## **REGULATIONS 2020**

# BACHELOR OF ENGINEERING Degree Programme (CHOICE BASED CREDIT SYSTEM)

of

## **GOVERNMENT COLLEGE OF ENGINEERING,**

## **BARGUR - 635 104**

(An Autonomous Institution, Affiliated to Anna University, Chennai)



### **Common to all B.E. Degree Programme**

### (Both Full time & Part time)

(With effect from the Academic Year 2020 - 2021) (Approved in the 6<sup>th</sup> Academic Council meeting held on 26.05.2022)

# **Bachelor of Engineering**

## (Both Full time & Part time)

## **REGULATIONS 2020**

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# **Bachelor of Engineering**

## (Both Full time and Part time)

## (CHOICE BASED CREDIT SYSTEM)

## **GOVERNMENT COLLEGE OF ENGINEERING**

### **BARGUR - 635 104**

(An Autonomous Institution Affiliated to Anna University, Chennai)

## **REGULATIONS 2020**

**Updated and Amended on 25<sup>th</sup> Aug' 2022** (With effect from the Academic Year 2020 - 2021)

### 1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these regulations, unless the context otherwise requires:

- i. "Programme" means B.E. Degree Programme.
- "Branch" means a discipline or specialization of B.E. Degree
   Programme like Computer Science and Engineering, Mechanical
   Engineering etc.
- iii. "Course" means a Theory or Practical subject that is normally studied in a semester like Engineering Mathematics, Engineering Mechanics 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 all Departments and hereafter called COE.
- vi. **"Head of the Department"** means Head of the Under Graduate Programme Concerned and hereafter called HOD.
- vii. "University" means ANNA UNIVERSITY, Chennai.

#### 2. ADMISSION

## **3. BRANCHES OF STUDY OFFERED**

FULL TIME	PART TIME		
<b>B.E. DEGREE PROGRAMME</b>	<b>B.E. DEGREE PROGRAMME</b>		
B.E. Computer Science and Engineering	branch of study currently being		
B.E. Electronics and Communication Engineering	g offered by the Institution is		
B.E. Electrical and Electronics Engineering	Electrical and Electronics		
B.E. Mechanical Engineering	Engineering.		

Approved in the 6<sup>th</sup> Academic Council meeting held on 26.05.2022

#### 4. STRUCTURE OF UNDERGRADUATE ENGINEERING PROGRAMME

#### 4.1 Categorization of Courses

Every B.E. Degree Programme will have a curriculum with syllabi consisting of theory and practical courses with well-defined Program Outcomes and Programme Educational Objectives (PEO) as per Outcome Based Education (OBE). The content of each course is designed based on the Course Outcomes (CO). The courses of a programme are categorized as follows:

#### A. Foundation Courses

(i)Humanities and Social Sciences Courses (HSC) include Technical English, Employability Skills, Engineering Ethics and Human Values, Communication skills etc.

(ii)Basic Sciences Courses (BSC) includes Mathematics, Physics, Chemistry, etc.

(iii)Engineering Sciences Courses (ESC) includes Engineering Practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.

**B. Professional Core Courses (PCC)** includes the core courses relevant to the chosen programme of study.

**C. Professional Elective Courses (PEC)** includes the elective courses relevant to the chosen programme of study.

- **D. Open Elective Courses (OEC)** includes the courses offered by a branch to other branches, from the list specified in the respective curriculum of Full time B.E. degree programme (Not applicable for Part time B.E.).
- E. Employability Enhancement Course (EEC) includes Project Work, Internship, Seminar, Professional Practices, Case Study and Industrial/Practical Training etc.
- F. Mandatory Courses (MC) prescribed by AICTE / UGC (only for Full Time B.E Degree Programme).

#### **Range of credits**

S. No	Category	<b>Credits</b> (Regular)	<b>Credits</b> (Lateral)	<b>Credits</b> (Part-time)
<b>A.</b>	Foundation Courses	61*	42*	13.5*
	Humanities and Social Science (HSS)	12*	8*	NA
	Basic Science Courses (BSC)	25*	19*	12.0*
	Engineering Science (ES)	24*	15*	1.5*
<b>B.</b>	<b>Professional Core Courses (PCC)</b>	48*	45*	63.0*
<b>C.</b>	<b>Professional Elective courses (PEC)</b>	18*	12*	15.0*
D.	<b>Open Elective Courses (OEC)</b>	18*	9*	NA
<b>E.</b>	<b>Employability Enhancement Course (EEC)</b>	15*	12*	4.5*
F.	Mandatory Courses (MC)	0	0	NA
	TOTAL	160*	122*	96*

The recommended distribution of credits for each category is given below:

\*Minor variation is allowed as per need of the respective disciplines.

A range of credits from 160 - 165 for a student to be eligible to get Full time Four-year Under Graduate degree in Engineering (credits from 122-128 for Lateral Entry) and the total number of credits proposed for the part-time B.E. degree program is 96 - 100.

#### **4.2. DEFINITION OF CREDIT**

Each course is assigned credits based on the following:

Contact period per week	CREDITS
1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
1 Hr. Practical (P) per week	0.5 credit

The Curriculum of U.G. Programmes is so designed that the prescribed credits required for the award of degree, which depends on the branch of study, shall be within the limits specified below;

Programme	Prescribed Credit Range
B.E (Full Time-Regular)	160-165
B.E. (Full Time-Lateral Entry)	122-128
B.E. (Part Time / EEE)	96-100

#### 4.3. PERSONALITY AND CHARACTER DEVELOPMENT (Applicable only for Full time B.E. Degree programme)

All the students should enroll on admission in any one of the personality and character development programmes (NSS / NSO / YRC). The training shall include classes on hygiene and health awareness and also training in first-aid.

**National Service Scheme (NSS)** will have social service activities in and around the College / Institution.

**National Sports Organization (NSO)** will have sports, Game, Drills and Physical exercises.

**Youth Red Cross (YRC)** will have activities related to social services in and around the College / Institution. While the training activities will normally be during weekends, the camp will normally be during vacation period.

**Fine Arts Club** like music, painting, cultural and documentary films with social themes shall be encouraged.

**Science club** shall organise activities of popularisation of science and scientific temper through activities related to astronomy, works of great scientists from India and abroad, observing National Science Day, etc.

**Literary Club** like 'Tamil Ilakkiya Mandram' shall be formed, which shall organise colourful literary events to propagate good humanist values, morals and ethics reflected in the literature.

Full Time B.E. Degree	Part Time B.E. Degree		
Programme	Programme		
Each semester curriculum shall	Curriculum of a semester shall		
normally have a blend of lecture	normally have a blend of 4 or 5 Lecture		
courses not exceeding 7 Theory	Courses and Laboratory Courses. In		
courses and Laboratory integrated	addition, Employability Enhancement		
theory courses and 4 Employability	Course(s) may also be included. Each		
Enhancement Course(s) and	course may have credits assigned as per		
Laboratory Courses. However, the	Clause 4.2. However, the total number		
total number of courses per	of courses per semester shall not		
semester shall not exceed 10.	exceed 5 (including EEC).		

#### 4.4. NUMBER OF COURSES PER SEMESTER

#### 4.5. INDUSTRIAL TRAINING / INTERNSHIP

- **4.5.1** The students may undergo Industrial training for a period as specified in the Curriculum during the summer / winter vacation. In this case, the training has to be undergone continuously for a period of at least two weeks in an organization. The students may undergo Internship at a Research organization / University/ Industry (after due approval from the Head of the Institution) for the period prescribed in the curriculum during the summer / winter vacation, in lieu of Industrial training. As per the format provided by COE, Attendance Certificate shall be forwarded to the office of COE mentioning the period of Industrial Training / Internship and signed by the competent authority of the industry for processing results.
- **4.5.2** If Industrial Training/ Internship is not prescribed in the curriculum, the student may undergo Industrial Training/ Internship optionally and the credits earned will be indicated in the Grade Sheet. If the student earns three credits in Industrial Training/ Internship, the student may drop one Professional Elective (only one professional elective can be dropped). In such cases, Industrial Training / Internship need to be undergone continuously from one organization or with a combination one / two week(s) and one / four week(s) from one / two organization(s). However, if the number of credits earned is 1 or 2, then these credits shall not be considered for classification of the degree. Students shall get permission from the Head of the Institution for taking Industrial Training / Internship and the Certificate of completion of Industrial Training / Internship shall be forwarded to the COE through head of the department.

Duration of Training / Internship	Credits
2 weeks*	1
4 weeks	2
6 weeks	3

\*1 week = 40 Internship Hours

#### 4.6. VALUE ADDED COURSES

#### 4.6.1Objectives

The main objectives of the Value Added Course are:

- ✤ To provide students an understanding of the expectations of industry.
- ✤ To improve the employability skill and inter-disciplinary skills of students.
- ✤ To bridge the skill gaps and make students industry ready.
- ✤ To mould students as job providers rather than job seekers.

#### 4.6.2 Course Designing

- (1) The department interested in designing a Value Added Course should undertake Training Need Analysis, discuss with the generic employers, alumni and industrial experts to identify the gaps and emerging trends before designing the syllabus. According to the content and target group, the appropriate pedagogical methods should be adopted in the curriculum.
- (2) Any new Value Added Course developed by a Department should be placed before the Board of Studies, Standing Committee and approved by the Academic Council.
- (3) The course offered should not be the same as any course listed in the curriculum of the respective programme / or any other programme. A unique course code is to be given for each course.
- (4) The course can be offered only for the students studying semester V and above of UG Programmes.

#### **4.6.3** Guidelines for conducting value added courses

- (1) Value added Course is not mandatory to qualify for any programme and the credits earned through the Value Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree.
- (2) It is faculty assisted learning courses open to all students without any additional fee. However, students shall pay the prescribed examination fee and register along with other courses in that particular semester.

- (3) Classes for a VAC are conducted during the RESERVED Time Slot in a week or beyond the regular class hours. The value added courses may also be conducted during weekends / vacation period. The details of the syllabus, time table and course coordination may be the sent to the office of the Controller of Examinations at least one month before the course is offered for approval.
- (4) Industry experts / eminent academicians from other Institutes are eligible to offer the value added course. The course can be offered only if there are at least 5 students opting for it.
- (5) The students may be allowed to take value added courses offered by other departments after obtaining permission from Head of the Department offering the course.

### 4.6.4 Procedure for registration

- (1) A student shall register for a Value Added Course offered during the semester by submitting the duly filled in registration form (Annexure II) through the concerned Head of the Department.
- (2) The Head of the Department shall segregate according to the choice opted and send it to the Office of the Controller of examinations.
- (3) A student will be permitted to register only one Value Added Course in a Semester. Students can take a maximum of two one credit courses / one two credit course during the entire duration of the Programme.

#### 4.6.5 Duration

The duration of value added course is 30 hours with a combination of 18 hours (60%) of theory and 12 hours (40%) of practical. However, the combination of theory and practical shall be decided by the course teacher with the approval of the Head of the Department.

The duration of value added courses is 15 (30) periods of theory or a maximum of theory and Laboratory courses and the course can have a maximum of three hours per day. For the one (two) credit courses either 15 (30) periods of theory or a combination of theory and Laboratory may be offered. Where, 2 periods of laboratory = 1 period of theory.

#### 4.6.6 ASSESSMENT FOR VALUE ADDED COURSES

The one / two credit course shall carry 100 marks and shall be evaluated through continuous assessment only. Two assessments shall be conducted by the department concerned. The total marks obtained in the assessments shall be reduced to 100 marks and rounded to the nearest integer. A committee consisting of the Head of the Department, staff handling the course and a senior faculty member nominated by the Head of the Institution shall do the evaluation process. The list of students along with the marks and the grades earned shall be forwarded to the office of the Controller of Examinations for appropriate action at least one month before the commencement of End Semester Examinations. The grades earned by the students for Value Added Courses will be recorded in the Grade Sheet, however the same shall not be considered for the computation of CGPA.

. Duration	Credits
2weeks	1
4weeks	2

#### 4.7. INDUSTRIAL VISIT

#### (Only for Full Time B.E. Degree Programme)

Every student is expected to undergo one industrial visit every year starting from second semester of the programme, subject to the approval of the Head of the Department and Principal.

#### 4.8 ONLINE COURSES / SELF STUDY COURSES

**4.8.1** Students may be permitted to register for online courses during fourth to seventh semester of his/her study. Maximum of three online courses, limited to a total of nine credits may be permitted with the approval of Head of the department, in lieu of open elective / professional elective courses. **The Head of the department shall form a committee (three members) comprised of HoD, a faculty member from the department of the student and HoD of any other branch of the institution. The committee has to ensure that the** 

**student has not studied such courses and would not repeat it again as Professional Core / Professional Elective/Open Elective courses.** Suitable online courses shall be chosen from the NPTEL / MOOC / SWAYAM platform.

**4.8.2** On successful completion of the course, he/she has to submit the copy of the certificate to the Head of the Department for exemption from registering for an elective course. Based on the recommendation by the team of faculty members nominated by the Head of the Department, the student will be awarded grade and credits. The recommendation will be sent to the office of the Controller after the approval by the Head of the Department.

#### 4.9 OTHER EMPLOYABILITY ENHANCEMENT COURSES

- **4.9.1**The Seminar / Case Study / Mini Project course is to be considered as purely INTERNAL (with 100% internal marks only). Every student is expected to present a minimum number of two seminars per semester before the evaluation committee and for each seminar, marks can be equally appointed. The three member committee appointed by the Head of the institution, consisting of the course coordinator and two experts for the department, will evaluate the seminar and at the end of the semester, the marks shall be consolidated and taken as the final mark. The evaluation shall be based on the seminar paper (40%), presentation (40%) and response to the questions asked during presentation (20%).
- **4.9.2** The Industrial / Practical Training, Summer Project, Internship, shall carry 100 marks and shall be evaluated through internal assessment only. At the end of Industrial / Practical Training / Internship / Summer Project, the student shall submit an attendance certificate from the organization where he / she have undergone training and a brief report. 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 institution consisting of the course coordinator and two experts from the department.

The certificates (issued by the organization) submitted by the students shall be attached to the mark list sent by the Head of the Institution to the Controller of Examinations.

**4.9.3** For all the courses under Employability Enhancement Courses Category, except the Project Work, the evaluation shall be done with 100% internal marks and as per the procedure described in clause 4.9.1 / 4.9.2.

#### 4.10 MANDATORY COURSES (Only for Full Time B.E. Degree)

Induction Program, Constitution of India and Environmental Science and Engineering (The list may change from time to time). Mandatory courses are awarded grade based upon the Continuous Assessment

Marks. Passing of the mandatory courses are a must for awarding the degree.

### 4.11 ADVANCEMENT OF COURSES

The students, who have completed their final semester courses (except project work) in advance, shall be permitted to carry out their final semester Project work for six months in an industry / research organization. These students shall undergo the eighth semester courses other than the Project work in the sixth and seventh semesters, provided they do not have current arrears and have a CGPA of 7.5 and above at the end of the semester IV. The Head of the department, in consultation with the faculty handling the said courses shall forward the proposal recommended by the Head of the institution to the Controller of Examinations for approval at least 4 weeks before the commencement of sixth semester of the programme for approval.

#### **4.12 MEDIUM OF INSTRUCTION**

The medium of instruction, examinations and project report shall be in English.

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

#### 5.1 Full Time B.E. Degree Programme

A student is ordinarily expected to complete the B.E. degree Programme over a period of 4 years (8 semesters) but in any case not more than 14 Semesters (for HSC students) and 3 years (6 semesters) for the students admitted in the third semester (Lateral Entry students) but in any case not more than 6 years (12 semesters).

- **5.2** Each semester shall normally consist of 75 working days or 540 periods of 50 minutes each. The Head of the institution shall ensure that every faculty imparts instruction as per the number of periods specified in the syllabus and that the faculty teaches the full content of the specified syllabus for the course being taught.
- **5.3** 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 (vide clause 17) in order that he / she may be eligible for the award of the degree (vide clause 15).
- 5.4 For the purpose of regulations, the academic year will be divided into two Semesters, the odd semester normally spanning from June to November and the even semester from December to May.

#### 5.5 Part Time B.E. Degree Programme

5.5.1 A student is normally expected to complete the Part –time B.E. Programme in 3 <sup>1</sup>/<sub>2</sub> years (7 Semesters) but in any case not more than 6 <sup>1</sup>/<sub>2</sub> years (13 Semesters).

- **5.5.2**Each semester shall normally consist of 75 working days. The HOD shall ensure that every teacher imparts instruction as per the number of contact periods specified in the syllabus covering the full content of the syllabus for the course being taught.
- **5.5.3**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 irrespective of the period of break of study or prevention in order that the student may be eligible for the award of the degree.

#### 6. COURSE REGISTRATION

- **6.1** The Head of the department is responsible for registering the courses that each student is proposing to undergo in the ensuing semester.
- **6.2** Registration by a student is mandatory for all the courses in the current semester and all arrear(s) course(s) for the end semester examinations failing which, the student will not be permitted to move to the higher semester. The registration details of the student shall be approved by Head of the department and forwarded to the Controller of Examinations.

### The courses that a student registers in a particular semester may include

- i. Courses of the current semester.
- ii. Courses advanced to Semester VI and VII from Semester VIII (as per clause 4.11).
- 6.3 The maximum number of credits that can be registered in a semester is36. However, this does not include the number of Re-appearance (RA) and Withdrawal (W) courses registered by the student for the appearance of Examination.

- **6.4** If a student fails to secure a pass in a theory course / laboratory course (except electives), the student shall register and appear only for the end semester examination in the subsequent semester. In such case, the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the student secures a pass.
- **6.5** A student who has already appeared for any course in a semester and passed the examination is not entitled to register and reappear in the same course for improvement of grades.

#### 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 a 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 V to VII semesters, the student has the option of registering for one additional theory course or dropping one existing theory course with the guidance of faculty advisor and approved by head of the department. The maximum number of credits the student can register in a particular semester cannot exceed 36 credits. The student is permitted to add/drop the course(s) within 30 days of the commencement of the academic schedule.

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

A student who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester and eligible for appearing for end semester examinations.

Full Time	Part Time		
<b>B.E. Degree Programme</b>	<b>B.E. Degree Programme</b>		
Ideally every student is expected to atte			
100% attendance.			
Students with overall attendance	Students with overall attendance		
percentage not less than 75% (after	percentage not less than 70% (after		
rounding off to the nearest integer) are	rounding off to the nearest integer) are		
eligible for appearing in the semester end	eligible for appearing in the semester end		
examination.	examination.		
Students with overall attendance	Students with overall attendance		
percentage between 65% and 74% are	percentage between 60% and 69% are		
not eligible for appearing in the	not eligible for appearing in the end		
semester end examination. However, in	semester examination. However, in order		
order to give provision for certain	to give provision for certain <b>unavoidable</b>		
unavoidable medical reasons	medical reasons (prolonged		
(prolonged hospitalization / accident /	hospitalization / accident / specific		
specific illness) /Participation in Sports	illness), may be permitted to appear for the		
events / Camp, may be permitted to	current semester examinations subject to		
appear for the current semester	the condition that the candidate should		
examinations subject to the condition	submit the medical certificate		
that the candidate should submit the	(immediately after taking leave of		
medical certificate / sports participation	absence) attested by the Head of the		
certificate (immediately after taking	Institution.		
leave of absence) attested by the Head of			
the Institution.			
Students those who got prior permission			
from the Head of the Department for			
participating in any other College /			
University / State / National /			
International Level Sports events / NSS,	Not Applicable		
NCC camp / Training at industries and higher learning institutions shall only be	Not Applicable		
considered to apply for condonation.			
Condonation can be allowed only two			
semesters during the entire course of			
study.			
Students with less than 65%	Students with less than 60% attendances		
attendances are not eligible to write the	are not eligible to write the semester end		
semester end examination. The student	examination. The student has to re-join the		
has to re-join the programme.	programme.		

#### 8. FACULTY ADVISOR

There shall be a faculty advisor for each class appointed by the HOD of the department concerned. The faculty advisor will be one among the course-instructors of the class. The faculty advisor is the ex-officiomember and the

Convener of the class committee. The responsibilities for the faculty advisor are as follows:

- To act as the channel of communication between the HOD and the students of the respective class.
- >To collect and maintain various statistical details of students.
- ➤To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- ➤To monitor the academic performance of the students including attendance and to inform the class committee. Faculty advisors should take utmost care that student availing leave or on-duty for **medical reasons** (enclose medical certificate)/ participation in **sports** / **camp** (selection letter), has to submit permission letter to the Principal through the respective Head of the Department.
- ➤To attend to the students welfare activities like awards, medals, scholarships and industrial visits. If necessary, may also discuss with or inform the parents about the progress of the students through Head of the Department or in Parent – Teacher meeting.

### 9. ACADEMIC COMMITTEE

#### 9.1 CLASS COMMITTEE

- The objective of the Class Committee is to improve the teaching-learning process. The functions of the class committee include:
- ➤Resolving difficulties experienced by students in the classroom and in the laboratories.
- Clarifying the regulations of the degree programme and the details of rules therein.
- >Discussing the progress of academic schedule and deviations if any.
- >Evaluating the performance of the students of the class after each test and finding the ways and means of improvement.
- Class committee comprises of faculty members who are teaching in that class, student representatives (cross section of students from boys and girls) and a Head of the department.

- The class committee shall meet three times in a semester as specified in the academic calendar.
- >During these meetings, the representative of the class shall meaningfully interact and express the opinions and suggestions of the other students of the class to improve the effectiveness of the teaching-learning process.
- The Chairperson is required to prepare the minutes of the meeting, signed by the members and submit the same to the Principal, within 10 working days of the meeting.
- ➤Committee Chairperson shall display the cumulative attendance particulars of each student on the Notice Board at the end of every such meeting to enable the students to know their attendance details to satisfy the clause 7of this Regulation.
- ≻In each meeting, the action taken report of the previous meeting is to be presented by the Chairperson of the class committee.

#### 9.2 PERFORMANCE ASSESSMENT COMMITTEE

The Performance Assessment Committee comprises of the IQAC Coordinator, Senior faculty members and Head of Department. This committee shall meet to assess the attainment of Course Outcomes and Program Outcomes, progress and status of the students of the semester concerned at the beginning and end of the semesters. The committee can invite Faculty mentors and students as invitees.

#### **10. SYSTEM OF EXAMINATION**

- 10.1 Performance in each course of study shall be evaluated based on
  - (i) Continuous internal assessment throughout the semester and
  - (ii) Terminal examination at semester end.

- **10.2** Each course, both theory and practical (including project work & viva voce examinations) shall be evaluated for a maximum of 100 marks.
- **10.3** Industrial Training and Seminar shall carry 100 marks and shall be evaluated through internal assessment only.
- **10.4** Mandatory Courses are evaluated through internal mode and grades are awarded based on Continuous Assessment Marks.
- 10.5 The terminal 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. All Practical examinations shall be conducted and evaluated at the Department itself on behalf of the Controller of Examinations.
- **10.6** The terminal examination for Project Work shall consist of evaluation of the final report submitted by the student or students of the project group (of not exceeding 4 students) by an external examiner and an internal examiner, followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner, the supervisor of the project group and an internal examiner.
- **10.7** For the terminal examination of practical courses including Project work, the internal and external examiners shall be appointed by the Controller of Examinations.
- **10.8** Identity card/Hall ticket of the college must be produced at the time of terminal examination. Any student fails to produce Identity card / Hall ticket shall be levied a spot fine by the Chief superintendent/ Examiners.
- 10.9 Students are prohibited from entering into the Examination Hall / Laboratories with any book or portion of book, manuscript, or paper of any description or Communicating with or copying from each other or communicating with anyone outside the Examination Hall / Laboratories. Programmable calculator, mobile phone shall not be permitted inside the Examination hall / Laboratories. However, any required codebooks and data

sheets / books as specified in the question paper will be supplied inside the Examination hall / laboratories by the office of the Controller of Examinations. The students are warned that any form of Malpractice will be dealt with severely.

#### **10.10 ACADEMIC MALPRACTICE**

Academic malpractice shall be viewed very seriously and penalized appropriately. In order to discourage students from indulging in such activities, each case shall be enquired by a Malpractice Committee, constituted by the Principal and Chairman. If the malpractice is proven, suitable punishments were awarded as per Anna University, Chennai guidelines.

#### **10.11 PROCEDURE FOR USING SCRIBE**

If a candidate is physically handicapped (in case of accidents / ill health) / at the time of examination, then he / she may be permitted to use a scribe to write the examination with prior permission from Controller of Examination, Anna University, Chennai. In such case 30 minutes extra time will be permitted. The Scribe shall be a non-engineering student / graduate.

#### 11. PROCEDURE FOR AWARDING MARKS FOR CONTINUOUS ASSESSMENT

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

For Students admitted in the academic year 2020-2021

- 11.1 Performance in each Course of Study shall be evaluated based on (i) Continuous assessments throughout the semester and (ii) End Semester Examination at the end of the semester.
- **11.1.1** 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.
- **11.1.2** 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.

**11.1.3** For **Project Work**, out of 100 marks, the maximum marks for Continuous Assessment is fixed as 50 and the Semester End Examination (Project Report evaluation and Viva-Voce examination) carries 50 marks. Project work may be assigned to a single student or to a group of students not exceeding 4 per group.

There shall be **two assessments** (each 100 marks) during the semester by a Review Committee. The student shall make presentation on the progress made before the Committee. The HOD shall constitute a Review Committee for each Programme. There shall be a minimum of three members in the Review Committee. The Project Guide will be one of the members of the Review Committee. The total marks obtained in the two Reviews shall be 50 marks.

The student(s) is expected to submit the Project Report on or before the notified date. The End Semester Examination for Project Work shall consist of evaluation of the final Project Report submitted by the student or students of the Project group by an external examiner and followed by a Viva-Voce examination conducted separately for each student by a committee consisting of the External Examiner, the Guide of the Project group and an Internal Examiner.

The Continuous Assessment and End Semester Examinations marks for Project Work and the Viva-Voce Examination will be distributed as indicated below.

Continuous Assessment 50 Marks				<b>End Semester Examination 50 Marks</b>		
<b>Review I</b> (25 Marks)		Review (25 Mar		ReportViva-VooEvaluation(30 Mark		
Review Committee (Excluding Guide)	Guide	Review Committee (Excluding Guide)	Guide	External Examiner	External Examiner	Internal Examiner **
15	10	15	10	20	15	15

**\*\*Guide will be the internal** 

11.1.4 All other courses included under Employability Enhancement Courses which are not theory courses are evaluated by Continuous Assessments only. Each course shall be evaluated for a maximum of 100 marks as shown below:

S.	Category of Course	Continuous	<b>End-Semester</b>
no.		Assessment	Examinations
1.	Theory Courses	50 Marks	50 Marks
2.	Laboratory Courses	50 Marks	50 Marks
3.	Project Work	50 Marks	50 Marks
4.	All other EEC Courses (non theory)	100 Marks	-
5.	Online Courses/Self Study Courses	50 Marks	50 Marks

#### **11.1.5** Guidelines for Continuous Assessment Mark:

<b>S.</b>	Category details	Continuous	Weightage
no.		<b>Assessment Marks</b>	
1.	Test (3 Nos.) - each test is to be conducted for 50 Marks	30 Marks	60%
2.	Assignment (3 Nos.)	20 Marks	40%
	TOTAL	50 Marks	100%

#### **For Students admitted in the academic year 2021-2022** 11.2 (A) THEORY COURSES

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

s.	Category details	Weightage
no.		
1.	Assignment (3 Nos.)	40%
2.	Test (3 Nos.) - each test is to be conducted for 50 Marks	60%
	TOTAL	100%

\**The weighted average shall be converted into 40 marks for Continuous Assessment.* The total marks obtained in all assessments put together out of 100, shall be proportionately reduced for 40 marks and rounded to the nearest integer.

### **11.2 (B) LABORATORY COURSES**

The maximum marks for Internal Assessment shall be 60 marks in case of practical courses. Every practical exercise / experiment shall be evaluated based on conduct of experiment / exercise and records to be maintained. There shall be at least one test. The criteria for arriving at the Internal Assessment marks of 60 are as follows: 75 marks shall be awarded for successful completion of all the prescribed experiments done in the Laboratory and 25 marks for the test. The total mark shall be converted into a maximum of 60 marks and rounded to the nearest integer.

Internal Assessment (100 Marks)*		
Evaluation of Laboratory Observation, Record	Model Lab	
75	25	

<sup>\*</sup>The internal assessment mark shall be converted into 60 marks for Continuous Assessment.

### 11.2 (C) PROJECT WORK

The student shall register for Project Work-I in pre-final semester and Project Work-II in final semester. Project work may be allotted to a single student or to a group of students not exceeding 4 per group. Project Work-II may / may not be a continuation of Project work – I. If Project work – II is not a continuation of Project work – I, then the topic and constitution of the project team members need not be the same.

- **11.2.1** 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 (i) PG degree or (ii) Ph.D. degree.
- **11.2.2** The Project Work-II carried out in industry/academic/research institutions need not be a continuation of Project Work-I. In such cases, the Project Work-II 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. The review meetings, if necessary, may also be arranged in online mode with prior approval from the Head of the Department and suitable record of the meetings shall be maintained.
- **11.2.3** The Head of the Department shall constitute a review committee for Project Work for each programme. The review committee consists of supervisor, an expert from the Department and a project coordinator from the Department. If the project coordinator/expert member happens to be the supervisor, then an alternate member shall be nominated. In the case of Industrial Project, the

review committee shall have the supervisor, the coordinator from industry and the project coordinator from the Department.

There shall be three reviews during the semesters VII and VIII by the review committee. The student shall make presentation on the progress made by him / her before the committee.

**11.2.4** The project report shall carry a maximum of 20 marks. Same marks shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 40 marks. Marks are awarded to each student of the project group is based on the individual performance in the viva-voce examination.

Review- Review- Review-		Semester End Examinations					
review-	Keview-	III	<b>Project Reports</b>		Viva Voce Examination		
			Internal	External	Internal	External	Supervisor
10	15	15	10	10	10	20	10

11.2.5 The Total Marks for each Course (Subject) consists of two Components namely Internal Assessment Marks (Continuous Assessment Marks) and Semester End Examination Marks. In some of the cases, the total marks may be only Internal Assessment Marks.

The declaration of result (Finalization of Grade) is based on the Internal Assessment Marks, Semester End Examination marks and Total Marks of the Subject.

11.2.6 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 HOD periodically (at least three times in a semester) 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. At the end of the semester, the record should be verified by the HOD who shall keep this document after the approval from the Principal in safe custody for eight years. The records of attendance and assessment of both current and previous semesters should be available for inspection whenever required.

#### **12. PASSING REQUIREMENTS**

### 12.1 For Students admitted in the academic year 2020-2021

The Passing requirement for a student in a Course is based on marks obtained both in Continuous Assessment and Semester End Examinations. A student who earns a minimum of 6 grade points in a Course, subject to securing a minimum of 50% marks in the End Semester Examinations, wherever applicable, shall be declared to have successfully passed the Course.

Continuous Assessment	Semester End Examination	6	Minimum Passing mark in end sem exam (Internal+External)
50 marks	50 marks	Internal: 25 marks External: 25 marks	50 marks

If a student fails to secure a pass in a theory course / laboratory course (except electives), the student shall register and appear only for the semester end examination in the subsequent semester (irrespective of odd or even).

For Students admitted in the academic year 2021-2022

- 12.2 A student who secures not less than 50% of total marks prescribed for the course [Internal Assessment + semester End Examinations] with a minimum of 45% of the marks prescribed for the semester end Examination, shall be declared to have passed the course and acquired the relevant number of credits. This is applicable for both theory and laboratory courses (including project work).
- **12.3** If a student fails to secure a pass in a theory course / laboratory course, the student shall register and appear in the subsequent semester.

### **12.4 REVALUATION**

#### 12.4.1 Open Day

To improve the transparency in valuation of answer scripts, Open day has been introduced for valuation clarification. On this day, the students can view their corrected answer scripts in the presence of Principal and Chairman, Head of the departments, subject experts and Course instructor handled the respective course for clarifying student doubts regarding valuation. There will be two options to the students while viewing the answer scripts and marks awarded viz.,

- (i) I agree with the valuation
- (ii) I need clarification.

If the student needs clarification in valuation, he / she can apply for revaluation. If a student is unable to attend the valuation open day, he / she will not be given another opportunity.

**12.4.2** A student can apply for photocopy of his/her semester examination answer paper in a theory course, as per the guidelines of the COE, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Institutions. The answer script is to be valued and justified by a faculty member, who has handled the subject and recommend for revaluation with the breakup of marks for each question. Based on the recommendation, the student can register for the revaluation through proper application to the Controller of Examinations. The revaluation results will be intimated to the student concerned through the Head of the departments. Revaluation is not permitted for practical courses and EEC courses. A student can apply for revaluation of answer scripts for not exceeding 5 subjects at a time.

### 12.5 REVIEW

Students not satisfied with Revaluation can apply for Review of his/ her examination answer paper in a theory course, within the prescribed date on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Institution.

Students applying for Revaluation only are eligible to apply for Review.

#### **13.** AWARD OF LETTER GRADES

#### 13.1 For Students admitted in the academic year 2020-2021

The Performance of a Student will be reported using letter grades, each carrying certain points as detailed below:

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

#### 13.2 For Students admitted in the academic year 2021-2022

The award of letter grades will be decided based on relative grading principle. The relative grading is applicable to ONLY those students who have passed the examination as per the passing requirements enumerated above.

Academic Performance	Letter Grade	Grade Points	REMARKS
91% - 100%	O (Outstanding)	10	PASS
81% - 90%	A + (Excellent)	9	PASS
71% - 80%	A (Very Good)	8	PASS
61% - 70%	B + (Good)	7	PASS
56% - 60%	B (Average)	6	PASS
50% - 55%	C (Satisfactory)	5	PASS
< 50%	U (RA: Re-appearance)	0	FAIL
-	W (Withdrawal)	0	FAIL

13.3 For theory courses relative grading method is to be followed and for the Project Work / Internship and Laboratory Courses absolute grading method shall be followed. For a given course, if the students' strength is greater than 30, the relative grading method shall be adopted. However, if the students' strength is less than 30 then the absolute grading method shall be followed.

#### 13.4 Validity of the Grade Ranges:

The Same Ranges of Grades are applicable for the results of revaluation / arrear / substitute / supplementary examination of that particular course. This procedure is applicable for both UG and PG Students.

13.5 "RA" denotes that the student has failed to pass in that course.

"W" denotes withdrawal from the exam for the particular course.

The grades "**RA**" and "**W**" will figure both in the Grade Sheet as well as in the Result Sheet. In both cases, the student has to appear for theSemester End Examinations as per the Regulation.

**13.6** If the grade RA is given to EEC (Employability Enhancement Course) / Mandatory course, which is evaluated only through internal assessment, the student shall register for the course again in the subsequent semester, fulfilling the passing requirements to earn pass in the course. However, attendance requirement need not be satisfied.

#### **14. 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 student has studied
- > The list of courses registered 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 acquired for courses and the corresponding points to the sum of the number of credits acquired for the courses in the semester. CGPA will be calculated in a similar manner, considering all the courses registered from first semester. RA grades will be excluded for calculating GPA and CGPA.

$$\mathbf{GPA / CGPA} = \frac{\underset{i=1}{\overset{n}{\sum} C_i GP_i}}{\underset{i=1}{\overset{n}{\sum} C_i}}$$

where ' $C_i$ ' is the number of Credits assigned to the course

'GP<sub>i</sub>' 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 DEGREE**

**15.1** A student shall be declared to be eligible for the award of B.E. Degree provided the student has

i) Successfully gained the required number of total credits as specified in the Curriculum corresponding to the programme of study within the stipulated time. Total minimum credits needed for each branch of study is as follows;

Branch of Study	Minimum No. of Credits
Computer Science and Engineering (FT)	160-165
Electronics and Communication Engineering(FT)	160-165
Electrical and Electronics Engineering (FT)	160-165
Mechanical Engineering (FT)	160-165
Part Time Electrical and Electronics Engineering	90

- ii) Successfully completed the course requirements, appeared for the End-Semester Examinations and passed all the subjects prescribed in all the 8 semesters within a maximum period of 7 years and 7 Semesters within a maximum period of 6<sup>1</sup>/<sub>2</sub> years for Part time reckoned from the commencement of the first semester to which the candidate was admitted.
- iii) Successfully passed any additional Courses prescribed whenever readmitted.
- iv) No disciplinary action pending against the student.
- v) Award of Degree must have been approved by the Anna University.

#### **15.2 CLASSIFICATION OF THE DEGREE AWARDED**

#### **15.2.1 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 eight semesters and 6 semesters in the case of Lateral Entry) in the student's First Appearance within **five** years and Four years in the case of Lateral Entry). For Part time B.E. seven semesters in the student's First Appearance within 4<sup>1</sup>/<sub>2</sub> years. Withdrawal from examination 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 semester.

### **15.2.2 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 eight semesters within five years for full time B.E. degree programme. Should have passed all the 6 semesters within four years in the case of Lateral Entry and in the case of Lateral Entry and within 4 <sup>1</sup>/<sub>2</sub> years in the case of Part Time B.E. degree Programme.
- One year authorized break of study (if availed of) or prevention from writing the End Semester examination due to lack of attendance (if applicable) is included in the duration of five years and four years in the case of lateral entry and 4 <sup>1</sup>/<sub>2</sub> years in case of Part time B.E. for award of First class.

Should have secured a CGPA of not less than 6.50 (for students admitted in the academic year 2021-2022) and CGPA of not less than 7.00 (for students admitted in the academic year 2020-2021).

#### **15.2.3 SECOND CLASS**

All other students (not covered in clauses 15.2.1 & 15.2.2) who qualify for the award of the degree (vide clause 15.1) shall be declared to have passed the examination in **Second Class**.

#### **15.2.4 RANK OF A STUDENT (Applicable only for Regular students)**

A candidate who qualifies for the Degree by passing the examination in all subjects of the entire programme in first attempt within a period of four consecutive academic years 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 Semester to VIII Semester end semester examination CGPA. Students transferred from other institution to GCE, Bargur are not eligible for rank.

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

- 16.1 A student may, for valid reasons, (medically unfit / unexpected family situations / sports approved by the Chairman, Sports Board and the 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 the COE through the Head of the Department with required documents.
- **16.2** Withdrawal application is valid if the student is otherwise eligible to write the examination and if it is made within TEN days after the date of the examination(s) in that course or courses and recommended by the Head of the Institution and approved by the Controller of Examinations. For a student

to withdraw from a course / courses, he/she should have registered for the course, fulfilled the attendance requirements and earned continuous assessment marks.

- **16.3** Notwithstanding the requirement of mandatory 10 days, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.
- 16.4 In case of withdrawal from a course / courses, the courses will figure both in the Grade Sheet as well as in the Result Sheet. However, withdrawal shall not be considered as an appearance for the eligibility of a student for First Class with Distinction.
- 16.5 If a student withdraws from writing end semester examinations for a course or courses, he/she shall register for the same in the subsequent semester and write the end semester examination(s).
- **16.6** If a student applies for withdrawal from Project Work, he/she will be permitted for the withdrawal only after the submission of project report before the deadline. However, the student may appear for the viva voce examination within 30/60 days after the declaration of results for Project Work I and II respectively and the same shall not be considered as reappearance.
- **16.7** Withdrawal is permitted for the end semester examinations in the final semester.

### **17. PROVISION FOR AUTHORISED BREAK OF STUDY**

- **17.1** A student is permitted to go on authorized break of study for a maximum Period of one year as a single spell.
- 17.2 Break of study shall be granted only once for valid reasons for a maximum of one year during the entire period of study of the degree programme. However, in extraordinary situation the student may apply for additional break of study not exceeding another one year. If a student intends to temporarily

discontinue the programme in the middle of the semester for valid reasons, and to re-join the programme in the subsequent year, permission may be granted based on the merits of the case provided he / she applies not later than the last date for registering for the semester end examination of the semester in question, through the Head of the department to the Principal and Chairman stating the reasons therefore and the probable date of re-joining the programme.

- **17.3** The student permitted to re-join the programme after break of study / prevention due to lack of attendance, shall be governed by the curriculum and regulations in force at the time of re-joining. The students re-joining in new regulations shall register for additional courses, if any, as notified by the change of regulations. These courses may be from any of the semesters of the curriculum in force, so as to bridge the curriculum in force and the old curriculum. In such cases, the total number of credits to be earned by the student may be more than or equal to the total number of credits prescribed in the curriculum in force.
- **17.4** The authorized break of study is included in the duration specified for passing all the courses for the purpose of classification.
- **17.5** 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 irrespective of the period of break of study in order that he/she may be eligible for the award of the degree.
- **17.6** If a student in Full Time mode wants to take up a job / start-up / entrepreneurship during the period of study he/she shall apply for authorized break of study for one year. The student shall join the job / start-up / entrepreneurship only after getting approval of the same by the Directorate of Technical Education / University, with due proof to that effect.
- **17.7** No fee is applicable to students during the Break of Study period.

#### **18. 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 College. The Head of the institution shall constitute a disciplinary committee consisting of the 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 Principal about the disciplinary action recommended for approval.

#### **19. 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 or as and when *Anna University, Chennai, implements changes in the regulations.*