SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

COIMBATORE – 641 062

REGULATIONS 2021

CHOICE BASED CREDIT SYSTEM

Common to all B.E. / B.Tech. Full-Time Programmes

DEGREE OF BACHELOR OF ENGINEERING / BACHELOR OF TECHNOLOGY

This "Regulations 2021" is applicable to the students admitted to B.E. /B.Tech. Programmes at SIET from the academic year 2021-2022 onwards.

1. **DEFINITIONS AND NOMENCLATURE**

    In these Regulations, unless the context otherwise requires:

    i.   "**Programme**" means Degree Programme that is B.E. / B.Tech. Degree Programme.

    ii. "**Discipline**" means specialization or branch of B.E. / B.Tech. Degree Programme, like Civil Engineering, Bio Technology, etc.

    iii. "**Course**" means a theory or practical or employability enhancement subjects that is normally studied in a semester, like Mathematics, Physics, etc.

    iv. **"Head of the Department"** means Head of the Department of the concerned Discipline.

    v.   **"Head of the Institution"** means the Principal of the College.

    vi. **"Institute"** means Sri Shakthi Institute of Engineering and Technology, Coimbatore.

    vii. "**Controller of Examinations"** means the authority of the Institute who is responsible for all activities of the Examinations.

    viii. **"Board of Studies"** means Board of the studies of the concerned discipline.

    ix. "**Academic Council"** means Academic Council of the Institute.

    x.   **"University"** means ANNA UNIVERSITY, CHENNAI.

2. **ADMISSION**

    Students for admission to the B.E. / B.Tech. degree programme will be required to satisfy the conditions of admission there to prescribed by the University and Government of Tamil Nadu.

Candidates seeking admission to the first semester of the Eight semester B.E. / B.Tech. Degree Programme:

Should have passed the Higher Secondary Examinations of (10+2) Curriculum (Academic Stream) prescribed by the Government of Tamil Nadu with Mathematics, Physics and Chemistry as three of the four subjects of study under Part-III or any examination of any other University.

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(OR)

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Should have passed the Higher Secondary Examination of Vocational stream (Vocational groups in Engineering / Technology) as prescribed by the Government of Tamil Nadu.

Lateral Entry Admission:

The candidates who possess the Diploma in Engineering / Technology awarded by the State Board of Technical Education, Tamil Nadu or its equivalent are eligible to apply for Lateral entry admission to the third semester of B.E. / B.Tech. degree programme in the branch corresponding to the branch of study.

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(OR)

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The candidates who possess the Degree in Science (B.Sc.) (10+2+3 stream) with Mathematics as a subject at the B.Sc. Level are eligible to apply for Lateral entry admission to the third semester of B.E. / B.Tech. degree programme. Such candidates shall undergo two additional Engineering subject(s) in the third and fourth semesters as recommended by Head of the Department and approved by the Head of the Institution.

3. B.E. / B.Tech. PROGRAMMES OFFERED

The following B.E. / B.Tech. degree programmes are offered in different Disciplines of the Institute.

3.1. B.E.:
Biomedical Engineering
Civil Engineering
Computer Science and Engineering
Electronics and Communication Engineering
Electrical and Electronics Engineering
Mechanical Engineering.
Computer Science and Engineering (Cyber Security)

3.2. B.Tech.:
Bio Technology

Food Technology

Information Technology

Agricultural Engineering

Artificial Intelligence and Data Science

Artificial Intelligence and Machine Learning

4. DURATION OF THE B.E. / B.Tech. DEGREE PROGRAMMES

4.1. **Minimum Duration:** The programme will extend over a period of four years (3 years for lateral entry); leading to the Degree of Bachelor of Engineering (B.E.) / Bachelor of Technology (B.Tech.) of the University. The four academic years will be divided into eight semesters (6 semesters for lateral entry); with two semesters per year.

4.2. **Maximum Duration:** The student shall complete all the passing requirements of the B.E. / B.Tech. degree programmee within a maximum period of 7 years (6 years for lateral entry); these periods reckoned from the commencement of the semester to which the student was first admitted to the programme. A student may be permitted by the Head of the Institution with the recommendation from the Head of the Department to withdraw from the programme for a semester or a longer period for reasons of ill health or on other valid grounds. However, the programme should be completed within a total span of fourteen semesters (twelve semesters for lateral entry).

4.3. **Medium of Instruction:** The medium of instruction is English for all courses, examinations, seminar presentations and project / thesis / dissertation reports except for the optional Language courses.

5. STRUCTURE OF PROGRAMMES

5.1 **Categorization of Courses:**

Every B.E. / B. Tech. Programme will have a curriculum with syllabus consisting of Theory, Practical and Employability Enhancement courses that shall be categorized as follows:

S. No	Category	Credits
1.	**Humanities and Social Sciences (HS)** courses include Technical English and Optional Language Courses, Engineering Ethics and Human Values, Communication Skills, Environmental Science and Engineering.	14*
2.	**Basic Sciences (BS)** courses include Mathematics, Physics, Chemistry, Biology, etc.	25*

3.	**Engineering Sciences (ES)** courses include Engineering Practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.	25*
4.	**Professional Core (PC)** courses include the Core courses relevant to the chosen Specialization / Discipline.	54*
5.	**Professional Elective (PE)** courses include the Elective courses relevant to the chosen Specialization/ Discipline.	18*
6.	**Open Elective (OE)** courses include the Courses from the same and other Disciplines which a student can choose from the list specified in the curriculum of the students B.E. / B. Tech. Programmes.	9*
7.	**Employability Enhancement Courses (EEC)** include Project Work, Design / Mini Project, Case Study, Industrial / Practical Training. Internship, Seminar, and Career Development Courses	20*
8.	**Audit courses (AC)** include the courses such as Constitution of India, Sangam literature etc.	
Total Credits		165

Plus or minus 5% of credits to be maintained *and restricting the total credits 165 - 170*

5.2. **Semester Pattern**: B.E. / B. Tech. Programmes will be structured on Choice-Based Credit System and continuous evaluation, following the semester pattern.

5.3. **Curriculum:** Every Discipline of B.E. / B. Tech. programme will have a curriculum and syllabi for the courses, which will be updated according to the requirements of the Discipline and approved by the BOS and Academic Council.

The curriculum of B.E. / B. Tech. programme will have a minimum number of credits, as defined for each Discipline of study, apportioned among knowledge segments, with minimum credits as per sections 5.1 and 5.4. For individual programme, refer to the curriculum / syllabi hand book of the concerned Discipline.

5.4 **Minimum Credits:** The minimum number of credits to be earned through successful completion of the courses of study in the respective Discipline by a student to qualify for the award of degree is provided below.

Discipline	For Regular Programme	For Lateral Entry
B E. Programme		
Biomedical Engineering	*165 to 170*	115 to 120
Civil Engineering	*165 to 170*	115 to 120
Computer Science and Engineering	*165 to 170*	115 to 120

Computer Science and Engineering(Cyber Security)	*165 to 170*	115 to 120
Electronics and Communication Engineering	*165 to 170*	115 to 120
Electrical and Electronics Engineering	*165 to 170*	115 to 120
Mechanical Engineering	*165 to 170*	115 to 120
B.Tech. Programmes		
Bio Technology	*165 to 170*	115 to 120
Food Technology	*165 to 170*	115 to 120
Information Technology	*165 to 170*	115 to 120
Agricultural Engineering	*165 to 170*	115 to 120

5.5. **Number of Courses per Semester:** Each semester curriculum shall normally have a blend of Lecture courses with Tutorial / Practical not exceeding 8 and Laboratory and Employability Enhancement Courses not exceeding 5. However, the total number of courses per semester shall not exceed 13.

5.6. **Credit Assignment:** In general, credits are assigned to the courses based on the following pattern with possible modifications wherever necessary:
- One credit for each lecture hour per week,
- One credit for each tutorial hour per week,
- One credit for each laboratory course/practical of two hours per week & Two credits for each laboratory course/practical of three hours per week
- 2 credits for Project work phase I and 6 credits for Project work phase II.

5.7. **Core and Electives:** Certain courses are identified as Core courses and a few others as Electives.

5.7.1 **Core:** It is mandatory to register and credits to be earned for core and elective courses. Failure to earn required credits in the elective courses does not necessarily require repeating the courses. Often another elective course may be permitted as replacement course, through Regular registration.

5.7.2 **Electives:** Every student shall opt electives from the list of electives relating to his/her degree programme as given in the curriculum / syllabus hand book in consultation with the Ward counselor, Class Advisor and the Head of the Department. The student will be required to study different types of electives like open electives and professional electives spread over from **4th semester to 8th semester**. **Minimum number of credits to be earned for courses under the category of 'Professional Electives' is 15. Minimum number of credits to be earned for courses under the category 'Open Electives' is 6(restricted to one course per semester).** Open electives are the elective courses offered by a department

for students of their own branch and also of other branches and professional electives are courses offered by a department to the students of their own branch only. Minimum of 20 students or 30% of the class strength have to register for offering an Elective.

5.7.3 **Audit Courses:** The Student may optionally study audit courses prescribed by the institution and it will be mentioned in the Grade Sheet. However, it will not be considered for computation of CGPA.

5.8. **Project Work:** Every student (Not more than 4 – in a group) shall be required to undertake a suitable project in each semester in the department / industry / research organization in consultation with the Head of the Department and the faculty guide and submit the project report there on at the end of the semesters in which the student registered, on dates announced by the Controller of Examinations.

5.8.1. **Engineering Exploration:** From 1st semester to 2nd semester the students shall register hands on Projects with 2 credits (Theory combined with Project) and From 3rd semester to 5th semester the students shall register hands on Projects with 1 credits (Project) each to understand and learn the simple concepts and exhibit their innovate ideas / problem solving skills in the subjects they study during that semester as specified in the curriculum of the concerned discipline. In case the student is not selected for next levels, He / She may select semester Project related to the subjects studied during previous semesters, as alternate course.

5.8.2. **Design Project / Mini Project / Case Study:** The students shall register a Design Project / Mini Project / Case Study with 2 credits as specified in the curriculum of the concerned discipline.

5.8.3. **Industrial / Practical Training :** The students may undergo Industrial Training / Practical Training for a period of 10 to 15 days during summer / winter vacation. In this case the training has to be undergone continuously for the entire period. The students may undergo minimum of two Industrial Training / Practical Training during summer / winter vacation (1st to 3rd year) of their study.

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Internship: The students may undergo Internship at Research organization / Industry (after due approval from the Department Consultative Committee for the period prescribed in the curriculum during summer / winter vacation, in lieu of Industrial Training.

5.9 **Online Courses:** Students may be permitted to credit a maximum of two online courses, subject to a maximum of six credits, with the approval of the Head of the Institution and the Centre for Academic Courses, in lieu of open elective / professional elective courses.

The Head of the Institution shall form a three member committee with members as HOD and a faculty member from the Department of the student, HOD of any other branch of the Institution 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 / SWAYAM platform.

The list of online courses is to be approved by the Chairman, Academic Council on the recommendation of Head of the Department at the beginning of the semester, if necessary, subject to ratification in the next Academic Council meeting.

5.10 **Student Exchange Programme:** The students can opt for the student exchange programme during 7th or 8th semester, during the final year of his / her programme of study with the Foreign University which entered MoU with the Institute. Provided, these students do not have current arrears and have a **CGPA of 7.50** and above at the end of Semester V. The credits earned under this programme will be equated with the corresponding semester credits as per the terms and conditions of the MoU and approved by the Academic Council.

5.11 **Advancement of Courses:** The students who 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 7.50** and above at the end of Semester IV. The Head of Department, in consultation with the faculty handling the said courses shall forward the proposal recommended by the Head of Institution to the Controller of Examinations through the Director, Centre for Academic Courses for approval at least 4 weeks before the commencement of the sixth semester of the programme for approval.

5.12 **Personality and Character Development (PCD):** Students shall enroll, on admission, in any one of the personalities and character development activities (NCC / NSS / YRC / Sports & Games) and undergo training for 40 hours during first to sixth semester.

National Cadet Corps (NCC) will have about 20 parades.

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

Social Eco Club (SEC) will have social service activities in the adopted Villages by the Institute.

Youth Red Cross (YRC) society activities will include peace time activities like health and hygiene, international friendship, awareness camps etc.

Sports & Games activities will include preparation for inter-collegiate sports events.

While the training activities will normally be during weekends, the camps will normally be during vacation period.

6.   WARD COUNSELLOR, CLASS ADVISOR, COURSE COORDINATOR, COURSE COMMITEE AND CLASS COMMITTEE.

6.1.   Ward Counsellor and Class Advisor: In order to (i) guide the students in planning their courses of study, (ii) advise them on academic programmes and (iii) monitor their progress in coordination with their parents, Head of the Department will assign a batch (class) of certain number of students to a faculty member, who will be designated as their Ward Counselor.

One among the Ward Counsellors, shall be designated as the Class Advisor, appointed by the Head of the Department concerned, who shall coordinate the functions of the Ward Counsellors. The Class Advisor is the ex-officio member and the Convener of the Class Committee.

The responsibilities for the Class Advisor shall be:

- To act as the channel of communication between the Head of the Department and the students of the respective class.
- To collect and maintain various statistical details and History of academic records of the students.
- To help the Chairperson (Senior Faculty member who is not handling the courses for that particular class) 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 their parents and to counsel them.
- To attend to the students' welfare activities like awards, medals, scholarships and industrial visits, study tour etc.

6.2.   Course Coordinator and Course Committee:

i.   For each course offered in the Institute, one of the faculty teaching that subject shall be nominated by the Head of the Department as Course Coordinator of the course.

ii.   In the beginning of the semester, the Course Coordinator along with other teachers teaching the same subject shall decide on all the details (Course Plan, etc.) of conduct of the course during the semester.

iii. The Course Coordinator will be responsible for preparing the question papers and answer keys, for the Continuous Internal Assessment and the end-semester examinations and coordinating valuation of the answer books.

iv. Each common theory course offered to more than one discipline or group, shall have a "Course Committee" comprising all the faculty 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 CIA and shall ensure a uniform evaluation of the CIA. Wherever feasible, the Course Committee may also prepare a common question paper for the internal assessment test(s).

6.3.   Class Committee:

6.3.1. The Class Committee for a class under a particular branch is normally constituted by the Head of the Department. Every class shall have a Class Committee consisting of faculty of the class concerned, student representatives and a Chairperson. 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.

- 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 / Online / Summer / Self Study Courses) 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 CIA 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.

6.3.2. The Class Committee for a class under a particular discipline is normally constituted by the Head of the Department. The Class Committee shall be constituted and conducted within the first week of each semester.

6.3.3. At least 4 student representatives (usually 2 boys and 2 girls) shall be included in the Class Committee. The Chairperson of the Class Committee may invite the Class Adviser(s) and the Head of the Department to the Class Committee meeting.

6.3.4. 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 faculty 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.

6.3.5. 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. 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 and non-academic process.

7. REGISTRATION

7.1 **Course Registration:** The institution is responsible for registration of the courses that each student is proposing to undergo in the ensuing semester. Each student has to register for all courses to be undergone in the curriculum of a particular semester (with the facility to drop courses to a maximum of 6 credits. The courses dropped in earlier semesters can be registered in the subsequent semesters when offered. The registration details of the student shall be approved by the Head of the Institution and forwarded to the Controller of Examinations. This registration is for undergoing the course as well as for writing the End Semester Examinations.

The courses that a student registers in a particular semester may include
i.   Courses of the current semester.
ii. ii. Courses dropped in the lower semesters

7.2. Eligibility for Registration: A student will be eligible to register the courses, only if he / she has cleared all the dues to the Institution, Hostel, Library and any other, as specified from time to time, at the time of enrollment of the semester and if he / she is not debarred from enrollment, as part of any disciplinary action of the Institution.

7.3 Late registration: Late registration of courses will be permitted on payment of a prescribed late-fee, up to a specified date, to be notified well in advance.

7.4. Pre-requisites: A student is permitted to enroll for a course if he/she has already attended the pre-requisite course, wherever specified.

7.5. Dropping / Substituting Courses:

7.5.1. Each student has to register for all courses to be undergone in the curriculum of a particular semester (with the facility to drop courses to a maximum of 6 credits from elective courses only). The student can also register for courses for which the student has failed in the earlier semesters.

7.5.2. In such cases the student shall do **reappearance registration** for those courses for which the attendance requirement is not compulsory.

7.5.3. A student can substitute an elective course registered earlier, with another elective for valid reasons, within **first seven working days** of the commencement of the semester, with the consent of the Class Advisor, Head of the Department and Head of the Institution.

7.6. The courses that a student register in a particular semester may include:
- Courses of the current semester.
- The core (Theory/Lab / Blended / EEC) / Elective (Professional / Open)) courses that the student has not cleared in the previous semesters and they will be permitted to register these courses for next two consecutive semester examination by carrying the previous CIA marks. The student who failed to get a pass mark in the next two semesters examinations, the CIA marks will not be counted in the subsequent semester examinations, only the external examination marks considered for awarding grades.

7.7.   Course Numbering:

Seven-digit code to be allotted for each course.

1	2	3	4	5	6	7

Digit	Details
1st and 2nd digit	Indicate the last 2 digits of the Regulation year example: "21" for 2021 regulation
3rd and 4th digit	Indicate the discipline (as per clause 2)
5th digit	indicate the semester number
6th digit	Indicate the theory or other courses Example: "0" for theory, "1" for Laboratory and "2" for blended
7th digit	Indicate the course number (numbered continuously for each course type in a particular programme/ semester)

*Regarding Elective, the last two digits are serial no.

Sl. No.	Department Name	Department Code
	Bachelor of Engineering	
1	Bio Medical Engineering	BM
2	Civil Engineering	CE
3	Computer Science and Engineering	CS
4	Computer Science and Engineering (Cyber Security)	CY
5	Electronics and Communication Engineering	EC
6	Electrical and Electronics Engineering	EE
7	Mechanical Engineering	ME
	Bachelor of Technology	
8	Agricultural Engineering	AG
9	Information Technology	IT
10	Bio Technology	BT
11	Food Technology	FT
12	Artificial Intelligence and Data Science	AD
13	Artificial Intelligence and Machine Learning	AM

Humanities and Sciences		
14	Mathematics	MA for UG MS for PG
15	Physics	PH
16	Chemistry	CH
17	English	EN
18	Tamil	TA
19	Language - English	EL

Categorization of Courses:

Category 1: Humanities and Social Sciences (HS)

Humanities and Social Sciences (HS) courses include Technical English and Optional Language Courses, Engineering Ethics and Human Values, Communication Skills, Environmental Science and Engineering and Management Skills.			
Sl. No.	**Course Details**	**Category**	**Course Code Formation**
1	English	HS	EN
2	Environmental Science and Engineering	HS	CH
3	Professional of Ethics	HS	ME
4	Principles of Management	HS	ME
5	Total Quality Management	HS	ME
6	Tamil	HS	TA
7	Language - English	HS	EL
8	Audit Course	HS	AC

Category 2: Basic Sciences (BS)

Basic Sciences (BS) courses include Mathematics, Physics, Chemistry, Biology, etc.			
Sl. No.	**Course Details**	**Category**	**Course Code Formation**
1	Mathematics	BS	MA
2	Physics	BS	PH
3	Chemistry	BS	CH

Category 3: Engineering Sciences (ES)

Engineering Sciences (ES) courses include Engineering Practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Instrumentation etc.

Sl. No.	Course Details	Category	Course Code Formation
1	Common to all departments	BS	Code belongs to the particular department
2	Another department course given to the one particular department (ex: EEE course for ECE dept.)	ES	Code belongs to the particular department (EE)
3	Another department course given to the one or more departments (ex: EEE course for EEE, ECE & BME depts.)	ES	Code belongs to the department of the course (EE)

Category 4: Professional Core (PC)

Professional Core (PC) courses include the Core courses relevant to the chosen Specialization / Discipline.

Sl. No.	Course Details	Category	Course Code Formation
1	Department course	PC	Respective department Code

Category 5: Professional Elective (PE)

Professional Elective (PE) courses include the Elective courses relevant to the chosen Specialization/ Discipline.

Sl. No.	Course Details	Category	Course Code Formation
1	Another department course given to the one particular department (ex: EEE course for ECE dept.)	PE	Code belongs to the particular department (PEE)
2	Another department course given to the one or more departments (ex: EEE course for EEE, ECE & BME depts.)	PE	Code belongs to the department of the course (PEE)

Category 6: Open Elective (OE)

Open Elective (OE) courses include the Courses from the same and other Disciplines which a student can choose from the list specified in the curriculum of the students B.E. / B. Tech. Programmes.

Sl. No.	Course Details	Category	Course Code Formation
1	Another department course given to the one particular department (ex: EEE course for ECE dept.)	OE	Code belongs to the particular department (OEE)
2	Another department course given to the one or more departments (ex: EEE course for EEE, ECE & BME depts.)	OE	Code belongs to the department of the course (OEE)

Category 7: Employability Enhancement Courses (EEC)

Employability Enhancement Courses (EEC) include Project Work, Design / Mini Project, Case Study, Industrial / Practical Training. Internship, Seminar, and Career Development Courses			
Sl. No.	**Course Details**	**Category**	**Course Code Formation**
1	Department course	EEC	Respective department Code

Category 8: On line / Certificate Courses (OC)

On line / Certificate Courses (OC)			
Sl. No.	**Course Details**	**Category**	**Course Code Formation**
1	Department course	OE	Respective department Code

Category 9: Entrepreneur Courses (OC)

On line / Certificate Courses (OC)			
Sl. No.	**Course Details**	**Category**	**Course Code Formation**
1	Department course	PED	Respective department Code

8. ATTENDANCE REQUIREMENTS

8.1. Every teacher is required to maintain an **'Attendance and Assessment Record'** which consists of attendance marked in each lecture or practical or project work or EEC classes, 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/her signature and date after due verification. At the end of the semester, the record should be verified by the Head of the Institution and the Head of the Department will keep this document in safe custody (for five years). The Institute or any inspection team appointed by the Institute may verify the records of attendance and assessment of both current and previous semesters.

8.2. Finalization of attendance for every course shall be done three working days before the last instruction day of the semester. Every student is expected to attend all classes of all the courses and secure 100% attendance. Any student failing to secure a minimum of 75% of overall attendance in a semester, will not be eligible to appear for the end-semester examination.

8.3. However, a student who secures attendance between 65% and 74% in the current semester due to medical reasons (prolonged hospitalization / accident / specific illness) / 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 Department and approved by the Head of the Institution.

8.4. Students going on official duty, such as representing the Institute / University for sports and cultural activities, or presenting papers in seminars, conferences and participating in co-curricular activities will be eligible for 'duty leave' on the recommendation of the Class Advisor and Head of the Department and approved by the Head of the Institution. Students should get this leave sanctioned before proceeding on 'duty leave'. The duty leave sanctioned as above to a maximum of 10 working days per semester will be counted for the purpose of calculating the attendance for the courses.

8.5. Students who **secure less than 65% attendance and students who do not satisfy the clause 8.2 and 8.3** shall not be permitted to write the End semester examinations. They are required to repeat the incomplete semester in the next academic year, when it is offered as per the curriculum and syllabi of the concerned discipline. When regulation changed, equivalent subjects to be studied/exempted, has to be approved by the Head of the institution with the recommendations by Board of Studies (BoS) and Academic Council.

8.6. Marks will be awarded for attendance as follows, for each course (theory or lab or EEC, etc.)

Attendance Percentage	Marks awarded
96-100% attendance	5 marks
91-95% attendance	4 marks
86-90% attendance	3 marks
81-85% attendance	2 marks
76-80% attendance	1 mark
75 and <75% attendance	0 mark

8.7. **Working Days:** Each semester shall normally consist of 90 working days or 600 periods of each 45 minutes duration. The Head of the Department 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 being taught. The Head of the Department with the approval of the Head of the Institution may conduct additional classes for improvement, special coaching, conduct of model examination etc., over and above the specified periods. But for the purpose of calculation of attendance requirement for writing the end semester examinations (as per section 8.2 and 8.3) by the students, following method shall be used.

$$\text{Percentage of Attendance} = \frac{\text{Total no. of periods attended in a semester}}{\text{(No. of periods per week as prescribed in the curriculum)} \times 15} \times 100$$

9. System of Examinations

9.1. Performance in each course of study shall be evaluated based on (i) Continuous Internal Assessment (CIA) throughout the semester and (ii) End semester examination at the end of the semester.

9.2. Each course, both theory and practical (including project work & viva voce Examinations) and **EEC shall be evaluated for a maximum of 100 marks.**

9.3. Industrial Training, Practical Training, Study Tour / Seminar, Summer Term Courses, Self-study courses, Semester Project, One credit and Online courses shall carry 100 marks and shall be evaluated through Continuous Internal Assessment (CIA) only.

9.4. The End semester examinations (theory and practical) of 3 hours duration shall ordinarily be conducted between October and November during the odd semesters and between March and April during the even semesters.

9.5. The End semester 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 Guide of the project group and an internal examiner (Project coordinator).

9.6. For the Final end semester examination in both theory and practical courses including project work the internal and external examiners shall be appointed by the Head of the Department in concurrence with Controller of Examination.

9.7. The Internal assessment of project work will be carried out through a minimum of three assessments (presentations followed by oral examinations). At the completion of the project work, the student will submit a bound volume of the project report in the prescribed format. The project work will be evaluated by a team of duly appointed examiners. The final evaluation of the project work, will be based on the content of the report, presentation by the student and a viva-voce examination on the project. There will be 40% weightage for Internal assessment and the remaining 60% for final evaluation. If the project work is not satisfactory, he/she will be asked to continue the project work and appear for assessment again **within one month from the date of end semester examination by paying the prescribed fees.**

9.8. Publication:

The students during their period of study in the Institute are encouraged to publish a paper. All publications (First Author) shall be in SCI / Web of Science / Scopus-indexed Journals / Scopus-indexed Conferences and shall be as per the guidelines prescribed by the Institute.

9.9. Co-curricular Activities

The students during their period of study in the Institute are encouraged to participate in Paper Presentation, Project Expo, Paper Publication, Seminars, Conference etc.

9.10. Evaluation of courses:

9.10.1. Theory Courses with or Without Tutorial Component: (CIA: 40% + FE: 60%) Total:100 marks

Marks Distribution:

Internal Test I	10 Marks	
Internal Test II	10 Marks	
Internal Test III	10 Marks	40 Marks
Attendance	05 Marks	
Assignment/case study/project	05 Marks	
Final Examination		60 Marks
Total		**100 Marks**

9.10.2. Theory Courses with Lab Component: (CIA: 40% + FE: 60%) Total:100 Marks

Marks Distribution:

Theory Component	
Internal Test I	10 Marks
Internal Test II	10 Marks
Internal Test III	10 Marks
Attendance	05 Marks
Assignment	05 Marks
Final Examination	60 Marks
Total	**100 Marks**

Laboratory Component	
Internal - Each Lab Exercise including Observation	40 marks (4 Marks - 10 experiments*)
Final Examination - Lab exam	40 Marks
Final Examination - Record	10 marks
Final Examination - Viva -Voce	10 Marks
Total	**100 marks**

Grade will be awarded separately for Theory and Laboratory component in the mark sheet.
*Minimum of 12 experiments may be conducted per course.

9.10.3. Laboratory Courses: (CIA: 40% + FE: 60%) Total: 100 marks

Marks Distribution:

Internal - Each Lab Exercise including Observation	40 marks (4 Marks - 10 experiments*)
Final Examination - Lab exam	40 Marks
Final Examination - Record	10 marks
Final Examination - Viva -Voce	10 Marks
Total	**100 marks**

9.10.4. Industrial / Practical Training, Seminar, Study Tour and Case Study: (CIA: 100%)

CIA Marks Distribution:

Record / Report	40 Marks
Final Examination / Presentation	40 Marks
Viva Voce	20 Marks
Total	**100 marks**

9.10.5. Online course: (CIA: 40% + FE: 60%) Total: 100 Marks

Marks Distribution:

Internal Test I	10 Marks	
Internal Test II	10 Marks	
Internal Test III	10 Marks	40 Marks
Assignment	5 Marks	
Attendance	5 Marks	
Final Examination / Certification		60 Marks
Total		**100 Marks**

Students may be permitted to credit two online courses (which are provided with certificate), subject to a maximum of six credits. The online course of 3 credits can be considered instead of one elective course. These online courses shall be chosen from the NPTEL / SWAYAM platform, provided the offering departments conducts regular examination and provides marks. The credits earned shall be transferred and the marks earned shall be converted into grades and transferred, provided the student has passed in the examination as per the norms. The details regarding online courses taken up by the student and marks/credits earned and the approval for the course from Centre for Academic Courses shall be sent to the Controller of Examinations, in the subsequent semester(s) along with the details of the elective(s) to be dropped.

9.10.6. Engineering Exploration :(CIA: 100%) Total:100 Marks

CIA Marks Distribution:

CIA Marks Distribution				
Review – I Supervisor 10 Marks Coordinator 10 Marks	20 Marks			
Review – II Supervisor 20 Marks Coordinator 20 Marks	40 Marks	35 Marks	40 Marks
Review – III Supervisor 20 Marks Coordinator 20 Marks	40 Marks		
Attendance		5 Marks	
Final Examination Mark Distribution			

Report, Presentation / Working Model
                 Supervisor   30 Marks
                 Coordinator   30 Marks
			60 Marks

Total			**100 marks**

9.10.7. Project Work Phase I / Design Project / Mini Project / Semester Project: (CIA: 40% + FE: 60%) Total:100 Marks

CIA Marks Distribution				
Review – I Supervisor 10 Marks Co Ordinator 10 Marks	20 Marks			
Review – II Supervisor 20 Marks Co Ordinator 20 Marks	40 Marks	35 Marks	40 Marks
Review – III Supervisor 20 Marks Co Ordinator 20 Marks	40 Marks		
Attendance		5 Marks	
Final Examination Mark Distribution			

Presentation & Viva Voce
                 Supervisor   20 Marks
                 Co Ordinator   20 Marks
Project Report
                 Supervisor   10 Marks
                 Co Ordinator   10 Marks
			60 Marks

Total			**100 marks**

9.10.8. Project Work Phase II (CIA: 40% + FE: 60%) Total:100 Marks

CIA Marks Distribution				
Review – I Supervisor	10 Marks	20 Marks		
Coordinator	10 Marks		35 Marks	40 Marks
Review – II Supervisor	20 Marks	40 Marks		
Coordinator	20 Marks			
Review – III Supervisor	20 Marks	40 Marks		
Coordinator	20 Marks			
Attendance			5 Marks	
Final Examination Mark Distribution				
Presentation & Viva Voce				
Supervisor	10 Marks			
Coordinator (Internal Examiner)	10 Marks			
External Examiner	10 Marks			60 Marks
Project Report				
Supervisor	10 Marks			
Coordinator (Internal Examiner)	10 Marks			
External Examiner	10 Marks			
Total				**100 Marks**

10. REQUIREMENTS FOR APPEARING FOR THE END SEMESTER EXAMS

A candidate shall normally be permitted to appear for the End Semester Examinations for all the courses registered in the current semester (vide Section 7.1 & 7.5) if he/she has satisfied the semester completion requirements (subject to Section 8.2 & 8.3).

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.

11. PASSING REQUIREMENTS

11.1. A candidate who secures not less than 45% of the End Semester Examination and 50 % of total marks prescribed for the courses (Continuous Assessment + End semester Examinations or Continuous Assessment only) shall be declared to have passed the course and acquired the relevant number of credits. This is applicable for both theory and practical courses (including project work and other Employability Enhancement Courses).

11.2. If a student fails to secure a pass in a Theory course, Laboratory course, Industrial Training / Practical Training, Semester Project, Seminar, Case Study, Online Courses, Self-study courses, **the student shall register** for the course again during subsequent semester.

11.3. If a student fails to secure a pass in Project work, even after availing the grace period **the student shall register** for the course again during subsequent semester.

12. AWARD OF LETTER GRADES

12.1 All assessments of a course will be evaluated 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	Result
O (Outstanding)	10	91 - 100	Pass
A + (Excellent)	9	81 - 90	Pass
A (Very Good)	8	71 – 80	Pass
B + (Good)	7	61 – 70	Pass
B (Average)	6	56 – 60	Pass
C (Satisfactory)	5	50-55	Pass
U	0	<50	RA
U	0	Absent	RA*
WD(Withdrawal)	-	-	
WH(Withheld)			
*Absent for University Examination			

A student is deemed to have passed and acquired the corresponding credits in a particular course if he/she obtains any one of the following grades: "O", "A+", "A", "B+", "B", "C".

'**RA**' denotes that the student has failed to pass in that course. '**WD**' denotes **withdrawal** from the exam for the particular course, '**WH**' denotes Withheld and the reason for the action taken will be decided by the Controller of Examination. The grades RA, WD will figure both in Marks Sheet as well as in Result Sheet.

13. PHOTOCOPY / REVALUATION

A candidate can apply for photocopy of his/her semester examination answer paper in a theory course, within five working days from the declaration of results, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of Institution. The answer script is to be valued and justified by a faculty member, who handled the subject and recommend for revaluation with breakup of marks for each question. Based on the recommendation, the candidate can register for the revaluation through proper application to the Controller of Examinations. The Controller of

Examinations 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, Online courses, One credit course, Self-study courses, Industry / Practical Training, Study Tour / Seminar, Semester Project, Mini Project / Design Project / Case Study and for Project work. A student can apply for revaluation of answer scripts for not exceeding 5 subjects at a time.

14.   GPA AND CGPA CALCULATION

The coordinator of the Result Passing Board shall call for a meeting of the committee after the end-semester examinations, to pass 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 and its equivalent percentage of marks.

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

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

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 the 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.

Percentage conversion

Percentage in a particular Programme = $\dfrac{\text{CGPA Earned}}{10} * 100$

15. PROVISION FOR WITHDRAWAL FROM END-SEMESTER 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 the Controller of Examination through the Head of the Institution with required documents.

15.2. Withdrawal application is valid if the student is otherwise eligible to write the examination (Section 8.1) and if it is made within TEN days prior to the commencement of the examination in that course or courses and recommended by the Head of the Institution and approved by the Controller of Examination.

15.3. Notwithstanding the requirement of mandatory 10 days of notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

15.4. In case of withdrawal from a course / courses (Section 15.1) the course will figure both in Marks Sheet as well as in Result Sheet. However, withdrawal shall not be considered as an appearance for the eligibility of a student for First Class with Distinction.

15.5. 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).

15.6. 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.

15.7. Withdrawal is permitted for the end semester examinations in the final semester, as per clause 18.1.

16 TEMPORARY BREAK OF STUDY FROM THE PROGRAMME

16.1. A student is not normally permitted to temporarily break the study. However, if a student intends to temporarily discontinue the programme in the middle for valid reasons (such as accident or hospitalization due to prolonged ill health) and to re-join the programme in a later respective semester, he/she shall apply to the Principal through the Head of the Department and stating the reasons therefore.

16.2. A student is permitted to re-join the programme at the respective semester as and when it is offered after the break of study subject to the approval of Commissioner of Technical Education and Anna University, Chennai, and shall be governed by rules and regulations in force at the time of re-joining.

16.3. The duration specified for passing all the courses for the purpose of classification (vide section 4.2) shall be increased by the period of such break of study permitted.

16.4. The total period for completion of the programme reckoned from the commencement of the semester to which the student was first admitted shall not exceed the maximum period specified in section 4.2 irrespective of the period of break of study in order that he/she may be qualified for the award of the degree.

16.5. If any student is detained for want of requisite attendance, progress and conduct, the period spent in that semester shall not be considered as permitted 'Break of Study'.

17   ELIGIBILITY FOR THE AWARD OF THE DEGREE

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

17.1. Successfully gained the required number of total credits as specified in the curriculum corresponding to the student's programme within the stipulated time.

17.2. Successfully completed the course requirements, appeared for the End-Semester examinations and passed all the subjects prescribed in all the 8 semesters (6 Semesters in the case of Lateral Entry) reckoned from the commencement of the first (third in the case of Lateral Entry) semester to which the candidate was admitted.

17.3. Successfully passed any additional courses prescribed by the Head of the Institution whenever readmitted under the new regulation in-force.

17.4. No disciplinary action pending against the student.

17.5. The award of Degree must have been approved by the Syndicate of the University.

18   CLASSIFICATION OF THE DEGREE AWARDED

18.1.   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 (six semesters in the case of Lateral Entry) in the student's First Appearance within **five** years (Four years in the case of Lateral Entry). Withdrawal from examination (vide Section 15.1) will not be considered as an appearance.

- Should have secured a CGPA of not less than **8.50**
- One-year authorized break of study (if availed of) is included in the five years (four years in the case of lateral entry) for award of First class with Distinction.
- Should NOT have been prevented from writing end semester examination due to lack of attendance in any semester.

18.2. 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 (6 semesters in the case of L ateral Entry) **within Six years** (Five years in the case of Lateral Entry).
- 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 six years (five years in the case of lateral entry) for award of First class.
- Should have secured a CGPA of not less than **6.50.**

18.3. Second Class:
All other students (not covered in Section 18.1 and 18.2) who qualify for the award of the degree **(**vide Section 17) shall be declared to have passed the examination in **Second Class**.

18.4. 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 for the purpose of classification (subject to Section 18.2 and 18.3).

19   AWARD OF RANK
The rank shall be awarded based on the following:

A student shall be eligible for award of ranking only if he/she has passed the examination in first class with distinction or first class in having passed all the courses in first attempt. Those who have availed the provision of break of study / withdrawal will not be eligible for rank.

20   INTERPRETATION CLAUSE
Related to any of the academic matters, whenever there arises any doubt or dispute on the interpretation of regulations or rules, the decision of the Academic Council will be final as well as binding on all concerned.

21   AMENDMENT TO REGULATIONS

Not with standing anything stated above, the Institute reserves the right to modify any of the regulations, as deemed fit, from time to time.