

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
COLLEGE OF ENGINEERING (Autonomous), ANANTHAPURAMU**

Academic Regulations 2015 (R15) for M. Tech (Regular)

(Applicable for the students admitted during the Academic Year 2015-2016 and onwards)

1. ELIGIBILITY FOR ADMISSION:

Admission to the M.Tech. 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 GATE/PGECET or otherwise specified, whichever is relevant.

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 four semesters and not more than eight semesters.
- ii. Students who fail to fulfill all the academic requirements for the award of the degree within eight semesters from the year of their admission, shall forfeit their seat in the course and their seat shall stand cancelled.

3. COURSES OFFERED:

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| I. Civil Engineering | - 1. Structural Engineering
- 2. Computer Aided Structural Engineering |
| II. EEE | - 1. Electrical Power Systems
- 2. Control Systems
- 3. Power & Industrial Drives
- 4. Reliability Engineering |
| III. Mechanical Engineering | - 1. Refrigeration & Air-Conditioning
- 2. Energy Systems
- 3. Advanced IC Engines
- 4. Product Design |
| IV. ECE | - 1. Digital Systems & Computer Electronics
- 2. Digital Electronics & Communication Systems |
| V. CSE | - 1. Computer Science
- 2. Software Engineering
- 3. Artificial Intelligence |
| VI. Chemical Engineering | - 1. Nanotechnology |

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

4. COURSE WORK:

The programs are offered on a semester basis consisting of four semesters.

- i. The candidates undergo six theory and one laboratory course in each semester during the first and second semesters. During the third and fourth semesters the candidates pursue the dissertation in the concerned specialization only. The theme of dissertation should conform to the specialization.
- ii. There shall be a seminar pertaining to the dissertation work in the third and fourth semesters respectively.
- iii. A candidate has to either present a paper pertaining to his dissertation in any national or international conference organized by AICTE recognized college/institution, or, publish/get acceptance for publication of a paper in peer-reviewed journals before the submission of his/her dissertation.
- iv. Only on successful completion of all the prescribed courses, the candidate will be permitted to submit the dissertation. Once a student fails to submit the dissertation within the stipulated period of four semesters, extension of time up to eight semesters may be permitted by the Principal with recommendation of the College Academic Committee.
- v. The dissertation will be adjudicated by one external examiner appointed by the Principal from a panel of 6 members nominated by the Head of the department. The panel shall comprise of Faculty from reputed Colleges/Institutes and/or renowned people from industry/R&D sector with minimum of M.Tech/M.S. qualification and preferably with Ph.D. qualification.
- vi. 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 as Chairman, the supervisor and the examiner who adjudicated the dissertation / dissertation. The board shall jointly **GRADE** the candidate's work vide Table given in item (6).
- vii. If the report of the viva-voce is not satisfactory or if the candidate fails in external viva-voce examination, the candidate will retake the viva-voce examination after three months. If he fails to pass 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 dissertation.

5. EVALUATION:

The performance of the candidate in each semester program shall be evaluated subject wise, with a maximum of 100 marks for theory and 100 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 Internal Examinations shall be held during the semester for 30 marks. First internal examination shall be conducted for half of the syllabus and second midterm examination shall be conducted for remaining half of the syllabus. In each

internal exam, a student shall answer all three questions in 2 hours of time without seeking any choice. Final Internal marks for a total of 30 marks shall be arrived at by considering the marks secured by the student in both the internal examinations with 70% weightage to the better internal exam and 30% to the other.

- iv. For the remaining 10 marks in internal evaluation, the faculty members teaching the subject shall evaluate the students through a minimum of 2 individual assignments or through a mini project with a group comprising maximum of six students or through term papers/seminars.
- v. 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.
- vi. Model Question paper for each theory course shall be prepared by the teacher within 15 days from the commencement of the semester and the same shall be forwarded to the Controller of Examinations through the Chairman, BOS concerned.
- vii. 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.
- viii. For Seminar, there will be an internal evaluation for 200 marks, with 100 marks in each semester. The student shall give a seminar in each semester on the progress of his M.Tech. dissertation. 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, Dissertation supervisor, and one senior faculty member. The internal marks of each seminar shall be sent to the academic section immediately for issue of grade sheet.
- ix. 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.
- x. In case the candidate does not secure the minimum aggregate marks as specified in 5 (ix) he has to reappear for the semester examination, either the supplementary or regular, in that subject.
- xi. There shall be an audit pass (Mandatory learning Course) course on Research Methodology during II semester with no credits. The evaluation for this subject is similar to the remaining subjects. However, attendance in the audit course shall be considered and the student shall be declared pass in the audit course when he/she secures a minimum aggregate of 50% of the total marks in the End Semester Examination and Internal Evaluation taken together.

6. GRADING:

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

Range in which the marks in the subject fall	Grade	Grade points assigned
≥ 95	S	10
90-94	A1	9.5
85-89	A2	9.0
80-84	A3	8.5
75-79	B1	8.0
70-74	B2	7.5
65-69	C1	7.0
60-64	C2	6.5
55-59	D1	6.0
50-54	D2	5.5
< 50	F (Fail)	0
Absent	Ab (Absent)	0

- i. A student obtaining Grade F shall be considered failed and will be required to reappear for that subject when the next supplementary examination offered.
- ii. For Audit courses ‘Satisfactory’ or ‘Unsatisfactory’ shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

6.1. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

- i. 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.

$$SGPA = \frac{\sum_{i=1}^n (C_i \times G_i)}{\sum_{i=1}^n C_i}$$

Where, C_i is the number of credits of the i^{th} subject, G_i is the grade point scored by the student in the i^{th} course and n is the no. of subjects

- ii. 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.

$$CGPA = \frac{\sum_{i=1}^n (C_i \times S_i)}{\sum_{i=1}^n C_i}$$

Where ‘ S_i ’ is the SGPA of the i^{th} semester, C_i is the total number of credits in that semester and n is the no. of semesters.

- iii. Both SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.
- iv. 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 as mentioned in the above table.

7. ATTENDANCE REQUIREMENT:

The candidate shall put in a minimum of 75% attendance in each subject 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 any subject he will have to repeat that subject.
- iv. In case the attendance of the candidate falls short of 65% in three or more than three subjects, he/she shall not be promoted to the next semester. He/She has to repeat the entire course work of that particular semester next year or as and when a regular batch of admissions is available.
- v. In case the attendance of the candidate falls short of 65% in two or less than two subjects, he/she has to repeat those subjects of that particular semester when next offered. In case of repetition the new internal evaluation marks shall be taken into account.

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 three classes:

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

9. WITHHOLDING OF RESULTS:

If the candidate has any dues not paid to the college or if any case of indiscipline or malpractice is pending against him, the result of the candidate shall be withheld and he will not be allowed /promoted into the next higher semester. The issue of awarding degree is liable to be withheld in such cases.

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 admission to the same or equivalent subjects as and when subjects are offered, subject to 5(x) and 2(ii) and they will be in the academic regulations into which the candidate is presently readmitted.

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 includes 'she', 'her', 'hers'.
- iii. There shall be no place transfer within the constituent colleges of Jawaharlal Nehru Technological University Anantapur during the entire course of the programme.

12. CONDUCT AND DISCIPLINE:

- i. Students shall conduct themselves within and outside the precincts of the Institute in a manner befitting the students of an Institute of national importance.
- ii. As per the order of the Hon'ble Supreme Court of India, ragging in any form is banned: acts of ragging will be considered as gross indiscipline and will be severely dealt with.
- iii. The following additional acts of omission and/or commission by the students within or outside the precincts of the College shall constitute gross violation of code of conduct and are liable to invoke disciplinary measures:
 - (a) Ragging
 - (b) Lack of courtesy and decorum; indecent behavior anywhere within or outside the campus.
 - (c) Willful damage or stealthy removal of any property/belongings of the Institute/Hostel or of fellow students.
 - (d) Possession, consumption or distribution of alcoholic drinks or any kind of hallucinogenic drugs
 - (e) Mutilation or unauthorized possession of library books
 - (f) Hacking in computer systems
 - (g) Furnishing false statement to the disciplinary committee, or willfully withholding information relevant to an enquiry.
 - (h) Organizing or participating in any activity that has potential for driving fellow students along lines of religion, caste, batch of admission, hostel or any other unhealthy criterion.
 - (i) Resorting to noisy and unseemly behavior, disturbing studies of fellow students.
 - (j) Physical or mental harassment of freshers through physical contact or oral abuse.
 - (k) Adoption of unfair means in the examination.
 - (l) Organizing or participating in any group activity except purely academic and scientific programmes in company with others in or outside the campus without prior permission of the Principal.
 - (m) Disturbing in drunken state or otherwise an incident in academic or student function or any other public event.
 - (n) Not obeying traffic rules in campus, not following safety practices or causing potential danger to oneself or other persons in any way.
 - (o) Any other act of gross indiscipline.
- iv. Commensurate with the gravity of the offence, the punishment may be reprimand, fine, and expulsion from the hostel, debarment from an examination, rustication for a specified period or even outright expulsion from the College.

- v. The reprimanding Authority for an offence committed by students in the Hostels and in the Department or the classroom shall be respectively, the manager of the Hostels and the Head of the concerned Department.
- vi. In all the cases of offence committed by students in jurisdictions outside the purview of Clause (12.v), the Principal shall be the Authority to reprimand them.
- vii. All major acts of indiscipline involving punishment other than mere reprimand, shall be considered and decided by the Principal, Students Disciplinary Committee appointed by the Principal.
- viii. All other cases of indiscipline of students, like adoption of unfair means in the examinations shall be reported to the Vice-Principal, for taking appropriate action and deciding on the punishment to be levied.
- ix. In all the cases of punishment levied on the students for any offence committed, the aggrieved party shall have the right to appeal to the Principal, who shall constitute appropriate Committees to review the case.

13. PUNISHMENTS FOR MALPRACTICE CASES - GUIDELINES

The examinations committee may take the following guidelines into consideration while dealing with the suspected cases of malpractice reported by the invigilators/squad members etc; during end examinations. The punishment may be more severe or less severe depending on the merits of the individual cases.

S. No	Nature of Malpractices/Improper conduct	Punishment
1.	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 student 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.
2.	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.
3.	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.

4.	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any other student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
5.	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 student is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects including practical examinations of that semester/year.
6.	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 including practical examinations of that semester/year.
7.	Smuggles in the Answer book or takes out or arranges to send out the question paper during the examination or answer book during or after the examination	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects including practical examinations of that semester/year. The student is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
8.	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	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 of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.

	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.	
9.	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 including practical examinations 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.
10.	Posseses 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 including practical examinations of that semester/year. The student is also debarred and forfeits the seat.
11.	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 7 to 9.	For Student of the college: Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects including practical examinations 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.
12.	Impersonates any other student in connection with the examination	The student who has impersonated shall be expelled from examination hall. The student is debarred from writing the remaining exams, and rusticated from the college fur one academic year during which period the student will not be permitted to write any exam. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.

		The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination including practicals of that semester/year. The student is rusticated from the college for two consecutive years during which period the student will not be permitted to write any exam. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat
13.	If any malpractice is detected which is not covered in the above clauses 1 to 12 it shall be reported to the college academic council for further action to award suitable punishment.	
14.	Malpractice cases identified during internal examinations will be reported to the examination committee nominated by Academic council to award suitable punishment.	
