

**GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641 013.**

**REGULATIONS 2016**

**CHOICE BASED CREDIT SYSTEM**

**COMMON TO ALL POST GRADUATE PROGRAMMES**

**(For the students admitted to M.E. (Full - Time/ Part - Time), from the  
Academic year 2016-2017 and onwards)**

**1. PRELIMINARY DEFINITIONS AND NOMENCLATURE**

In this regulation, unless the context otherwise specifies:

- I. **"Programme"** means M.E. Degree Programme.
- II. **"Specialisation"** means a discipline of the Post Graduate Degree Programme like Structural Engineering, Engineering Design, etc.
- III. **"Course"** means a Theory or Practical subject that is normally studied in a semester, like Applied Mathematics, Advanced Thermodynamics, High Voltage Lab., etc.
- IV. **"Principal & Chairman"** means the authority of the Institution who is responsible for all academic activities for the implementation of relevant rules and regulations.
- V. **"Controller of Examinations"** means the Authority of the Institution who is responsible for all activities of the End Semester Examinations of the Institution.
- VI. **"Head of the Department"** means Head of the Post Graduate Department concerned.
- VII. **"University"** means ANNA UNIVERSITY, Chennai.

**2. ADMISSION PROCEDURE**

- 2.1** Students for admission to the first semester of the Post Graduate Degree Programme shall be required to have passed an appropriate qualifying Degree Examination of

Anna University or any examination of any other University or authority approved by the Directorate of Technical Education and Anna University, Chennai as equivalent thereto.

2.2. Eligibility conditions for admission will be as prescribed by the GOVERNMENT OF TAMILNADU & ANNA UNIVERSITY from time to time.

### 3. PROGRAMMES OFFERED AND MODE OF STUDY

#### 3.1 PROGRAMMES OFFERED

A student may be offered admission to any one of the following specialisation in M.E. Degree programme of study approved the Institution offered by various departments of the Institution.

S.No.	Department Name
<b>Department of CIVIL Engineering.</b>	
1	M.E. Structural Engineering
2	M.E. Environmental Engineering
3	M.E. Geotechnical Engineering
<b>Department of Mechanical Engineering</b>	
4	M.E. Engineering Design
5	M.E. Manufacturing Engineering
6	M.E. Thermal Engineering
<b>Department of Electrical and Electronics Engineering</b>	
7	M.E. Power Systems Engineering
8	M.E. Power Electronics and Drives
<b>Department of Electronics and Communication Engineering</b>	
9	M.E. Applied Electronics
10	M.E. VLSI Design
<b>Department of Computer Science and Engineering</b>	
11	M.E. Computer Science and Engineering

#### 3.2 MODES OF STUDY:

##### 3.2.1 FULL TIME:

Students admitted under 'Full-Time' should be available in the Institution during the entire duration of working hours for the curricular, co-curricular and extra-curricular activities assigned to them.

The Full-Time students should not attend any other Full-time programme(s) / course(s) or take up any Full-time job / Part-Time job during working hours in any Institution or company during the period of Full-Time programme. Violation of the above rules will result in cancellation of admission to the PG programme.

### **3.2.2. PART-TIME MODE:**

In this mode of study, the candidates are required to attend classes on every working day, along with full time students for half-a-day, either in forenoon or in afternoon.

A part time student is not permitted to convert to the full time mode of Study.

## **4. STRUCTURE OF THE PG PROGRAMMES**

### **4.1 Categorization of Courses**

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

- i. Foundation Courses (FC) may include Mathematics or other basic courses
- ii. Professional Core (PC) courses include the core courses relevant to the chosen PG specialization.
- iii. Professional Elective (PE) courses include the elective courses relevant to the chosen specialization.
- iv. Employability Enhancement Courses (EEC) include project work and/or internship, seminar, professional practices, case study and industrial / practical training

A student may be permitted to choose a maximum of 2 electives from other PG programmes with the approval of the head of the department offering such courses.

### **4.2 Number of Courses per Semester**

Curriculum of a semester shall normally have a blend of lecture courses and practical courses including employability enhancement courses. Each course may have credits assigned as per clause 4.3.

### **4.3 Credit Assignment**

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

Contact period per week	CREDITS
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 practical can only be in multiples of 2.

#### **4.4 Project Work**

The Project work is an important component of Post-Graduate programmes. The project work for M.E. consists of Phase – I and Phase – II. The Phase – I is to be undertaken during III semester and Phase – II, which is a continuation of Phase – I is to be undertaken during IV semester.

**4.4.1** The Project work for M.E (for Phase II Project work) shall be pursued for a minimum of 16 weeks during the final semester.

**4.4.2** 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 (i) PG degree with a minimum of 3 years of teaching experience or (ii) Ph.D. degree.

**4.4.3** A student may, however, in certain cases, be permitted to work on projects in an industrial / research organization, on the recommendations 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.

**4.4.4** Every candidate doing M.E. shall, based on his/her project work/thesis/dissertation, should send a paper for publication in a journal or a conference in which full papers are published after usual review. An acknowledgement for having communicated to the journal or a certificate for having presented the paper in a conference shall be attached to the report of the project work/thesis/dissertation.

#### **4.5. Industrial training / internship**

**4.5.1** The students may undergo industrial training for a minimum period of 2 weeks during summer / winter vacation. In this case the training has to be undergone continuously for the entire period.

The students may undergo internship at research organization / university (after due approval from the department ) for a minimum period of 2 weeks during summer / winter vacation.

**4.5.2** If industrial training / internship is not prescribed in the curriculum, the student may undergo industrial training / internship optionally and the one credit earned will be indicated in the Grade sheet. This credit shall not be considered for calculation of CGPA.

DURATION OF TRAINING/INTERNSHIP	CREDITS
2 weeks	1

#### **4.6 One Credit Courses**

One credit courses shall be offered by a department with the prior approval from the Board of Studies & Academic Council. The details of the syllabus, time table and faculty may be sent to the Principal & Chairman for the introduction of new one credit courses after approval from the Board of Studies concerned. The credits earned through the one credit courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. Students can take a maximum of two one credit courses. They shall be allowed to take one credit courses offered in other departments with the permission of Head of the Departments concerned. The candidates who enrolled for one credit courses, have to earn minimum of 80% attendance, failing which the registration for the courses will be cancelled.

#### **4.7 Online Courses**

Students may be permitted to credit online courses (which are provided with certificate) with the approval of Board of studies and Academic Council subject to a

maximum of three credits. This online course of 3 credits can be considered instead of one elective course. The student needs to obtain certification or credit to become eligible for writing the end semester examination to be conducted by the Institution. In case of credits earned through online mode from a university approved by appropriate Authorities of the Institution, the credits may be transferred after due approval procedures from Head of the Departments and Principal & Chairman.

#### **4.8 Self Study Courses**

**4.8.1** Students may be opted to credit atmost one self study course with the approval of Board of studies concerned.

**4.8.2** 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 to be delivered. The syllabus of the course and mode of assessments shall be approved by the Board of studies and forwarded to the Academic Council for the formal approval of the course by the academic body, preferably before the Commencement of the semester. The self study course of 3 credits can be considered as one elective course. One faculty member approved by the Head of the department shall be responsible for the periodic monitoring and evaluation of the course.

#### **4.9 Medium of Instruction**

The medium of instruction is **English** for all courses, examinations, seminar presentations and project / thesis / dissertation reports.

### **5. DURATION OF THE PROGRAMMES**

**5.1** The minimum and maximum period for the completion of the P.G. programme is Given below:

<b>Programme</b>	<b>Min. No. of Semesters</b>	<b>Max. No. of Semesters</b>
M.E. (Full-Time)	4	8
M.E. (Part Time)	6	12

**5.2** Each semester shall normally consist of 90 teaching days (including examination days). 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 (vide clause 16) or prevention (vide clause 7.4) in order that the student may be eligible for the award of the Degree (vide clause 14).

**5.4** The curriculum of P.G. programmes shall be so designed that the prescribed credits required for the award of the degree shall be within the limits specified below:

<b>PROGRAMME</b>	<b>PRESCRIBED CREDIT RANGE</b>
M.E.	65 – 75

## **6. COURSE ENROLLMENT AND REGISTRATION**

**6.1** Each student, on admission shall be assigned to a Student Counsellor (vide clause 8) 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** Every student shall enroll for the course of the succeeding semester in the current semester. However, the student shall confirm the enrollment by registering for the courses within the first ten working days after the commencement of the semester concerned. Students who rejoined the programme after availing permitted Break of Study or Readmitted by DOTE/University need not submit new Enrollment Form, but they have to submit the course registration form within the first 10 working days after the commencement of the semester concerned.

**6.3** No course shall be offered by a department unless a minimum of 5 students register for that course.

**6.4** Students shall attend the classes, satisfy the attendance requirements, earn continuous assessment marks and appear for the end semester Examinations

**6.4.1** Each student on admission shall register for **all the courses prescribed in the curriculum in the student's first semester of study.**

**6.4.2** The enrollment for all the courses of the semester II will commence 10 working days prior to the last working day of semester I. The student shall confirm the enrollment by registering for the courses within the first ten working days after the commencement of the semester II. However, the student is allowed to register for courses for which the student has not enrolled, if these are the courses in which the student has failed.

**6.4.3** The enrollment for the courses of the II semester to final semester will commence 10 working days prior to the last working day of the preceding semester. If the student wishes, the student may drop or add courses (vide clause 6.6) within ten working days after the commencement of the semester concerned and complete the registration process duly authorized by the Programme Co-ordinator and Head of the Department of the programme.

The student is allowed to register for courses for which the student has not enrolled, if these are the courses in which the student has failed.

**6.4.4** A student who has passed all the courses prescribed in the curriculum for the award of the Degree shall not be permitted to re-enroll to improve the student's marks in a course or the aggregate marks / CGPA.

#### **6.5 MINIMUM CREDITS TO REGISTER FOR PROJECT WORK**

The project work for M.E. consists of phase – I and phase – II. The phase – I is to be undertaken during III semester and phase – II, which is the continuation of phase – I is to be undertaken during IV semester.

Minimum credits shall be as follows:

**TABLE – 1**

PROGRAMME	MINIMUM NO. OF CREDITS TO BE EARNED
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M.E.	24 (FOR PHASE - I)
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**6.5.1** If the student has not earned the requisite minimum credits, the student cannot enroll for the project work phase I. In such a case, the student can enroll for the project work in a subsequent semester, after earning the minimum credits specified.

## **6.6 Flexibility to Add or Drop Courses**

**6.6.1** A student has to earn the total number of credits specified in the curriculum of the respective programme of study in order to be eligible to obtain the degree. However, if the student wishes, the student is permitted to earn more than the total number of credits prescribed in the curriculum of the student's programme.

**6.6.2** From the Second to final semesters, the student has the option of registering for additional courses or dropping existing courses. Total number of credits of such course cannot Exceed 6. However the maximum number of credits the student can register in a particular semester cannot exceed 30 credits (excluding courses for which the student has done reappearance registration (vide clause 6.7).

**6.6.3** The student shall register for the project work phase I in the third semester (5th semester in case of Part Time M.E.) and project work phase II in the fourth semester (sixth semester in case of part time M.E programme). However, if a student has not earned the minimum number of credits as specified In table 1, the student may be permitted to register for the project work Phase I and Phase II as and when the student earns the minimum number of credits.

## **6.7 Reappearance Registration/Re-enrollment Registration**

**6.7.1** If a student fails in a theory/Practical course, the student shall do reappearance registration for that course in the subsequent semester and attend end semester examination.

**6.7.2** The student shall fulfil the continuous assessment criteria to re-earn the continuous assessment marks for the reappearance registration courses, if the student wishes. In such

a case, latest Continuous Assessment marks will only be valid. However, the re-earning of attendance is not permitted for such courses.

**6.7.3** If the theory course, in which the student has failed, is an elective, the student may register for the same or any other elective course in the subsequent semesters.

**6.7.4** The student who fails in project work / seminar or any other EEC course other than Practical Courses shall register for the same in the subsequent semester, when offered next, and repeat the course. In this case, the student shall attend the classes, satisfy the attendance requirements (vide clause 7), earn Continuous Assessment marks and appear for the End Semester Examinations. The facility of Reappearance Registration is not available for such courses.

**6.7.5** If a student is prevented from writing end semester examination of a course due to lack of attendance, the student has to re-enroll and register for that course again, when offered next. The student shall attend the classes and fulfil the attendance requirements as per clause 7, earn continuous assessment marks and appear for the end semester examinations. If the course, in which the student has lack of attendance, is a Professional Elective, the student may register for the same or any other Professional Elective Course in the subsequent semesters.

## **7. REQUIREMENTS FOR APPEARING FOR THE END SEMESTER EXAMINATION OF A COURSE**

A student who has fulfilled the following conditions ( vide clause 7.1 and 7.2) 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 80% attendance course wise taking into account the number of periods required for that course as specified in the curriculum.

**7.2 (i)** If a student secures not less than 70% and less than 80% attendance in any Course in the Current Semester due to medical reasons (hospitalization / accident / specific illness) or due to participation in the College / University / State / National / International Level Sports events with prior permission from the Head of the Department concerned, the student shall apply for condonation and chairman of the Academic Council or any authority delegated with such powers (by the Academic Council) to grant condonation

(based on the recommendation from the Head of the Department after satisfying the requirements specified in clause 7.2)

(ii). In such cases, his/her conduct has been certified to be satisfactory by the Faculty Advisor / Student Counsellor concerned and the Head of the Department.

(iii) The student applied for condonation, has to compensate the shortfall periods to 80% by attending the contact classes scheduled by the Course Incharge (One week before the commencement of subsequent semester). The results of the End Semester Examination of such courses will be published only after the shortfall period is condoned by the PRINCIPAL.

**7.3** A student shall normally be permitted to appear for end semester examination of the course if the student has satisfied the attendance requirements (vide Clause 7.1 – 7.2) and has registered for examination in those courses of that semester by paying the prescribed fee.

**7.4** Students who do not satisfy clause 7.1 and 7.2 and who secure less than 70% attendance in a course will not be permitted to write the End-Semester Examination of that course. The student has to register and repeat this course in a subsequent semester when it is offered next (vide clause 6.7.5).

**7.5** In the case of reappearance registration for a course (vide Clause 6.7.1), the attendance requirement as mentioned in Clauses 7.1 - 7.3 is not applicable. However, the student has to register for examination in that course by paying the prescribed fee.

**7.6** A student who has already appeared for a course in a semester and passed the examination is not entitled to reappear in the same course for improvement of grades.

## **8. STUDENTS COUNSELLOR/FACULTY ADVISOR**

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department of the students will attach a certain number of students to a teacher of the Department who shall function as Students Counsellor/Faculty Advisor for those students throughout their period of study. The Students Counsellor/Faculty Advisor shall advise the students in registering and reappearance registering of courses, authorize the process, monitor their attendance

and progress and counsel them periodically. If necessary, the Students Counsellor/Faculty Advisor may also discuss with or inform the parents about the progress / performance of the students concerned.

The responsibilities for the Students Counsellor/Faculty Advisor shall be:

To inform the students about the various facilities and activities available to enhance the student's curricular and co-curricular activities.

- To guide student enrollment and registration of the courses.
- To authorize the final registration of the courses at the beginning of each semester.
- To monitor the academic and general performance of the students including attendance and to counsel them accordingly.

## 9. CLASS COMMITTEE

**Class** committee for each semester of a programme which comprises of (i) the Course Coordinators / Course teachers (as applicable), (ii) the Students Counsellor/Faculty Advisor of the class and (iii) Programme Coordinator (iv) Head of the Department (v) student representatives. This class committee shall meet periodically to discuss academic related matters, progress and status of the students of the semester concerned.

## 10. ASSESSMENT PROCEDURES FOR AWARDING MARKS

All PG M.E. (Full-Time/ Part Time) Programmes consist of Theory Courses, Laboratory Courses and Employability Enhancement Courses. Employability Enhancement Courses include Project Work, Seminar, Case Study and Industrial / Practical Training. Appearance in End Semester Examination is mandatory for all courses including Theory, Laboratory, Theory Courses with Laboratory Component and Project work.

(i.e.) Each course shall be evaluated for a maximum of 100 marks as shown below:

S.No.	Category of Course	Continuous Assessments	End-Semester Examinations
1	Theory Courses/ Theory Courses with Laboratory Component	50 Marks	50 Marks
2	Laboratory Courses	50 Marks	50 Marks
3	Project Work: Phase I Phase II	100 Marks 200 Marks	100 Marks 200 Marks
4	Online Courses/Self Study Courses (Optional)	50 Marks	50 Marks

5	All other EEC Courses * (Except Laboratory Courses and Project Work: Phase I & Phase II)	100 Marks	-
6	Value Added One Credit Course * (Optional)	100 Marks	-

**\* Value Added Courses – not included for CGPA calculation.**

Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' for every semester which consists of attendance marked in each theory / Laboratory/EEC 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 periodically (at least three times in a semester) for checking the syllabus coverage and the records of assessment marks and attendance. The Head of the Department will affix his/her signature and date after due verification. At the end of the semester, the record should be verified by the Head of the Department who shall keep this document in safe custody after the approval from the Principal (for four years). The records of attendance and assessment of both current and previous semesters should be available for inspection.

### **10.1 ASSESSMENT FOR THEORY COURSES:**

For Theory Courses out of 100 marks, the maximum marks for Continuous Assessment is fixed as 50 and the End Semester Examination carries 50 marks.

The End Semester Exams for theory courses will be of 3 hours duration and shall normally be conducted for a maximum of 100 marks between December/January during the odd semesters and between May/ June during the even semesters. End semester Examination is mandatory requirement for passing the course and every student should appear for the examination for theory, theory course with laboratory, laboratory courses and project work.

Continuous Assessment is to be arrived on the basis of students performance in tests, assignments and tutorial **or** objective type tests. Three assessments of equal weightage, conducted by the course instructor / coordinator / department. The total marks obtained in the **assessments** put together shall be reduced to 50

marks and rounded to the nearest integer. A minimum of two tests would be conducted in a day (in the case of tests and they would be of one and a half hours durations each) students will not have regular classes on the scheduled day of these tests. In case a student misses the assessment due to medical reasons (hospitalization / accident / specific illness) or due to participation in the College / University / State / National / International level Sports events with prior permission from the HOD, a **Reassessment** may be given at the end of the semester after getting approval from the Head of the Department through the concerned course instructor.

To arrive the Continuous Assessment Mark the following guidelines are to be followed.

Sl.No.	Category Details	CA Marks	Weightage
i.	Test (3 Nos.) {each test is to be conducted for 50 Marks}	30 Marks	60%
ii.	Assignment (3 Nos.)	15 Marks	30%
iii.	Tutorial/Objective type tests (3 Nos)	5 Marks	10%
	TOTAL	50 Marks	100%

If a student fails in a theory course, the student shall do reappearance registration for that course in the subsequent semester (vide clause 6.7.1). The student can optionally earn Continuous Assessment marks and attend end semester examination, in such case latest sessional marks will only be valid (vide clause 6.7.2).

## **10.2 ASSESSMENT FOR LABORATORY COURSES:**

For Laboratory Courses out of 100 marks, the maximum marks for Continuous Assessment is fixed as 50 and the End Semester Examination carries 50 marks.

Every laboratory exercise / experiment shall be evaluated based on the student performance during the laboratory class and the student's records maintained. There shall be at least one assessment test. The criteria for arriving at the Continuous Assessment marks of 50 shall be decided at the respective class committee meetings. The End Semester examinations for Laboratory courses will be of 3 hours duration and shall normally be

conducted for a maximum of 100 marks between October and December during the odd semesters and between April and June during the even semesters.

**10.3 ASSESSMENT FOR THEORY COURSES WITH LABORATORY COMPONENT:**

The maximum marks for Internal Assessment shall be 50 in the case of theory courses with laboratory component. For a theory course with Laboratory component, there shall be three assessments: the first two assessments (each with a maximum of 100 marks) will be from theory portions and the third assessment (maximum marks 100) will be for laboratory component. The sum of marks of all the three assessments shall be reduced to 50 marks and rounded to the nearest integer.

**10.4 ASSESSMENT FOR PROJECT WORK:**

The evaluation of Project Work for Phase I and Phase II shall be done independently in the respective semesters and marks shall be allotted as per the weightages given in Clause 10.4.1.

**10.4.1** The Project work (Phase I/Phase II) shall be evaluated for a maximum of 200/400 marks of which 100/200 marks will be through Continuous assessment. There should be three reviews for each phase (Phase I and Phase II) to be conducted separately with Continuous Assessment of 100/200 marks and External 100/200 marks. The marks are to be distributed as detailed below.

Project Work	Continuous Assessment (100/200 Marks)			End Semester Examination (100/200 Marks)		
	Review I	Review II	Review III	Thesis Evaluation (External)	Viva - Voce	
					Supervisor	External
Phase - I	30	30	40	20	40	40
Phase - II	60	60	80	40	80	80

**10.4.2** There shall be three assessments (each 100 marks) during the semester by a review committee. The student shall make presentation on the progress made before the committee. The Head of the Department shall constitute the review committee

consisting of supervisor, project coordinator and another faculty member from the Department for each branch of study.

**10.4.3** The Project Report prepared according to approved guidelines as given by the Institution and duly signed by the supervisor, Programme Co-ordinator and the Head of the Department.

**10.4.4** The evaluation of the Project work Phase - I and Phase - II will be based on the project report submitted in each of the Phase - I and Phase - II semesters respectively and a Viva-Voce Examination by a team consisting of the supervisor and External Examiner. The external examiner shall be appointed by the Office of the Controller of Examinations from the panel of examiners recommended by the HOD for Phase - I and Phase - II project evaluation

**10.4.5** If the student fails to obtain 50% of the continuous assessment marks in the phase-I and Phase-II project work, he / she will not be permitted to submit the report for that particular semester and has to re-enroll for the same in the subsequent semester.

**10.4.6** The Project Report/ Thesis/ Dissertation report/ Drawings prepared according to approved guidelines and duly signed by the supervisor(s), the Programme Coordinator and the Head of the Department shall be submitted at the end of the III<sup>rd</sup> and IV<sup>th</sup> semester in the case of Full Time candidates and V<sup>th</sup> and VI<sup>th</sup> semester in the case of Part Time candidates. The last date for the submission of Thesis (Project - II) will be six months (minimum period) from the reopening date of IV semester for FT ME/VI semester for PT ME. However, in exceptional cases, based on the recommendations of the Professor-incharge of the Programme, the Chairman, Academic Council can permit an extension of time not exceeding 31 days. If a candidate submits the project report/thesis report/dissertation after the specified deadline, he/she is deemed to have failed in the Project Work/Thesis/Dissertation and shall re-enroll for the same in a subsequent semester.

**10.4.7** If a student fails to submit the project report on or before the specified deadline, student is deemed to have failed in the project work and shall re-enroll for the same in a subsequent (next) semester. This applies to both phase-I and phase-II project work.



In case of students not completing phase - I of the project work successfully, the students can undertake phase - I again in the subsequent (next) semester. In such cases, the students can enroll for Phase-II, only after successful completion of Phase I.

**10.4.8** A copy of the approved project report after the successful completion of viva-voce Examinations shall be kept in the Department library.

#### **10.5 ASSESSMENT FOR SEMINAR / PROFESSIONAL PRACTICES / CASE STUDY:**

The seminar /Professional Practices/case study shall carry 100 marks and shall be evaluated through continuous assessment only. Every student is expected to present a minimum of 2 seminars per semester before the evaluation committee and for each seminar, marks can be equally apportioned. The three member committee appointed by head of the department will evaluate the seminar and at the end of the semester the marks can be consolidated and taken as the final mark. The evaluation shall be based on the seminar paper / report (40%), Presentation (40%) and response to the questions asked during presentation (20%).

#### **10.6 ASSESSMENT FOR INDUSTRIAL / PRACTICAL TRAINING / INTERNSHIP / SUMMER PROJECT**

**10.6.1** Industrial / Practical training / internship / summer project not specified in the curriculum shall not exceed the maximum duration of 4 weeks.

**10.6.2** The industrial / practical training / internship / summer project shall carry 100 marks and shall be evaluated through continuous assessment only. At the end of industrial / practical training / internship /summer project, the student shall submit a brief report on the training undergone and a certificate from the organization concerned. The evaluation will be made based on this report and a viva-voce examination, conducted internally by a three member departmental committee constituted by the head of the department. Certificates (issued by the organization) submitted by the student shall be attached to the mark list and sent to Controller of Examinations by the head of the department.

#### **10.7 ASSESSMENT FOR VALUE ADDED ONE CREDIT COURSE**

The Value Added one credit course shall carry 100 marks and shall be evaluated through continuous **assessments only**. Two assessments shall be conducted

during the semester by the department concerned. The total marks obtained in the tests shall be reduced to 100 marks and rounded to the nearest integer. The head of the department may identify a faculty member as coordinator for the course. A committee consisting of the head of the department, staff handling the course (if available), programme coordinator and a senior faculty member nominated by the head of the department shall monitor the evaluation process. The grades shall be assigned to the students by the Performance Analysis Committee based on their relative performance (vide clause 12).

#### **10.8 ASSESSMENT FOR ONLINE COURSE**

Students may be permitted to credit online courses (which are provided with certificate) with the approval of Board of studies subject to a maximum of three credits. This online course of 3 credits can be considered instead of one elective course. Departmental consultative committee consists of the Head of the Department, Programme Coordinator and Senior Faculty Member will take a decision on the evaluation methodology for the online course. The committee can decide whether to Evaluate the online courses through continuous assessment and end semester Examination or through end semester examination only and same may be conveyed to the Controller of Examinations at the beginning of the semester when the course is offered. The student needs to obtain certification or credit to become eligible for writing the end Semester examination to be conducted by the Office of the Controller of Examinations. The Head of the Department may identify a faculty member as a coordinator for the course, who is responsible for evaluation of Continuous Assessment. The Performance Analysis Committee shall assign the grades to the students based on their relative performance (vide clause 12).

In case of credits earned through online mode from a university approved by appropriate authorities of the Institution, the credits may be transferred without End Semester Examinations and / or Continuous Assessment and grades shall be approved by the Performance Analysis Committee (vide clause 12).

#### **10.9 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 departmental consultative

committee) and end semester examination. The evaluation methodology shall be the same as that of a theory course (vide clause 10.1). The Performance Analysis Committee shall assign the grade to the students based on their relative performance (vide clause 12).

## **11 PASSING REQUIREMENTS**

**11.1** The passing requirement for a student in a course is determined based on the marks obtained both in continuous assessment and end semester examinations. A student who earns a minimum of 6 grade points in a course subject to securing minimum of 50% marks in the end semester examinations, wherever applicable, shall be declared to have successfully passed the course.

**11.1.1** If a student fails to secure a pass in a theory course (except electives), the student shall do re-appearance registration for that course in the subsequent semester, with an option of re-earning the continuous assessment marks or retaining the original continuous assessment marks and attend the end semester examination.

**11.1.2** If the course, in which the student has failed, is an elective, the student may be permitted to register for the same or any other elective course in the subsequent semesters. The student shall attend the classes, fulfil the attendance requirements and earn Continuous Assessment marks as per clause 7, if he/she opted for any other elective course (vide clause 6.7.3).

**11.1.3** If a student fails to secure a pass in a laboratory course, the student shall do re-appearance registration for that course in the subsequent semester, with an option of re-earning the continuous assessment marks or retaining the original continuous assessment marks and attend the end semester examination (vide clause 6.7.1 and 6.7.2).

**11.1.4** If a student fails to secure a pass in project work, the student shall register for the course in the subsequent semester/when offered next and repeat the course (vide clause 6.7.4).

**11.2** The passing requirement for the courses which are assessed only through continuous assessment (EEC except Laboratory and project work), shall be determined based on the marks obtained in continuous assessment.

### **11.3.1. Valued answer script review by the students**

All the students are allowed to review their valued answer scripts with the faculty incharge of the course on the specified date (usually the reopening day). Any discrepancies in the valuation can immediately be brought to the notice of the Controller of Examinations.

### **11.3.2. Revaluation**

A student can apply for revaluation of the student's semester examination answer script in a theory course within 2 days from the date of review of valued answer scripts by the students on payment of a prescribed fee along with prescribed application to the COE through the head of the department. The COE will arrange for the revaluation and the following procedure is followed in awarding Grade Points after revaluation:

(i) If there is a change from fail to pass for a Candidate in a Course, Grade Point is awarded based on Absolute Grading.

(ii) If a passed candidate in a course obtains more marks after revaluation, Absolute Grading is used only when the candidate gets Higher Grade, otherwise no change in the Grade awarded before the revaluation.

The results will be intimated to the student concerned through the head of the department within 5 working days from the last date of application of revaluation. Revaluation is not permitted for laboratory course and project work.

### **11.3.3 Challenging the Revaluation**

Challenging the revaluation is permitted for those students who have applied for photocopy of answer script. The copy of the answer script is to be valued by a competent authority and the valued script should be submitted to COE's office along with prescribed fee for challenging the revaluation within 2 days after the declaration of Re-valuation results.

## **12 AWARD OF LETTER GRADES**

### **12.1. RELATIVE GRADING SYSTEM**

In this system, grades are awarded to the students based on their performance relative to others in all the courses having continuous assessment (CA) and/or End-Semester Examination components.

For each course, the total mark  $M$  (ie., the sum of Continuous Assessment marks (CA) and/or End-Semester Examination (EE)) is computed for every candidate. The statistical

parameters Mean ( $\mu$ ) and Standard Deviation ( $\sigma$ ) of the distribution of the marks are arrived at as given below:

Where  $M_j$  - Total mark of the  $j^{\text{th}}$  student in the course

$N$  - Number of students who appeared for the examination in that particular course.

The students who secure the total mark  $M$  as detailed below are first declared as fail (RA) in a course

$M < \text{minimum of } (\mu - 1.5\sigma, 50)$	<b>RA</b>
Or	
End -Semester Examination (EE) less than 50% of maximum of EE marks for the course	
Or	
$M$ less than 50% in total marks for theory and laboratory courses with 100% CA component	

Note: "RA" denotes Reappearance in a course

After omitting the marks ( $M$ ) of all failed candidates, revised  $\mu$  and  $\sigma$  are computed for the marks secured by the remaining candidates (ie., passed candidates), letter grades and grade point to each student are awarded based on the revised  $\mu$  and  $\sigma$  as detailed below:

<b>Total mark, M secured by the student (CA+EE)</b>	<b>Grade</b>	<b>Relative Grade Point</b>
$M \geq [(\mu + 1.5\sigma)]$	O (Outstanding)	10
$(\mu + 0.52\sigma) \leq M < (\mu + 1.5\sigma)$	A+ (Excellent)	9
$(\mu - 0.45\sigma) \leq M < (\mu + 0.52\sigma)$	A (Very Good)	8
$(\mu - 1.35\sigma) \leq M < (\mu - 0.45\sigma)$	B+ (Good)	7
$M < (\mu - 1.35\sigma)$	B(Above Average)	6
	SA (Shortage of Attendance)	0
	W (Withdrawal)	0

- No 'O' Grade shall be allowed if scored maximum mark is less than 80.
- If the maximum marks awarded in a course is greater than or equal to 95% and if the number of candidates getting 'O' Grade is less than 7% of the total number of candidates, then some candidates with A+ grade may be awarded 'O' Grade. In such a case some candidates with 'A' Grade may be awarded A+ and some with B+ Grade may be awarded 'A' in order to ensure that minimum 24% of candidates are awarded A+ and 38% are awarded 'A' Grade.
- If the total number of candidates passed is less than 10, grades shall be awarded as per the following Absolute Grading System otherwise Relative Grading System may be followed.

#### **ABSOLUTE GRADING SYSTEM**

<b>Letter Grade</b>	<b>Grade Points</b>	<b>Range of Marks (M)</b>
O (Outstanding)	<b>10</b>	<b>90-100</b>
A+ (Excellent)	<b>9</b>	<b>80-89</b>
A (Very Good)	<b>8</b>	<b>70-79</b>
B+ (Good)	<b>7</b>	<b>60-69</b>
B (Above average)	<b>6</b>	<b>50-59</b>
RA (Reappearance Registration)	<b>0</b>	----
SA (Shortage of Attendance)	<b>0</b>	----
W (Withdrawal)	<b>0</b>	----

#### **PERFORMANCE ANALYSIS COMMITTEE**

Head of the Department, Programme Co-ordinator, Course Co-ordinator/Course Teacher, Student Counsellor will by collective wisdom, normalize the marks secured

by the students so as to ensure that the clustering, grading decisions have been made in a reasonable manner for all the courses.

**12.2** The grades O, A+, A, B+, B obtained for the value added one credit courses and Employment Enhancement Courses (except laboratory and project work) shall figure in the mark sheet under the title 'value added courses'. The other grades RA, SA **will not figure in the Mark sheet.**

**12.3. Award of letter grades system for attendance**

In this system letter grades are awarded for the attendance earned by the student for the individual courses as per the following table.

**Attendance Grade:**

<b>Range of attendance %</b>	<b>95 and above</b>	<b>85-94</b>	<b>80-84</b>	<b>80</b>
<b>Letter Grade</b>	<b>VG</b>	<b>G</b>	<b>S</b>	<b>P</b>
	<b>Very Good</b>	<b>Good</b>	<b>Satisfactory</b>	<b>Poor (Condoned Category)</b>

**13. GPA AND CGPA CALCULATION**

**13.1** The Principal & Chairman of the Academic Council shall call for a Result Passing Board Members meeting after the end-semester examinations, to pass and publish the results. After results are declared, grade sheets will be issued to each student which will contain the following details:

- the list of courses registered during the semester and the grades scored.
- the grade point average (GPA) for the semester and
- the cumulative grade point average (CGPA) of all courses registered from first semester onwards.

During each semester, the list of courses registered and the grades scored in each course (excluding Value Added Courses) 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(excluding Value Added Courses), to the sum of the number of credits of all the courses in the semester .

Where  $C_i$ - is the credits assigned to the course

$GP_i$ - is the grade point corresponding to the letter grade obtained for each course

$n$  - is number of all courses successfully cleared during the particular semester

In the case of GPA and during all the semesters in the case of CGPA.

CGPA will be calculated in a similar manner, considering all the courses enrolled from first semester. “RA” and “SA” grades will be excluded for calculating GPA and CGPA.

**13.2** The credits earned through Value Added Courses shall not be considered for calculating GPA and CGPA.

**13.3** If a student studies more number of electives than required as per the student’s programme curriculum, the courses with higher grades alone will be considered for calculation of CGPA.

## **14 ELIGIBILITY FOR THE AWARD OF DEGREE**

**14.1.** A student shall be declared to be eligible for the award of the ME degree provided the student has

(i). Successfully gained the required number of total credits as specified in the curriculum corresponding to the student’s programme within the stipulated time. Total minimum credits needed for each branch of study is as given below:

### **DETAILS OF TOTAL MINIMUM CREDITS**

<b>SL.NO</b>	<b>BRANCH</b>	<b>TOTAL MINIMUM CREDITS NEEDED FOR SUCCESSFUL COMPLETION</b>
1	M.E. STRUCTURAL ENGINEERING	71
2	M.E. ENVIRONMENTAL ENGINEERING	68
3	M.E. GEOTECHNICAL ENGINEERING	66
4	M.E. ENGINEERING DESIGN	71
5	M.E. MANUFACTURING ENGINEERING	70
6	M.E. THERMAL ENGINEERING	71
7	M.E. POWER SYSTEMS ENGINEERING	68
8	M.E. POWER ELECTRONICS AND DRIVES	68



9	M.E. APPLIED ELECTRONICS	66
10	M.E. VLSI DESIGN	65
11	M.E. COMPUTER SCIENCE ENGINEERING	70

(ii). Successfully completed the course requirements, appeared for the end-semester examinations and passed all the courses prescribed in all the semesters within the prescribed maximum period reckoned from the commencement of the first semester to which the candidate was admitted.

(iii). Successfully passed any additional courses prescribed by the Board of studies whenever readmitted under regulations other than Regulations 2016 (vide clause 16.3)

(iv). No disciplinary action pending against the student.

(v). The award of degree must have been approved by the syndicate of Anna university.

## 14.2 CLASSIFICATION OF THE DEGREE AWARDED

### 14.2.1 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 examination in all the courses of all the four semesters in the student's first appearance within **three** years, Four years for Part -time students which includes authorised break of study of one year. Withdrawal from examination (vide clause 15) will not be considered as an appearance.
- should have secured a CGPA of not less than 8.50.
- should not have been prevented from writing end semester examination due to lack of attendance in any of the courses.

### 14.2.2 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 the semesters **within three years and four year in case of Part time candidates** which includes one year of authorized break of study (if availed) or prevention from writing the end semester examination due to lack of attendance (if applicable).
- Should have secured a CGPA of not less than **7.00**

### **14.2.3 SECOND CLASS:**

All other students (not covered in clauses 14.2.1 and 14.2.2) who qualify for the award of the degree (vide clause 14.1) shall be declared to have passed the examination in **Second class**.

**14.2.4** A student who is absent in end semester examination in a course / project work after having registered for the same shall be considered to have appeared in that examination (except approved withdrawal from end semester examinations as per clause 15) for the purpose of classification.

### **15 PROVISION FOR WITHDRAWAL FROM EXAMINATION:**

**15.1** A student may, for valid reasons, (medically unfit / unexpected family situations / sports approved by chairman, sports board and HOD) be granted permission to withdraw from appearing for the end 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 Principal & Chairman through HOD with required documents.

**15.2** Withdrawal application shall be valid only if the student is otherwise eligible to write the examination (clause 7) and if it is made within TEN working days before the commencement of the end semester examination in that course or courses and also recommended by the head of the department.

**15.3** Notwithstanding the requirement of mandatory TEN working days notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

**15.4** Withdrawal shall not be considered as an appearance for deciding the eligibility of a student for first class with distinction.

**15.5** Withdrawal is permitted for the end semester examinations in the final semester only if the period of study the student concerned does not exceed 3 years as per clause 14.2.1.

### **16 BREAK OF STUDY FROM A PROGRAMME**

**16.1** A student is permitted to go on break of study for a single break of one year only.

**16.2** The student can apply for break of study in advance, in any case, not later than the last date of the first assessment period. The application duly filled by the student shall be submitted through the Head of the Department for the approval of the Chairman.

**16.3** The students permitted to rejoin the programme after break of study / readmission, shall be governed by the Curriculum and Regulations in force at the time of rejoining. The students rejoining in new Regulations shall apply 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.

**16.4** 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 (vide clause 14).

**16.5** In case there is any period of break of study more than the permitted duration of break of study, the student shall be permitted to continue the programme only if the approval is obtained from the Director of Technical Education / University through the concerned HOD / Principal before the end of the semester in which the student has taken break of study.

**16.6** If a student has not reported to the department for a period of two consecutive semesters without any intimation, the name of the student shall be deleted permanently from the college enrollment. Such students are not entitled to seek readmission under any circumstances.

## **17. RANK OF A STUDENT**

A Candidate who qualifies for the Degree by passing the examination in all courses of the entire Programme in first attempt within a period of two or three consecutive academic years applicable for the Full Time students joined after permitted Break of Study and three or four consecutive academic years applicable for the Part Time students joined

after permitted Break of Study from the date of admission to the Programme can be given his/her position in the class as rank. The Rank is determined from I<sup>st</sup> Semester to IV<sup>th</sup> Semester for Full Time and from I<sup>st</sup> Semester to VI<sup>th</sup> Semester for Part Time end semester examination CGPA. Students transferred from other institutions to GCT are not eligible for rank.

## **18. PROCEDURE FOR USING SCRIBER**

If a candidate is physically handicapped (in case of accidents / ill health) at the time of examination, he / she may be permitted to use a scriber to write the examination. In such a case 30 minutes extra time will be permitted. The Scriber shall be a non-engineering student / graduate.

## **19. INDUSTRIAL VISIT**

Every student is required to undergo one Industrial visit, starting from the first semester of the Programme. Every teacher shall take the students atleast for one industrial visit in a semester.

## **20 DISCIPLINE**

**20.1** 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. 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 and notify the institution about the disciplinary action recommended for approval. In case of any serious disciplinary action which leads to suspension or dismissal, then a committee shall be constituted by the principal & chairman for taking final decision.

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

**21 REVISION OF REGULATIONS, CURRICULUM AND SYLLABI**

The Institution may from time to time revise, amend or change the regulations, curriculum, syllabus and scheme of examinations through the academic council with the approval of the syndicate.