

**VELALAR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(An Autonomous Institution Affiliated to Anna University, Chennai)  
THINDAL, ERODE – 638012



**ME REGULATIONS 2022**

**CHOICE BASED CREDIT SYSTEM**

For  
ME- Applied Electronics,  
ME- Biomedical Engineering,  
ME-Computer Science and Engineering,  
ME-Embedded System Technologies  
Programmes

*(For the candidates admitted from Academic Year 2022-23)*

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**1. PRELIMINARY DEFINITIONS AND NOMENCLATURE**

In this Regulations, unless the context otherwise specifies:

1. **“Programme”** means as M.E. Degree Programme.
2. **“Specialisation”** means a discipline of the M.E. Degree Programme like Applied Electronics, Embedded System Technologies, etc.
3. **“Course”** means a Theory or Practical subject that is normally studied in a semester, like Mathematics, etc.
4. **“Head of the Institution”** means the Principal.
5. **“Head of the Department”** means Head of the Department concerned.
6. **“University”** means Anna University, Chennai.
7. **“Credit”** means a numerical value allocated to each course to describe the candidate’s workload required per week.
8. **“Grade”** means the letter grade assigned to each course based on the marks range specified.
9. **“Grade point”** means a numerical value (0 to 10) allocated based on the grade assigned to each course.
10. **“Controller of Examinations”** means the authorized person who is responsible for examinations of the College.

**2. ADMISSION PROCEDURE**

- 2.1 Students for admission to the first semester of the M.E. Programme shall be required to have passed an appropriate qualifying Degree Examination of Anna University or any examination of any other University or authority accepted by the Syndicate of Anna University, Chennai as equivalent thereto.
- 2.2 Eligibility conditions for admission such as the Eligible UG Degree, marks, class obtained the number of attempts in the qualifying examination and physical fitness will be as prescribed by the Syndicate of the Anna University from time to time.

**3. PROGRAMMES OFFERED**

1. M.E.- Computer Science & Engg.,
2. M.E.- Embedded System Technologies,
3. M.E.- Applied Electronics.

#### 4. STRUCTURE OF THE PROGRAMMES

##### 4.1 Categorization of Courses

Every Programme will have a curriculum with syllabi consisting of theory and practical courses that shall be categorized as follows:

1. **Foundation Courses (FC)** which include Mathematics or other basic courses
2. **Professional Core (PC)** courses include the core courses relevant to the chosen specialization/branch.
3. **Professional Elective (PE)** courses include the elective courses relevant to the chosen specialization/ branch.
4. **Open Electives (OE)** : A student has to choose Open Elective courses from the open electives offered by any M.E programme other than his/her own programme. The open elective courses on offer are subject to availability of faculty members, time table slot, class rooms and minimum class strength specified from time to time.
5. **Employability Enhancement Courses (EEC)** include Project Work and/or Internship, Seminar, Professional Practices, Case Study and Industrial / Practical Training, etc.

##### 4.2 Courses per Semester

Curriculum of a semester shall normally have a blend of theory and practical courses including Employability Enhancement Courses. Each course may have credits assigned as per clause 4.3.

##### 4.3 Minimum Credits to be earned by a student:

Sl. No.	Name Of The Programme	Minimum Credits To Be Earned
1	M.E. Computer Science and Engineering	71
2	M.E. Embedded System Technologies	69
3	M.E. Applied Electronics	69

Each course is assigned certain number of credits based on the following:

Contact period per week	CREDIT
1 Lecture Period	1
2 Tutorial Periods	1
2 Practical Periods (Laboratory / Seminar / Project Work etc.)	1

The Contact Periods per week for Tutorials and Practicals can only be in multiples of 2.

#### 4.4 Project Work

4.4.1 The Project work is an important component of Post-Graduate programmes. The Project work for M.E. consists of Phase - I and Phase - II. Phase - I is to be undertaken during 3<sup>rd</sup> semester of M.E. Phase - II, which is a continuation of Phase - I is to be undertaken during 4<sup>th</sup> semester of M.E.

4.4.2 The Phase II of the Project work shall be pursued for a minimum of 16 weeks during the 4<sup>th</sup> semester.

4.4.3 The Project work shall be carried out under the supervision of a “qualified teacher” in the Department concerned. In this context “qualified teacher” means a faculty member possessing a PG degree with a minimum of 3 years of teaching experience or a Ph.D. degree.

4.4.4 A student may be permitted to work on projects in an Academic/Industrial / Research Organization, on the approval of the Head of the Department. In such cases, the Project work shall be jointly guided by a supervisor of the department and an expert as joint supervisor from the organization and the student shall be instructed to meet the supervisor periodically and to attend the review committee meetings for evaluating the progress.

#### 4.5. Self Study Courses

The Department may offer self study courses. The purpose of the course is to permit the student to study a course of the student’s choice. The students shall study on their own under the guidance of a faculty member. No formal lectures need be delivered. The syllabus of the course and mode of assessments shall be approved by the Department. The self study course of 3 credits can be considered as one elective course. Students may be permitted to credit at most one Self Study course with the approval of the HOD. One Faculty member approved by the Head of the Department shall be responsible for the periodic monitoring and evaluation of the course.

#### 4.6 Medium of Instruction:

The medium of instruction is English for all courses, examinations, seminar presentations and project reports except in language courses.

### 5. DURATION OF THE PROGRAMMES

5.1 The period for the completion of the M.E. Programme is given below:

Programme	Number of Semesters	
	Minimum	Maximum
M.E.	4	8

5.2 Each semester shall normally consist of 75 working days (including examination days) or 540 periods of 50 minutes duration. The Head of the Department shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus covering the full content of the syllabus for the course being taught.

5.3 The total duration for completion of the programme reckoned from the commencement of the first semester to which the student was admitted shall not exceed the maximum duration specified in clause 5.1 irrespective of the period of break of study in order that the student may be eligible for the award of the degree.

## **6. COURSE REGISTRATION**

6.1 Each student, on admission shall be assigned to a Class Advisor who shall advise and counsel the student about the details of the academic programme and the choice of courses considering the student's academic background and career objectives.

### **6.2 Course Registration**

6.2.1 Each student shall register for the courses in every semester so as to earn the minimum credits prescribed in the curriculum .

6.2.2 A student who has passed a course is not be permitted to re-register in that course to improve the Grade.

## **7. REQUIREMENTS FOR APPEARING FOR THE SEMESTER EXAMINATION**

A student who has fulfilled the following conditions shall be deemed to have satisfied the attendance requirements for appearing for end semester examination of a particular course.

7.1 Ideally every student is expected to attend all periods and earn 100% attendance. However, the student shall secure not less than 75% attendance based on number of working days.

7.2 If a student secures attendance between 65% and less than 75% due to medical reasons or participation in a College / University / State / National / International level event with prior permission from the Head of the Department and Principal, the student is given exemption from the prescribed attendance requirement and the student is permitted to appear for the end semester examination . The students should submit the required documents on joining after the absence to the Head of the Department through the Class Advisor.

7.3 Students who secure less than 65% attendance are not permitted to write the Semester Examination. The student has to register and repeat this in a subsequent semester.

## 8. CLASS ADVISOR

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department will designate a Class Advisor for the students throughout their period of study. The Class Advisor shall advise the students in registering and reappearing registering of courses, authorizes the process, monitor their attendance and progress and counsel them periodically. If necessary, the Class Advisor may also discuss with or inform the parents about the progress / performance of the students concerned.

## 9. ATTENDANCE AND ASSESSMENT RECORD

Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' which consists of attendance marked in each theory / Laboratory class, the assessment marks and the record of class work (topics covered), separately for each course handled by the teacher. This should be submitted to the Head of the Department two times in a semester, at the end of every assessment, for checking the syllabus coverage and the records of assessment marks and attendance. The HOD will affix his/her signature and date after due verification. After the final results are published, the record should be verified by the HOD who shall keep this document in safe custody for four years.

## 10. ASSESSMENT PROCEDURES FOR AWARDING MARKS

10.1 All M.E. Programmes consist of Theory Courses, Laboratory Courses and Project Work. Appearance in Semester Examinations is mandatory for all courses .

10.2 Performance in each course of study is evaluated based on (i) Continuous Assessments (CA) throughout the semester and (ii) Semester Examination (SE) at the end of the semester.

10.3 The Semester Examinations for theory and Practical courses is of 3 hours duration for a maximum marks of 100.

The apportionments of CA and SE marks are given below:

S. No.	Category of course	Max. Marks	CA	SE
1	Theory Courses	100	40%	60%
2	Laboratory Courses	100	60%	40%
3	Theory Courses with Laboratory Component	100	50%	50%
4	Project Work	100	40%	60%

## 11. PROCEDURE FOR AWARDING MARKS IN CONTINUOUS ASSESSMENT

For all the theory courses, laboratory courses and project work the continuous assessment marks shall be awarded as per the procedure given below:

### 11.1 THEORY COURSES

Two assessments each carrying 100 marks - in two parts : one part by Individual Assignment /Case study / Seminar / Mini project for a weightage of 40% and another part by a test for a weightage of 60% - shall be conducted during the semester . The total marks obtained in all these assessments out of 200, shall be proportionately reduced and rounded to the nearest integer for 40 marks. The distribution of marks is shown below:

Assessment 1 (100 Marks)		Assessment 2(100 Marks)		Total Continuous assessment
Individual Assignment / Case Study / Seminar / Mini Project	Written Test	Individual Assignment / Case Study / Seminar / Mini Project	Written Test	
40	60	40	60	200

### 11.2 LABORATORY COURSES

The maximum marks for Continuous Assessment shall be 60 for practical courses. Every practical exercise / experiment shall be evaluated based on conduct of experiment / exercise and records. There shall be at least one test. 75 marks shall be awarded for successful completion of all the prescribed experiments done in the Laboratory and 25 marks for the test as below. The total of 100 marks shall be reduced and rounded to the nearest integer for a maximum of 60 marks.

Evaluation of Laboratory Observation , Record	Test	Total
75	25	100

### 11.3 THEORY COURSES WITH LABORATORY COMPONENT

If there is a theory course with laboratory component, there shall be two assessments: the first assessment (maximum mark is 100) will be similar to assessment of theory course and the second assessment (maximum mark is 100) will be similar to assessment of laboratory course respectively. The weightage of first assessment shall be 40 % and the second assessment be 60 %. The weighted average of these two assessments shall be converted into 50 marks and rounded to the nearest integer.

Assessment I (40% weightage) (Theory Component)		Assessment II (60% weightage) (Laboratory Component)		Total Continuous Assessment
Individual Assignment/Case Study/ Seminar / Mini Project	Written Test	Evaluation of Laboratory Observation, Record	Test	
40	60	75	25	200*

## 11.4 AWARDING MARKS FOR PROJECT WORK

11.4.1 The evaluation of Project Work for Phase I and Phase II shall be done independently in the respective semesters. The Project work shall be evaluated for a maximum of 100 marks of which 40 marks will be through continuous assessment and 60 marks will be from Semester Examinations. There should be three reviews in each Phase I and II. The marks are to be distributed as detailed below.

Continuous Assessment (CA) (40 Marks)			Semester Examinations (SE) (60 Marks)			
Review I	Review II	Review III	Thesis Evaluation (External)	Presentation & Viva - Voce		
				Supervisor	Internal Examiner	External Examiner
10	15	15	25	10	10	15
Total =100						

11.4.2 The evaluation of the Project work in Phase - I and Phase - II will be based on the project reports submitted in each Phase separately and a Viva-Voce Examination by a team consisting of the supervisor, an Internal Examiner and an External Examiner.

11.4.3 The Reports for Project-Phase I and Project-Phase II shall be submitted before the due dates which will be announced by COE in the respective semesters. If a student fails to submit the project report on or before the specified dates, the student is deemed to have failed in the Project Work and shall re-enroll for the same in a subsequent semester. This applies to both Phase-I and Phase-II.

11.4.4. A student can enroll for Phase-II, only after successful completion of Phase- I.

11.4.5. A copy of the approved project report after the successful completion of viva-voce examination shall be kept with the HOD.



#### 11.5. Assessment for Online Courses

Students may be permitted to credit online courses from SWAYAM –NPTEL (which are provided with certificates) with the approval of HoD, subject to a maximum of three credits. This online course of 3 credits can be considered instead of one elective course. .

#### 11.6. Assessment for Self-Study Course

The Faculty member approved by the Head of the Department shall be responsible for periodic monitoring and evaluation of the course. The course shall be evaluated through Continuous Assessment as decided by the Department and Semester Examination. The evaluation methodology shall be the same as that of a theory course.

### 12. PASSING REQUIREMENTS

12.1 A candidate who secures not less than 50% of total marks (continuous assessment and semester examination put together) with a minimum of 45% of the marks prescribed for the semester examination in a course shall be declared to have successfully passed the course in the examination.

12.2 The continuous assessment marks obtained by the candidate in the first attempt for the courses shall be retained and considered valid for subsequent attempts also. However, from the fourth attempt onwards the marks scored in the semester examinations alone shall be considered. The candidate should secure minimum 50% marks in the semester examinations to satisfy the passing requirement, but the grade awarded shall be only lowest passing grade irrespective of the marks obtained.

12.3 A student can apply for photocopy and then revaluation of answer scripts of theory examinations, within a prescribed time from the declaration of results, on payment of a prescribed fee along with an application to the COE through the Head of Departments. COE will arrange for the revaluation and the results will be published. Revaluation is **not permitted for laboratory course and project work.**

### 13 AWARD OF LETTER GRADES

13.1 Fixed Grading system is followed for ME courses, if the number of students passed in a particular course examination is less than 30. The performance of a student will be reported using letter grades, each carrying certain points as detailed below:

Range of percentage of total marks	Letter grade	Grade Point
91 to 100	O (Outstanding)	10
81 to 90	A+ (Excellent)	9
71 to 80	A (Very Good)	8
61 to 70	B+ (Good)	7
56 to 60	B (Average)	6
50 to 55	C (Satisfactory)	5
< 50	U (Reappearance)	0
Withdrawal	W	0
Absent	AB	0
Shortage of Attendance	SA	0

13.2 The Relative Grading System is applied if the number of students, who passed in an examination pertaining to a course, is greater than or equal to 30.

Letter Grade	Grade Points*
O (Outstanding)	10
A + (Excellent)	9
A (Very Good)	8
B + (Good)	7
B (Average)	6
C (Satisfactory)	5
U (Re-appearance)	0
SA (Shortage of Attendance)	0
W (Withdrawal)	0

#### 14. GPA and CGPA Calculation

During each semester, the list of courses registered and the grades scored in each course are used to compute the Grade Point Average (GPA). GPA is the ratio of the sum of the products of the number of credits of courses registered and the grade points corresponding to the grades scored in those courses, taken for all the courses, to the sum of the number of credits of all the courses in the semester.

The Grade Point Average (GPA) is calculated using the formula:

$$GPA = \frac{\sum(Credits\ Acquired \times Grade\ points)}{\sum(Credits\ Acquired)}$$

CGPA is calculated in a similar manner, considering all the courses enrolled from first semester.

$$CGPA = \frac{\sum_{i=1}^n C_i GP_i}{\sum_{i=1}^n C_i}$$

where,  $C_i$  is the Credit assigned to the Course,  $GP_i$  is the grade point for each course and  $n$  is total number of courses for the entire programme.

CPA and CGPA are calculated only for passed courses. The credits earned through one credit courses are not considered for calculating GPA and CGPA.

## 15. ELIGIBILITY FOR THE AWARD OF DEGREE

A student shall be declared to be eligible for the award of the M.E. Degree provided the student has successfully gained the required minimum number of total credits as specified in the curriculum corresponding to the student's programme within the stipulated time and no disciplinary action against the student is pending.

### 15.1. CLASSIFICATION OF THE DEGREE AWARDED

#### 15.1.1 FIRST CLASS WITH DISTINCTION:

A student who satisfies the following conditions shall be declared to have passed the examination in First class with Distinction:

- Should have passed the examinations of all the courses in four semesters within the student's First Appearance.
- A student who has availed Authorised Break of Study, should have passed the examinations of all the courses in six semesters within the student's First Appearance.
- Withdrawal from examination will not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50.

#### 15.1.2 FIRST CLASS:

A student who satisfies the following conditions shall be declared to have passed the examination in First class:

- Should have passed the examination in all the courses of all four semesters within three years, which includes one year of authorized break of study (if availed) or prevention from writing the Semester Examination due to lack of attendance (if applicable).
- Should have secured a CGPA of not less than 6.50.

#### 15.1.3 SECOND CLASS:

All other students (not covered in clauses 15.1.1 and 15.1.2) who qualify for the award of the degree shall be declared to have passed the examination in Second Class.

- A student who is absent in Semester Examination in a course / project work after having registered for the same shall be considered to have appeared in that examination for the purpose of classification.

## **16. PROVISION FOR WITHDRAWAL FROM EXAMINATION:**

- 16.1 A student may, for valid reasons, (medically unfit, unexpected family situations / participation in sports, NCC, NSS, etc. approved by HOD) be granted permission to withdraw from appearing for the semester examination in any course or courses in ANY ONE of the semester examinations during the entire duration of the degree programme. The application shall be sent to COE through HOD with required documents.
- 16.2 Withdrawal application shall be valid only if the student is otherwise eligible to write the examination.
- 16.3 Withdrawal shall not be considered as an appearance for deciding the eligibility of a student for First Class with Distinction.
- 16.4 Withdrawal is permitted for the semester examinations in the final semester only if the period of study of the student concerned does not exceed 3 years.

## **17. BREAK OF STUDY FROM A PROGRAMME**

- 17.1 A student is permitted to go on break of study for a maximum period of one year.
- 17.2 The student, who wishes to apply for break of study, shall apply to the COE in advance, in any case, not later than the last date of the first assessment period. The application by the student shall be submitted through the Head of the Department and approved by Principal.
- 17.2 The student permitted to rejoin the programme after break of study shall be governed by the Curriculum and Regulations in force at the time of rejoining. The students rejoining in new Regulations shall apply to the Principal in the prescribed format through Head of the Department at the beginning of the readmitted semester itself for prescribing additional/equivalent courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.
- 17.3 The total period for completion of the programme reckoned from, the commencement of the first semester to which the student was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of break of study in order that the student may be eligible for the award of the degree.

## **18. DISCIPLINE**

- 18.1. Every student is required to observe disciplined and decorous behavior both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the Institution/University. The Head of the Institution shall constitute a disciplinary committee consisting of Head of the Institution, Head of the departments to which the student concerned belongs, and the Head of another department to enquire into acts of indiscipline.

18.2 If a student indulges in malpractice in any of the examinations, the student shall be liable for punitive action as prescribed by the College from time to time.

**19. REVISION OF REGULATIONS, CURRICULUM AND SYLLABI**

The College may from time to time revise, amend or change the Regulations, Curriculum, Syllabus and Scheme of examinations through the Academic Council.

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