPG)
w.e.f.
2018 ADMITTED BATCH
(R-17 REGULATIONS)***



**COLLEGE OF ENGINEERING (AUTONOMOUS) :: PULIVENDULA
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
PULIVENDULA – 516390, Y.S.R. (DIST), ANDHRA PRADESH, INDIA**

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COLLEGE OF ENGINEERING (AUTONOMOUS) :: PULIVENDULA
PULIVENDULA– 516 390, Y.S.R. (Dist), ANDHRA PRADESH, INDIA**

Academic regulations for M. Tech (PTPG) program with effect from academic year 2018-19

1. ELIGIBILITY FOR ADMISSION:

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

- i. Admission shall be made either on the basis of merit/rank obtained by the qualifying candidates in written exam conducted by the University or otherwise specified, whichever is relevant.
- ii. The candidates **must be employed** in and around Pulivendula city.

2. AWARD OF M.TECH. DEGREE:

A student will be declared eligible for the award of the M.Tech degree if he/she fulfills the following academic regulations:

- i. He/she has pursued a course of study for not less than six semesters and not more than twelve semesters.
- ii. Students who fail to fulfill all the academic requirements for the award of the degree within twelve semesters from the year of their admission, shall forfeit their seat in the course and their seat shall stand cancelled.
- iii. Register for 68 credits and secure all 68 credits

And any other course as approved by the competent authorities from time to time.

3. COURSE WORK:

The programs are offered on a Semester basis consisting of Six Semesters.

- i. The candidates undergo three theories and one laboratory course in during the first and Third semesters and two theory and one laboratory courses during the second and fourth semesters. During the fifth and sixth semesters the candidates pursue the dissertation in the concerned specialization only. The theme of dissertation should conform to the specialization.
- ii. There shall be **two seminars** (Seminar-I, and Seminar-II) related to thesis/dissertation. Out of two seminars related to thesis/dissertation, seminar-I shall be conducted in the Vth semester and the seminar-II will be in VIth semester.
- iii. There shall be one comprehensive online examinations conducted by the respective department one at the end of 4th Semester with 60 objective questions for 60 marks on the subjects studied in 1st, 2nd, 3rd and 4th semesters. The heads of the respective department are given the responsibility of preparing the question paper and conducting the online examination by maintaining confidentiality. A student shall acquire Two credit assigned to the online examination only when he/she secure 50% or more marks. In case, if a student fails in comprehensive online examination, he shall re- register by following a similar procedure adopted for the lab examinations.
- iv. A candidate has to either present a paper in any national or international conference organized by AICTE recognized college/institution, or, publish a paper in peer-reviewed journals/Conferences proceedings before the submission of thesis.

- v. Only on successful completion of all the prescribed courses, the candidate will be permitted to submit the thesis/dissertation. Three copies of the thesis / dissertation certified by the supervisor in the prescribed form shall be submitted to the College. Once a student fails to submit the thesis within the stipulated period of six semesters, extension of time up to twelve semesters may be permitted by the Principal with recommendation of the College Academic Committee.
- vi. The Thesis/Dissertation will be adjudicated by one external examiner appointed by the Principal.
- vii. If the report of the external examiner is favorable, a viva-voce examination shall be conducted by a board consisting of Head of the department, the supervisor and the examiner who adjudicated the thesis / dissertation. The board shall jointly report the candidate's work as :
 - A - Excellent
 - B - Good
 - C - Satisfactory
 - D - Unsatisfactory
- viii. If the report of the viva-voce is not satisfactory, the candidate will retake the viva-voce examination after three months. If he/she fails to get a satisfactory report at the second viva-voce examination, he will not be eligible for the award of the degree unless the candidate is asked to revise and resubmit the thesis / dissertation.

4. EVALUATION:

The performance of the candidate in each semester program shall be evaluated subject wise, with a maximum of 100 marks for theory and 50 marks for practical examination, on the basis of Internal Evaluation and End Examination.

- i. For the theory subjects 60% of the marks will be for the End Examination and 40% of the marks will be for Internal Evaluation.
- ii. There shall be five units in each of the theory subjects.
- iii. Two Midterm Examinations shall be held during the semester. First midterm examination shall be conducted for I & II unit syllabus and second midterm examination shall be conducted for the III, IV & V Unit syllabus. In each midterm exam, a student shall answer all three questions in 2 hours of time without seeking any choice. Final Internal marks for a total of 40 marks shall be arrived at by considering the marks secured by the student in both the mid examinations with 80% weightage to the better mid exam and 20% to the other.
- iv. The following pattern shall be followed in the End Examination.
 - a. Five questions shall be set from each of the five units with either/or type for 12 marks each.
 - b. All the questions have to be answered compulsorily.
 - c. Each question may consist of one, two or more bits.
- v. For practical subjects, 60% marks shall be for the End Examinations and 40% marks will be for internal evaluation. The end examination shall be conducted by the concerned laboratory teacher and another examiner from the same department. The internal marks will be awarded by the concerned laboratory teacher based on the report of experiments.

- vi. For Seminar, there will be an internal evaluation for 100 marks, with 50 marks in each semester. The student shall give a seminar in each semester on the progress of his/her M.Tech thesis. He/she has to secure a minimum of 50% to be declared successful. The assessment will be made by a Board consisting of Head of the Department, Thesis supervisor and one senior faculty member.
- vii. 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 Examination and a minimum aggregate of 50% of the total marks in the End Semester Examination and Internal Evaluation taken together.
- viii. In case the candidate does not secure the minimum aggregate marks as specified in 5 (vii) he has to reappear for the semester examination, either the supplementary or regular, in that subject.

5. RE-REGISTRATION FOR IMPROVEMENT OF INTERNAL EVALUATION MARKS

Following are the conditions to avail the benefit of improvement of internal evaluation marks.

- i. The candidate should have completed the course work and obtained examinations results for I & II semesters.
- ii. He should have passed all the subjects for which the internal evaluation marks secured are more than 50%.
- iii. Out of the subjects the candidate has failed in the examination due to internal evaluation marks secured being less than 50%, the candidate shall be given one chance for each Theory subject and for a maximum of three Theory subjects for Improvement of Internal evaluation marks.
- iv. The candidate has to re-register for the chosen subjects and fulfill the academic requirements.
- v. For each subject, the candidate has to pay a fee equivalent to one third of the semester tuition fee.
- vi. In the event of availing the Improvement of Internal evaluation marks, the internal evaluation marks as well as the End Examinations marks secured in the previous attempt(s) for the reregistered subjects stand cancelled

6. ATTENDANCE:

The candidate shall put in a minimum of 75% attendance in aggregate of all subjects in a semester.

- i. Condonation of shortage of attendance up to 10% in any subject i.e. from 65% and above and less than 75% may be given by the College Academic Committee.
- ii. Condonation of shortage of attendance shall be granted only on genuine and valid reasons on representation by the candidate with supporting evidence.
- iii. If the candidate has not satisfied the attendance requirements in a semester he/she will have to repeat that semester.

7. Grading System is to be introduced. After each subject is evaluated for 100 marks, the marks obtained in each subject will be converted to a corresponding letter grade as given below, depending on the range in which the marks obtained by the student fall.

Table – Conversion into Grades and Grade Points assigned

Academic performance	Letter Grade	Grade points Assigned
≥ 95%	S	10
≥90% - < 95%	A++	9.5
≥ 85% - <90%	A+	9
≥80% - <85%	A	8.5
≥75% - <80%	B++	8
≥70% - <75%	B+	7.5
≥65% - <70%	B	7
≥60% - <65%	C++	6.5
≥55% - <60%	C+	6
≥50% - <55%	C	5.5
≥45% - < 50%	D	5
≥40%- < 45%	E	4.5
Below 40%	F(Fail)	0
Absent	Ab (Absent)	0

- i. The following procedure shall be adopted to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA);
 - a. The Semester Grade Point Average (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.

$$\text{SGPA} = \frac{\sum (C_i \times G_i)}{\sum C_i}$$
 Where, C_i is the number of credits of the i^{th} subject and G_i is the grade point scored by the student in the i^{th} course.
 - b. The Cumulative Grade Point Average (CGPA) will be computed in the same manner taking into account all the courses undergone by a student over all the semesters of a program, i.e.

$$\text{CGPA} = \frac{\sum (C_i \times S_i)}{\sum C_i}$$
 Where ‘ S_i ’ is the SGPA of the i^{th} semester and C_i is the total number of credits in that semester.
- ii. Both SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.
- iii. While computing the GPA/CGPA the subjects in which the student is awarded Zero grade points will also be included.

Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale.

Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters S, A, B, C, D, E and F.

8. 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/she shall be placed in one of the following four classes:

Class Awarded	CGPA Secured
First Class with Distinction	≥ 7.5
First Class	$\geq 6.5 < 7.5$
Second Class	$\geq 5.5 < 6.5$
Pass Class	$\geq 4.0 < 5.5$

Further, CGPA to a maximum of extent of 0.05 shall be added which is just sufficient to effect change of class from pass class to Second class, Second class to First class, First class to First class with distinction for all the courses being offered, without adding any marks to the original marks secured by the students

A candidate shall be eligible for the award of respective degree if he/she satisfies the minimum academic requirements in every subject and secures at least satisfactory report on his/her thesis / dissertation and viva-voce.

9. WITHHOLDING OF RESULTS

The result of a candidate shall be withheld if:

- i. He/she has not cleared any dues to the Institution / Hostel.
- ii. A case of disciplinary action against him/her is pending disposal.

10. TRANSITORY REGULATIONS:

Candidates who have discontinued or have been detained for want of attendance or who have failed after having undergone the course are eligible for re-admission to the same or equivalent subjects as and when subjects are offered, subject to the conditions mentioned in 5-(iv) and 2-(ii).

11. GENERAL:

The academic regulations should be read as a whole for purpose of any interpretation.

- i. The college reserves the right of altering the regulations as and when necessary. The regulations altered may be applicable to all the candidates on rolls.
- ii. Wherever the word he, him or his occur, it will also include she, her, hers.
- iii. There shall be no place for transfer of candidate within the constituent colleges of Jawaharlal Nehru Technological University Anantapur during the entire course of the programme.

JNTUA COLLEGE OF ENGINEERING (AUTONOMOUS) :: PULIVENDULA

Course Structure for M.Tech (PTPG) with effective from the AY 2018-19

M.Tech (PTPG) I Semester

S.NO	Course code	Subject Name	Theory	Lab	Credits
1.	17PT07101	OPERATION AND CONTROL OF POWERR SYSTEMS	4		4
2.	17PT07102	SWITCHED MODE POWER CONVERTERS	4		4
3.	ELECTIVE – I				
	17PT07103	POWER QUALITY			4
	17PT07104	RENEWABLE ENERGY SYSTEMS			
	17PT07105	POWER SYSTEM OPTIMIZATION	4		
4.	17PT07106	MACHINES AND POWER SYSTEMS LAB		3	2
		CONTACT PERIODS/WEEK	12	03	
			15		
		TOTAL CREDITS (3 THEORY + 1 LAB)			14

M.Tech (PTPG) IISemester

S.NO	Course code	Subject Name	Theory	Lab	Credits
1.		THEORY - 3	4		4
2.		ELECTIVE - II	4		4
3.		LAB – 2		3	2
		CONTACT PERIODS/WEEK	08	03	
			11		
		TOTAL CREDITS (2 THEORY + 1 LAB)			10

M.Tech (PTPG) III Semester

S.NO	Course code	Subject Name	Theory	Lab	Credits
1.		THEORY –4	4		4
2.		THEORY - 5	4		4
3.		ELECTIVE – III	4		4
4.		LAB – 3		3	2
		CONTACT PERIODS/WEEK	12	03	
			15		
		TOTAL CREDITS (3 THEORY + 1 LAB)			14

M.Tech (PTPG) IV Semester

S.NO	Course code	Subject Name	Theory	Lab	Credits
1.		THEORY - 6	4		4
2.		ELECTIVE - IV	4		4
3.		LAB – 4		3	2
		COMPREHENSIVE ONLINE EXAMINATION	---	---	2
		CONTACT PERIODS/WEEK	08	03	
			11		
TOTAL CREDITS (2 THEORY + 1 LAB)					12

M.Tech (PTPG) V Semester

S.NO	Course Code	Subject	Maximum Marks		Total	Min. Marks/ Grades to Pass	Credits
			Internal	External			
1		Seminar-I	50	-	50	25	0

M.Tech (PTPG) VI Semester

S.NO	Course Code	Subject	Maximum Marks		Total	Min. Marks/ Grades to Pass	Credits
			Internal	External			
1		Seminar-II	50	-	50	25	0
2		Project Work Grades : A, B, C, D A - Excellent B - Good C – Satisfactory D - Unsatisfactory	-	-	-	-	18