

# ANNA UNIVERSITY, CHENNAI

## Two year M.Sc. Programmes

### REGULATION 2010 – CREDIT SYSTEM

#### AFFILIATED COLLEGES

The following Regulation is applicable to the students to be admitted to the all Engineering Colleges affiliated to Anna University, Chennai (other than Autonomous Colleges) and to all the University Colleges of Engineering of Anna University, Chennai from the academic year 2011-12 onwards.

#### 1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires:

- I) **“Programme”** means the Two year M.Sc. Programme.
- II) **“Branch”** means a specialization or discipline of M.Sc. Degree Programme like “Computer Technology”, “Software Engineering”, etc.
- III) **“Course”** means a theory or practical subject that is normally studied in a semester, like Discrete Mathematics, Visual Programming etc.
- IV) **“Director, Academic Courses”** means the authority of the University who is responsible for all academic activities of the Academic Programmes for implementation of relevant rules of this Regulations pertaining to the Academic Programmes.
- V) **“Head of the Institution”** means the Principal / Dean of the College.
- VI) **“Chairman”** means the Head of the Faculty.
- VII) **“Head of the Department”** means head of the Department concerned.
- VIII) **“Controller of Examinations”** means the authority of the University who is responsible for all activities of the University Examinations.
- IX) **“University”** means ANNA UNIVERSITY, CHENNAI.

#### 2. PROGRAMME OFFERED, MODE OF STUDY AND ADMISSION REQUIREMENTS

##### 2.1 Programmes offered:

The Two year M.Sc. programmes offered by the affiliated colleges of Anna University, Chennai are given as follows.

M.Sc. Applied Mathematics

M.Sc. Material Science

M.Sc. Medical Physics

M.Sc. Applied Chemistry

M.Sc. Electronic Media

M.Sc. Environmental Science

M.Sc. Visual Communication

M.Sc. Electronic Software

M.Sc. Bio Technology  
M.Sc. Computer Technology  
M.Sc. Information Technology

## 2.2. **Mode of study**

Candidates admitted under 'Full-Time' should be available in the College/Institution/University during the complete working hours for curricular, co-curricular and extra-curricular activities assigned to them.

## 2.3. **Admission requirements**

2.3.1 Candidates for admission to the first semester of M.Sc. (2 year) Degree Programme shall be required to have passed an appropriate qualifying Degree Examination of Anna University prescribed by the Syndicate of the University or any examination of other University or authority accepted by the Syndicate of Anna University, Chennai as equivalent thereto.

2.3.2 Notwithstanding the qualifying examination the candidate might have passed, he/she shall have a minimum level of proficiency in the appropriate Programme / courses as prescribed by the Syndicate of the University from time to time.

2.3.3 Eligibility conditions for admission such as class obtained, number of attempts in qualifying examination and physical fitness will be as prescribed by the Syndicate of the University from time to time.

## 3. **DURATION AND STRUCTURE OF THE P. G. PROGRAMMES:**

3.1 A student is ordinarily expected to complete Two year M.Sc. programme in 4 semesters, but in any case not more than 8 semesters.

3.2 Each semester shall normally consist of 90 working days or 350 periods each of 50 minutes duration. The Head of the Institution shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course (subject) being taught. End-Semester Examination will be scheduled after the last working day of the semester.

3.3 The Head of the Institution may conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. But for the purpose of calculation of attendance requirement or writing the end semester examinations (as per clause 4) by the students 350 periods conducted within the specified academic schedule alone shall be taken into account and the overall percentage of attendance shall be calculated accordingly.

The University Examination will ordinarily follow immediately after the last working day of the semester commencing from I semester as per the academic schedule prescribed from time to time.

3.4 The programme will consist of:

Core courses

Elective courses

Project work

The Programme will also include design projects/seminars/ practicals /practical training, if they are specified in the Curriculum.

- 3.4 The credits will be assigned to the courses for different modes of study as given below.
- One credit for each lecture period designed per week  
One credit for each tutorial period designed per week  
One credit for each seminar/practical session/Project work of two periods designed per week.  
One credit for two weeks, two credits for four weeks and three credits for six weeks of industrial training during summer vacation.
- 3.5 The number of credits to be earned for the successful completion of the Programme shall be as specified in the Curriculum of the respective specialization of the P.G. Programmes.
- 3.6 The electives from the curriculum are to be chosen with the approval of the Head of the Department concerned.
- 3.7 The Curriculum and Syllabi of all the P.G. Programmes shall be approved by the Academic Council of Anna University Chennai.
- 3.8 The medium of instruction is English for all courses, examinations, seminar presentations and project / thesis / dissertation reports.

#### **4. REQUIREMENTS FOR COMPLETION OF THE SEMESTER**

A Candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester.

- 4.1 Ideally every student is expected to attend all classes and secure 100% attendance. However, in order to allow provision for certain unavoidable reasons such as medical / participation in sports, the student is expected to earn a minimum of 75% attendance. Therefore, he/she shall secure not less than 75% (after rounding off to the nearest integer) in that semester taking into account the total number of periods in all courses attended by the candidate as against the total number of periods in all courses offered during that semester.
- 4.2 However, a candidate who secures overall attendance between 65% and 74% in the current semester due to medical reasons (prolonged hospitalization / accident / specific illness / Participation in Sports events) may be permitted to appear for the current semester examinations subject to the condition that the candidate shall submit the medical certificate attested by the Head of the Institution. The same shall be forwarded to the Controller of Examinations, Anna University, Chennai for record purposes.
- 4.3 Candidates who secure less than 65% of overall attendance shall not be permitted to write the University examination at the end of the semester and not permitted to move to the next semester. They are required to repeat the incomplete semester in the next academic year, as per the norms prescribed.

#### **5. Project Work**

- 5.1 The duration of projects shall be for a period of sixteen weeks.
- 5.2 Project work shall be carried out under the supervision of a “qualified teacher” in the Department concerned. In this context “qualified teacher” means the faculty member possessing Ph.D. degree or PG degree with a minimum of 3

years experience in teaching PG courses. The project work shall be allotted to individual students, not as a group of students.

A candidate may, however, in certain cases, be permitted to work on projects in an Industrial/Research Organization, on the recommendations of the Head of his/her Department. In such cases, the Project work shall be jointly supervised by a supervisor of the department and an expert-as a 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.

- 5.3 The Project Report prepared according to approved guidelines and duly signed by the Supervisor(s) shall be submitted to the respective Head of the Department.
- 5.4 The deadline for submission of Project Report is 60 calendar days from the last working day of the semester in which Project work is carried out.
- 5.5 If a candidate fails to submit the project report on or before the specified deadline, he/she is deemed to have failed in the Project work and shall re-register the same in a subsequent semester.

## **6 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 student will identify a teacher of the Department who shall function as Faculty Advisor for those students throughout their period of study. Such Faculty Advisor shall advise the students and monitor the courses taken by the students; check the attendance and progress of the students attached to him/her and counsels them periodically. If necessary, the faculty advisor may also discuss with or inform the parents about the progress of the students.

## **7. CLASS COMMITTEE**

- 7.1 Every class shall have a class committee consisting of teachers of the class concerned, student representatives and a chairperson who is not teaching the class. It is like the 'Quality Circle' (more commonly used in industries) with the overall goal of improving the teaching-learning process. The functions of the class committee include
  - Solving problems experienced by students in the class room and in the laboratories.
  - **Clarifying the regulations of the degree programme and the details of rules therein particularly clause 3 and 4 which should be displayed on college Notice-Board.**
  - Informing the student representatives the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
  - Informing the student representatives the details of Regulations regarding weightage used for each assessment. In the case of practical courses (laboratory / drawing / project work / seminar etc.) the breakup of marks for each experiment / exercise / module of work, should be clearly discussed in the class committee meeting and informed to the students.

- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any.
  - Identifying the weak students, if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students.
- 7.2 The class committee for a class under a particular branch is normally constituted by the Head of the department. However, if the students of different branches are mixed in a class, the class committee is to be constituted by the Head of the Institution.
- 7.3 The class committee shall be constituted within the first week of each semester.
- 7.4 At least 2 student representatives (usually 1 boy and 1 girl) shall be included in the class committee.
- 7.5 The chairperson of the class committee may invite the Faculty advisor(s) and the Head of the department to the class committee meeting.
- 7.6 The Head of the Institution may participate in any class committee of the institution.
- 7.7 The chairperson is required to prepare the minutes of every meeting, submit the same to Head of the Institution within two days of the meeting and arrange to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the Management by the Head of the Institution.
- 7.8 The first meeting of the class committee shall be held within one week from the date of commencement of the semester, in order to inform the students about the nature and weightage of assessments within the framework of the Regulations. Two or three subsequent meetings may be held in a semester at suitable intervals. **The Class Committee Chairman shall put on the Notice Board the cumulative attendance particulars of each student at the end of every such meeting to enable the students to know their attendance details to satisfy the clause 6 of this Regulation.** During these meetings the student members representing the entire class, shall meaningfully interact and express the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.

## 8. COURSE COMMITTEE FOR COMMON COURSES

Each common theory course offered to more than one discipline or group, shall have a "Course Committee" comprising all the teachers teaching the common course with one of them nominated as Course Coordinator. The nomination of the course Coordinator shall be made by the Head of the Department / Head of the Institution depending upon whether all the teachers teaching the common course belong to a single department or to several departments. The 'Course committee' shall meet in order to arrive at a common scheme of evaluation for the test and shall ensure a uniform evaluation of the tests. Wherever feasible, the course committee may also prepare a common question paper for the internal assessment test(s).

## **9. SYSTEM OF EXAMINATION**

- 9.1 Performance in each course of study shall be evaluated based on (i) continuous internal assessment throughout the semester and (ii) University examination at the end of the semester.
- 9.2 Each course, both theory and practical (including project work & viva voce Examinations) shall be evaluated for a maximum of 100 marks.
- 9.2.1 For all theory and practical courses including project work, the continuous internal assessment will carry **20 marks** while the End - Semester University examination will carry **80 marks**.
- 9.3 The University examination (theory and practical) of 3 hours duration shall ordinarily be conducted between October and December during the odd semesters and between April and June during the even semesters.
- 9.4 The University examination for project work shall consist of evaluation of the final report submitted by the student by an external examiner followed by a viva-voce examination conducted for each student by a committee consisting of the external examiner, the supervisor and an internal examiner.
- 9.5 For the University examination in both theory and practical courses including project work the internal and external examiners shall be appointed by the University.

## **10. PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT**

For all theory and practical courses the continuous assessment shall be for a maximum of 20 marks (consisting of 15 marks for tests/experiments and 5 marks for attendance). The above continuous assessment shall be awarded as per the procedure given below:

### **10.1**

#### **(a) Theory Courses**

Three tests each carrying 100 marks shall be conducted during the semester by the Department / College concerned. The total marks obtained in all tests put together out of 300, shall be proportionately reduced for 15 marks and rounded to the nearest integer (This also implies equal weightage to all the three tests).

#### **(b) Practical Courses:**

Every practical exercise / experiment shall be evaluated based on the exercise / experiment prescribed as per the syllabi and the records of work done maintained. There shall be at least one test during the semester. The criteria for arriving at the internal assessment marks (15 marks) shall be decided based on the recommendation of the class committee and shall be announced at the beginning of every semester by the Head of the Institution.

#### **(c) Internal Assessment for Theory Courses with Laboratory Component:**

The maximum marks for Internal Assessment shall be 15 in case of theory courses with Laboratory component.

If there is a theory course with Laboratory component, there shall be three tests: the first two tests (each 100 marks) will be from theory portions and the third test (maximum mark 100) will be for laboratory component. The sum of marks of first two tests shall be reduced to 30 marks and the third test mark shall be reduced to 30 marks. The sum of these 60 marks may then be arrived at for 15 and rounded to the nearest integer.

## 10.2 Project Work:

Project work shall be allotted to individual students not as a group of students. The Head of the Institution shall constitute a review committee for project work for each branch of study. There shall be three reviews (each 100 Marks) during the semester by the review committee. The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be reduced for 15 marks and rounded to the nearest integer (as per the scheme given in 10.2.1). Five marks shall be given for attendance (Clause 10.3)

**10.2.1** The project report shall carry a maximum 30 marks while the viva-voce examination shall carry 50 marks.

Attendance	Review I	Review II	Review III	End semester Examinations				
				Thesis (30)		Viva-Voce (50)		
				Internal	External	Internal	External	Supervisor
5	5	5	5	15	15	16.66	16.66	16.66

## 10.3 Attendance Record

The remaining 5 marks for attendance shall be awarded as given below:

Theory and Practical courses and Project Work

- 76% to 80% of attendance - 1 mark
- 81% to 85% of attendance - 2 marks
- 86% to 90% of attendance - 3 marks
- 91% to 95% of attendance - 4 marks
- 96% to 100% of attendance -5 marks

Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' which consists of attendance marked in each lecture or practical or project work class, the test marks and the record of class work (topic covered), separately for each course. 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 test marks and attendance. The Head of the department will put his signature and date after due verification. At the end of the semester, the record should be verified by the Head of the Institution who will keep this document in safe custody (for five years). The University or any inspection team appointed by the University may verify the records of attendance and assessment of both current and previous semesters.

## 11. REQUIREMENTS FOR APPEARING FOR UNIVERSITY EXAMINATIONS

A candidate shall normally be permitted to appear for the University Examinations of the current semester if he/she has satisfied the semester completion requirements (subject to Clause 4) and has registered for examination in all courses of the semester. Registration is mandatory for

semester examinations as well as arrear examinations, failing which the candidate will not be permitted to move to the higher semester.

A candidate who has already appeared for any subject in a semester and passed the examination is not entitled to reappear in the same subject for improvement of grades.

## **12 PASSING REQUIREMENTS**

- 12.1 A candidate who secures not less than 50% of total marks prescribed for the courses [Internal Assessment + End semester] with a minimum of 50% of the marks prescribed for the end-semester University Examination in both theory and practical courses (including Project work), shall be declared to have passed the Examination.
- 12.2 If a candidate fails to secure a pass in a particular course, it is mandatory that he/she shall register and reappear for the examination in that course during the subsequent semester when examination is conducted in that course; he/she should continue to register and reappear for the examinations in the failed subjects till he / she secures a pass.
- 12.3 The internal assessment marks obtained by the candidate in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secure a pass. However, from the 3rd attempt onwards if a candidate fails to obtain pass marks (IA + End Semester Examination) as per clause 12.1 then the passing requirement shall be as follows.

The candidate should secure a minimum of 50% marks prescribed for the courses in the University End semester Examination alone.

- 12.4 A student who has acquired the minimum number of total credits prescribed in the Curriculum for the award of the Masters Degree will not be permitted to register for more courses to improve his/her cumulative grade point average.

## **13. REVALUATION**

A candidate can apply for revaluation of his/her semester examination answer paper in a theory course, within 2 weeks from the declaration of results, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Institution. **A candidate can apply for revaluation of answer scripts for not exceeding 5 subjects at a time.** The Controller of Examination will arrange for the revaluation and the results will be intimated to the candidate concerned through the Head of the Institution. Revaluation is not permitted for practical courses, seminars, and for project work.

## **14. AWARD OF LETTER GRADES**

All assessments of a course will be done on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of total marks (out of 100) obtained by the candidate in each subject as detailed below:

Letter grade	Grade Points	Marks Range
S	10	91 – 100
A	9	81 – 90
B	8	71 – 80
C	7	61 – 70
D	6	57 – 60
E	5	50 – 56
U	0	< 50
W	0	

“U” denotes **Reappearance** (RA) is required for the examination in the course.  
(This grade will figure both in Marks Sheet as well as in Result Sheet)

“W” denotes **withdrawal** from the course.

‘SA’ denotes shortage of attendance (as per clause 6.3) and hence prevention from writing the end semester examination. ‘SA’ will appear only in the result sheet.

### Grade sheet

After results are declared, Grade Sheets will be issued to each student which will contain the following details:

- The college in which the candidate has studied
- The list of courses enrolled during the semester and the grade scored.
- The Grade Point Average (GPA) for the semester and
- The Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards.

GPA for a semester is the ratio of the sum of the products of the number of credits for courses acquired and the corresponding points to the sum of the number of credits for the courses acquired in the semester.

$$\text{GPA} = \frac{\text{Sum of [Credits acquired x Grade points]}}{\text{Sum of Credits acquired}}$$

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

$$\text{GPA/CGPA} = \frac{\sum_{i=1}^n C_i \text{ GPI}}{\sum_{i=1}^n C_i}$$

where  $C_i$  – is the Credits assigned to the course

$G_{P_i}$  – is the point corresponding to the 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

## **15. ELIGIBILITY FOR THE AWARD OF THE DEGREE**

15.1 A student shall be declared to be eligible for the award of the Degree if he/she has

- Successfully gained the required number of total credits as specified in the Curriculum corresponding to his/her Programme within the stipulated time.
- No disciplinary action is pending against him/her.
- Successfully completed the field visit / industrial training, if any, as prescribed in the curriculum.
- The award of the degree must be approved by the Syndicate.
- Successfully completed any additional courses prescribed by the Director, Academic Courses, whenever any candidate is readmitted under Regulations other than R-2010 (clause 18.2).

## **16. CLASSIFICATION OF THE DEGREE AWARDED**

### **16.1 FIRST CLASS WITH DISTINCTION:**

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

- Should have passed the End semester examination in all the courses of all the four semesters in his/her First Appearance within two years. Withdrawal from examination (vide Clause 17) will not be construed 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 semesters.

One year authorized break of study (if availed of) is permitted in addition to two years for award of First class with Distinction.

### **16.2 FIRST CLASS:**

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

- Should have passed the End semester examination in all the courses of all the four semesters within three years.
- Should have secured a CGPA of not less than 6.50

One year authorized break of study (if availed of) is permitted in addition to three years for the award of First Class.

### **16.3 SECOND CLASS:**

All other candidates (not covered in clauses 16.1 and 16.2) who qualify for the award of the degree (vide Clause 15) shall be declared to have passed the examination in Second Class.

- 16.4.** A candidate 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.

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

- 17.1 A candidate may, for valid reasons, (medically unfit / unexpected family situations) be granted permission to withdraw from appearing for the examination in any course or courses in any one of the 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.

- 17.2 Withdrawal application shall be valid only if the candidate is otherwise eligible to write the examination (Clause 6) and if it is made within TEN days before the commencement of the examination in that course or courses and also recommended by the Head of the Department and Head of the Institution.

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

- 17.4 Withdrawal shall not be construed as an appearance for deciding the eligibility of a candidate for First Class with Distinction.

- 17.5 Withdrawal is NOT permitted for arrears examinations of the previous semesters.

### **18. AUTHORIZED BREAK OF STUDY FROM A PROGRAMME**

- 18.1 A candidate is normally not permitted to temporarily break the period of study. However, if a candidate happens to discontinue the programme temporarily in the middle of duration of study for valid reasons (such as accident or hospitalization due to prolonged ill health) and to rejoin the programme in a later semester he / she shall apply to the Director, Student Affairs, in advance, in any case, not later than the last date for registering for the semester in question, through the Head of the Institution stating the reasons.

- 18.2 The candidate permitted to rejoin the programme after the break shall be governed by the Curricula and regulations in force at the time of rejoining. If the regulation is changed, then those candidates may have to do additional courses prescribed by the Director, Academic Courses.

- 18.3 The authorized break of study will not be counted towards the duration specified for passing all the courses for the purpose of classification (vide Clause 16.1 and 16.2).
- 18.4 The total period for completion of the programme reckoned from, the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 3.1 irrespective of the period of break of study in order that he / she may be eligible for the award of the degree (vide clause 15).
- 18.5 If any student is detained for want of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted 'Break of Study' and Clause 18.3 is not applicable for this case.
- 18.6 In case of any valid reasons for extension of Break of Study, such extended Break of Study may be granted by the approval of the Director, Student Affairs for a period not more than 1 year in addition to the earlier authorized Break of Study. Such extended break of study shall be counted for the purpose of classification of degree (vide clause 16).
- 18.7 If the candidate has not reported back to the department, even after the extended Break of Study, the name of the candidate shall be deleted permanently from the college enrollment. Such candidates are not entitled to seek readmission under any circumstances.

**19. DISCIPLINE**

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 University / College. The Head of the Institution shall constitute a disciplinary committee consisting of Head of the Institution, Two Heads of Department of which one should be from the faculty of the student, to enquire into acts of indiscipline and notify the University 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 including one representative from Anna University, Chennai. In this regard, the member will be nominated by the University on getting information from the Head of the Institution.

If a student indulges in malpractice in any of the University / internal examination he / she shall be liable for punitive action as prescribed by the University from time to time.

**20. REVISION OF REGULATION AND CURRICULUM**

The University may from time to time revise, amend or change the Regulations, scheme of examinations and syllabi if found necessary.