

# **AMRITA SAI INSTITUTE OF SCIENCE AND TECHNOLOGY (AUTONOMOUS)**

**AICTE approved, NAAC accredited, ISO 9001 – 2015 certified Institution  
& Permanent affiliation to JNTUK Kakinada**

## **ACADEMIC REGULATIONS (AR20)**



### **M.Tech TWO YEAR PG COURSE**

**(Applicable for the batches admitted from 2020-21)**

**Sponsored by**

**AMRITA SAI EDUCATIONAL IMPROVEMENT TRUST**

## **ACADEMIC REGULATIONS (AR20) FOR M. Tech (REGULAR) DEGREE COURSE**

- Applicable for the students of M. Tech (Regular) Course from the Academic Year 2020-21 onwards
- The M. Tech Degree of Jawaharlal Nehru Technological University Kakinada shall be conferred on candidates who are admitted to the program and who fulfill all the requirements for the award of the Degree.

## **ELIGIBILITY FOR ADMISSIONS**

- Admission to the above program shall be made subject to eligibility, qualification and specialization as prescribed by the college 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 college or on the basis of any other order of merit as approved by the college, subject to reservations as laid down by the Govt. from time to time.

## **AWARD OF M. Tech DEGREE**

- 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.
- The student shall register for all 80 credits and secure all the 80 credits.
- The minimum instruction days in each semester are 90.

## **COURSES OF STUDY**

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

1. M.Tech- Structural Engineering
2. M.Tech- Power Electronics
3. M.Tech- Digital Electronics and Communication Systems
4. M.Tech- VLSI & Embedded System Design
5. M.Tech- Computer Science & Engineering

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

<b>CIVIL</b>	1. M.Tech- Structural Engineering
<b>EEE</b>	1. M.Tech- Power Electronics
<b>ECE</b>	1.M.Tech- Digital Electronics and Communication Systems 2.M.Tech- VLSI & Embedded System Design
<b>CSE</b>	1.M.Tech- Computer Science & Engineering

**ATTENDANCE**

- A student shall be eligible to write college end examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- 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.
- Shortage of Attendance below 65% in aggregate shall not be condoned.
- Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class.
- A prescribed fee shall be payable towards condonation of shortage of attendance.
- 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.

## 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 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. End semester examination is conducted for 60 marks for 5 questions to be answered out of 8 questions.
- For practical subjects, 60 marks shall be awarded based on the performance in the End Semester Examinations and 40 marks shall be awarded based on the day-to-day performance as Internal Marks.
- There shall be two seminar presentations during III semester and IV semester. 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 Project Review 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 50 marks. A candidate has to secure a minimum of 50% of marks to be declared successful.
- 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.
- In case the candidate does not secure the minimum academic requirement in any subject he has to reappear for the End semester Examination in that subject. 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 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 through the college by paying the requisite fees and get approval from the college before the start of the semester in which re-registration is required.
- 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.
- Laboratory examination for M. Tech. courses must be conducted with two Examiners, one of them being the Laboratory Class Teacher or teacher of the respective college and the second examiner shall be appointed by the college from the panel of examiners submitted by the respective college.

## **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.
- A Project Review Committee (PRC) shall be constituted with Head of the Department and two other senior faculty members.
- 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.
- After registration of project work 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).
- 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.
- A candidate shall submit his status report in two stages at least with a gap of 3 months between them.
- 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. The candidate has to pass all the theory and practical subjects before submission of the Thesis.
- Three copies of the Project Thesis certified by the supervisor shall be submitted to the College/School/Institute.
- The thesis shall be adjudicated by one examiner selected from other universities/autonomous colleges. For this, the Principal of the College will select one examiner from a panel of five examiners proposed by controller of examination with the help of supervisor, who are eminent in that field.
- 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. The candidate has to re-register for the project and complete the project within the stipulated time after taking the approval from the college.
- 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:
  - (i) Excellent
  - (ii) Good
  - (iii) Satisfactory
  - (iv) 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 he fails to get a satisfactory report at 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 college.

## CGPA:

Marks Range Theory (Max – 100)	Marks Range Lab (Max – 75)	Letter Grade	Level	Grade Point
≥ 90	≥ 90	O	Outstanding	10
≥85 to <90	≥85 to <90	S	Excellent	9
≥80 to <85	≥80 to <85	A	Very Good	8
≥70 to <80	≥70 to <80	B	Good	7
≥60 to <70	≥60 to <70	C	Fair	6
≥50 to <60	≥50 to <60	D	Satisfactory	5
<50	<50	F	Fail	0
		Ab	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.

$$\text{SGPA (Si)} = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

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.

### 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 program, i.e.

$$\text{CGPA} = \frac{\sum (C_i \times S_i)}{\sum C_i}$$

Where  $S_i$  is the SGPA of the  $i^{\text{th}}$  semester and  $C_i$  is the total number of credits in that semester.

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

$$\text{Equivalent Percentage} = (\text{CGPA} - 0.75) \times 10$$

### Award of Class:

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

<b>Class Awarded</b>	<b>CGPA to be secured</b>	<b>From the CGPA secured from 160 Credits.</b>
First Class with Distinction	$\geq 7.75$ with no subject failures	
First Class	$\geq 6.75$ with subject failures	
Second Class	$\geq 5.75$ to $< 6.75$	
Pass Class	$\geq 4.75$ to $< 5.75$	

### WITHHOLDING OF RESULTS:

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

### TRANSITORY REGULATIONS

- Discontinued or detained candidates are eligible for re-admission into same or equivalent subjects at a time as and when offered.
- The candidate who fails in any subject will be given two chances to pass the same subject; otherwise, he has to identify an equivalent subject as per next academic regulations.

### GENERAL

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