

Rules and Regulations

M. E. / M. Tech. Programmes

(For the batch of students admitted in 2013-2014 and onwards)

NOTE: The regulations hereunder are subject to amendments as may be decided by the Academic Council of the Institute from time to time. Any or all such amendments will be effective from such date and to such batches of students including those already in the middle of the programme as may be decided by the Academic Council.

1. Conditions for Admission

- (i) Candidates for admission to the I Semester of M. E. / M. Tech. degree programme will be required to satisfy the conditions of admission thereto prescribed by the Anna University, Chennai and Government of Tamil Nadu.
- (ii) Part-time candidates should satisfy conditions regarding experience, sponsorship, place of work, etc., that may be prescribed by Anna University, Chennai from time to time, in addition to satisfying requirements as in Clause 1(i).

2. Duration of the Programme

- (i) **Minimum Duration:** The programme will lead to the Degree of Master of Engineering (M.E.) / Master of Technology (M. Tech.) of the Anna University, Chennai extend over a period of two years. The two academic years (Part-time three academic years) will be divided into four semesters (Part-time six Semesters) with two semesters per year.
- (ii) **Maximum Duration:** The candidate shall complete all the passing requirements of the M. E. / M. Tech. degree programmes within a maximum period of 4 years / 8 semesters in case of full-time programme and 6 years / 12 semesters in case of part-time programme, these periods being reckoned from the commencement of the semester to which the candidate was first admitted.

3. Branches of Study

The following are the branches of study of M.E. / M.Tech. Programmes

M.E.

Branch I	Applied Electronics
Branch II	CAD/CAM
Branch III	Communication Systems
Branch IV	Computer Science and Engineering
Branch V	Embedded Systems
Branch VI	Engineering Design
Branch VII	Power Electronics and Drives
Branch VIII	Software Engineering
Branch IX	Structural Engineering
Branch X	VLSI Design

M. Tech.

Branch I	Biotechnology
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4. Structure of Programmes

- (i) **Curriculum:** The curriculum for each programme includes Courses of study and detailed syllabi. The Courses of study include theory Courses (including electives), seminar, practicals, Industrial training / Mini-project, Project Work (Phase I) and Project Work (Phase II) as prescribed by the respective Boards of Studies from time to time.

Full-time Programme: Every full-time candidate shall undergo the Courses of his/her programme given in clause 12 in various semesters as shown below:

Semester 1:	6 Theory Courses and two Practicals
Semester 2:	6 Theory Courses, one Practical and a Technical Seminar
Semester 3:	3 Theory Courses and Project Work (Phase I)
Semester 4:	Project work (Phase II).

Part-time Programme: Every part-time candidate shall undergo the Courses of his/her programme in various semesters as shown below:

Semester 1:	3 Theory Courses and one Practical
Semester 2:	3 Theory Courses and one Practical
Semester 3:	3 Theory Courses, Technical Seminar and one Practical
Semester 4:	3 Theory Courses
Semester 5:	3 Theory Courses and Project Work (Phase I)
Semester 6:	Project Work (Phase II)

- (ii) **Theory Courses:** Every candidate shall undergo core theory, elective, and practical Courses including project work of his/her degree programme as given in clause 12 and six elective theory Courses. The candidate shall opt electives from the list of electives relating to his/her degree programme as given in clause 12 in consultation with the Head of the Department. However, a candidate may be permitted to take a maximum of two electives from the list of Courses of other M.E. / M.Tech. Degree programmes with specific permission from the respective Heads of the Departments.
- (iii) **Project Work:** Every candidate individually shall undertake the Project Work (Phase I) during the third semester (fifth semester for part-time programme) and the Project Work (Phase II) during the fourth semester (Sixth semester for part-time programme). The Project Work (Phase II) shall be a continuation work of the Project Work (Phase I). The Project Work can be undertaken in an industrial / research organisation or in the Institute in consultation with the faculty guide and the Head of the Department. In case of Project Work at industrial / research organization, the same shall be jointly supervised by a faculty guide and an expert from the organization.
- (iv) **Industrial Training / Mini Project:** Every full-time candidate shall opt to take-up either industrial training or Mini Project under the supervision of a faculty guide.
- (v) **Value added / Certificate Courses:** Students can opt for any one of the Value added Courses in II and III semester. A separate certificate will be issued on successful completion of the Course.
- (vi) **Special Self-Study Elective Courses:** Students can opt for any one of the special elective Courses as Self-Study in addition to the electives specified in the curriculum in II and III semesters, under the guidance of the faculty. The grades of only passed candidates will be indicated in the mark sheet, but will not be taken into account for assessing CGPA.
- (vii) **Application oriented and Design Experiments:** The students are to carryout Application oriented and Design Experiments in each laboratory in consultation with the respective faculty and Head of the department.
- (viii) **Mini project:** A Mini Project shall be undertaken individually or in a group of not more than 3 in consultation with the respective faculty and the Heads of the Department, in any one of the laboratories from I to III semesters.

- (ix) **Credit Assignment:** Each course is normally assigned a certain number of credits with 1 credit per lecture hour per week, 1 credit for 1 or 2 hours of practical per week (2 credits for 3 hours of practical), 4 credits for theory with lab component with 3 hours of lecture and 2 hours of practical per week, 2 credits for 3 hours of seminar per week, 6 credits for the Project Phase I and 12 credits for the Project Phase II. The exact numbers of credits assigned to the different courses of various programmes are decided by the respective Boards of Studies.
- (x) **Minimum Credits:** For the award of the degree, the candidate shall earn a minimum number of total credits as prescribed by the respective Board of Studies as given below:

M.E./M. Tech. Programmes	Total Credits
M.E. Applied Electronics	75
M.E. CAD / CAM	75
M.E. Communication Systems	75
M.E. Computer Science and Engineering	75
M.E. Embedded Systems	75
M.E. Engineering Design	77
M.E. Power Electronics and Drives	76
M.E. Software Engineering	76
M.E. Structural Engineering	77
M.E. VLSI Design	75
M.Tech. Biotechnology	76

5. Requirements for Completion of Study of a Semester

- (i) a) Candidate will be deemed to have completed the study of any semester only if he /she has kept not less than 70% of attendance in each course and at least 80% of attendance on an average in all courses in that semester put together.
- b) On medical grounds, 10% relaxation in the attendance can be allowed
- (ii) his/her progress has been satisfactory, and
- (iii) his/her conduct has been satisfactory

6. Assessment and Passing Requirements

- (i) **Assessment:** The assessment will comprise continuous assessment and final examination, carrying marks as specified in the scheme (clause 10). Continuous assessment will be made as per the guidelines framed by the Institute from time to time. All assessments will be done on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades and grade points will be awarded as per clause 6(v).
- (ii) **Final Examinations:** Final examinations will normally be conducted during November / December and during April / May of each year. Supplementary examinations may be conducted at such times as may be decided by the Institute.
A candidate will be permitted to appear for the final examination of a semester only if he/she has completed the study of that semester satisfying the requirements given in clause 5 and registers simultaneously for the examinations of the highest semester eligible and all the Courses which he/she is in arrears of. A candidate, who is not permitted to appear at the final examination of a semester, is not permitted to proceed to the next semester. A candidate who is not permitted to appear at the final examination of any semester has to register for and redo the Courses of that semester at the next available opportunity.
- (iii) **Rejoining the Programme:** A candidate who has not completed the study of any semester as per clause 5 or who is allowed to rejoin the programme after a period of discontinuance or who on his/her own request is permitted to repeat the study of any semester, may join the semester which he/she is eligible or permitted to join, only at the time of its normal commencement for a regular batch of candidates and after obtaining the approval from the Director of Technical Education and Anna University, Chennai. No candidate will however be enrolled in more than one semester

at any point of time. In the case of repeaters, the earlier continuous assessment in the repeated Courses will be disregarded.

(iv) **Industrial Training, Mini-project and Project Work:**

Every candidate shall submit reports on Industrial training / Mini-project, Project Work (Phase I) and Project Work (Phase II) on dates announced by the Institute / department through the faculty guide to the Head of the Department. If a candidate fails to submit the reports of any of these Courses not later than the specified date, he/she is deemed to have failed in it. Every candidate shall present report/papers in the seminars in each of the relevant semesters about the Industrial training / Mini-project, Project Work (Phase I) and Project Work (Phase II). The reports/papers shall be presented in the seminar before a review committee constituted by the Head of the Department. The Industrial training / Mini-project, Project Work (Phase I) and Project Work (Phase II) will be evaluated based on the presentations in the seminar, reports and viva-voce examinations. In case of the industrial training for the full-time candidates, evaluation will be carried out in the third semester.

In case of Project Work (Phase II), the viva-voce examination will be carried out by a team consisting of an internal examiner, usually the supervisor, and an external examiner, appointed by the Principal.

1. Due weight will be given for the training report from the Organisation / Industry while evaluating the report and its presentation at the seminar about the nature of the training and what the student has learnt. The student shall be required to get a grade not less than “C”. The grade will be indicated in the mark sheet. This will not be taken into account for assessing CGPA.
2. The evaluation of the Mini Project will be based on the report, presentation at the seminar and viva-voce. The student shall be required to get a Grade not less than “C”. The grade will be indicated in the mark sheet. This will not be taken into account for assessing CGPA.
3. Every Candidate shall pursue Project work-Phase I in third semester and Project Work – Phase II in fourth semester which is in continuation of Phase I. Project work –Phase I and Phase II will be evaluated as given below in the scheme of evaluation

A candidate is permitted to register for the Project Work (Phase II), only after passing the Project Work (Phase I). A candidate who fails in Industrial training / Mini-project, Project Work (Phase I) or Project Work (Phase II) shall register for redoing the same at the beginning of a subsequent semester.

(v) **Letter grade and grade point:** The letter grade and the grade point are awarded based on percentage of total marks secured by a candidate in an individual Course as detailed below:

Range of Percentage of Total Marks	Letter grade	Grade Point (g)
90 to 100	S	10
80 to 89	A	9
70 to 79	B	8
60 to 69	C	7
55 to 59	D	6
50 to 54	E	5
0 to 49 or less than 50% in final examination	RA	0
Incomplete	I	
Withdrawal	W	

“RA” denotes reappearance in the course.

“I” denotes incomplete as per clause 5 (i) & (ii) and hence prevented from writing semester end examination.

“W” denotes withdrawal from the final examination

After completion of the programme earning the minimum number of credits, the Cumulative Grade Point Average (CGPA) from the semester in which the candidate has joined first to the final semester is calculated using the formula:

$$CGPA = \frac{\sum g_i * C_i}{\sum C_i}$$

Where g_i : Grade point secured corresponding to the Course

C_i : Credits allotted to the Course.

- (vi) **Passing a Course:** A candidate who secures grade point 5 or more in any Course of study will be declared to have passed that Course, provided a minimum of 50% is secured in the final examination of that Course of study.

A candidate, who is absent for the final examination or withdraws from final examination or secures a letter grade RA (Grade point 0) in any Course carrying continuous assessment and final examination marks, will retain the already earned continuous assessment marks for two subsequent appearances in the examination of that Course and thereafter he/she will be solely assessed by the final examination carrying the entire marks of that Course.

A candidate, who scores a letter grade RA (Grade point 0) in any Course carrying only continuous assessment marks, will be solely examined by a final examination carrying the entire marks of that Course, the continuous assessment marks obtained earlier being disregarded.

7. Qualifying for the Award of the Degree

A candidate will be declared to have qualified for the award of the M.E. / M.Tech. Degree provided:

- (i) he/she has successfully completed the Course requirements and has passed all the prescribed Courses of study of the respective programme listed in clause 12 within the duration specified in clause 2.
- (ii) No disciplinary action is pending against the candidate

8. Classification of Degree

- (i) **First Class with Distinction:** A candidate who qualifies for the award of degree (vide clause 7) having passed all the Courses of all the semesters at the first opportunity within four consecutive semesters (six consecutive semesters for part-time) after the commencement of his / her study and securing a CGPA of 8.5 and above shall be declared to have passed in First Class with Distinction. For this purpose the withdrawal from examination (vide clause 9) will not be construed as an opportunity for appearance in the examination.
- (ii) **First Class:** A candidate who qualifies for the award of degree (vide clause 7) having passed all the Courses of all the semesters within a maximum period of six semesters for full-time and eight consecutive semesters for part-time after commencement of his /her study and securing a CGPA of 6.50 and above shall be declared to have passed in First Class.
- (iii) **Second Class:** All other candidates who qualify for the award of degree (vide clause 7) shall be declared to have passed in Second Class.

9. Withdrawal from Examination

- (i) A candidate may, for valid reasons, be granted permission to withdraw from appearing for the examination in any Course or Courses of only one semester examination during the entire duration of the degree programme. Also, only one application for withdrawal is permitted for that semester examination in which withdrawal is sought.
- (ii) Withdrawal application shall be valid only if the candidate is otherwise eligible to write the examination and if it is made prior to the commencement of the semester examinations and also recommended by the Head of the Department and the Principal.
- (iii) Withdrawal shall not be construed as an opportunity for appearance in the examination for the eligibility of a candidate for First Class with Distinction.

10. Scheme of Assessment

- Students who were absent for the previous periodicals and those who wish to improve their periodical test marks shall take up an optional test consisting of two units prior to the commencement of model examination.

Scheme of Evaluation

i) Theory

Final Examination	: 50 Marks
Internal Assessment	: 50 Marks

Distribution of marks for internal assessment:

Assignment/Tutorial	: 05
Test 1	: 10
Test 2	: 10
Model Exam	: 15 (Entire syllabus)
Innovative Presentation [#]	: 10

	: 50

[#] Innovative Presentation includes Seminar / Quiz / Group Discussion / Case Study /Soft Skill Development / Mini Project / Review of State-of-the art

ii) Technical Seminar : 100 Marks

Three Seminars (3 × 25)	: 75 Marks
Report	: 25 Marks

iii) Practical

Final Examination	: 50 Marks
Internal Assessment	: 50 Marks

Distribution of marks for internal assessment:

Preparation	: 5
Conduct of Experiments	: 10
Observation & Analysis of results	: 10
Record	: 10
Model Exam & Viva-voce	: 15

	: 50

**iv) Project Work Phase – I & Viva Voce
Marks**

Internal

Project Identification	: 10
Literature survey + analysis	: 15

Sub Total	: 25
Approach & Progress	: 25

Total	: 50

External – Final Evaluation

Report Preparation & Presentation	: 25
Viva Voce	: 25

	: 50

v) Project Work Phase – II Marks

Internal

Continuation of Approach & Progress	: 50
Findings, Discussion & Conclusion	: 50

Total	: 100

External – Final Evaluation

Report Preparation & Presentation	: 50
Viva Voce	: 50

	: 100

11. Question paper pattern for Theory Examination

Max. Marks	: 100
Time	: 3 Hours

PART A

Short Answer Questions: 15
(15 × 2 Marks) : 30 Marks
(Three Questions from each unit)

PART B

Lengthy Answer Questions: 2
(2 × 14 Marks) (*Compulsory*) : 28
(Questions may be framed from any of the five units)
Lengthy Answer Questions: 3
(3 × 14 Marks) (*Either Or Type*) : 42
(Questions may be framed from the remaining three units)

Total Marks	: 100

12. Curriculum and Syllabi