



Excel

ENGINEERING COLLEGE

(Autonomous)

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NBA and NAAC with "A+" and Recognized by UGC (2f&12B)

KOMARAPALAYAM – 637303

www.excelinstitutions.com

B.E. / B.TECH.PROGRAMMES

REGULATION 2023

(Version 1.0)



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VISION

To create competitive human resources in the fields of engineering for the benefit of society to meet global challenges

MISSION

- To provide a conducive ambience for better learning and to bring creativity in the students.
- To develop sustainable environment for innovative learning to serve the needy.
- To meet global demands for excellence in technical education.
- To train young minds with values, culture, integrity, innovation and leadership.

QUALITY POLICY

“Excellence in Professional Education”

We gallop to meet the excellence in professional education by continuously improving and updating the skills and resources needed for demand driven education, training and development by providing excellent infrastructure, conducive learning environment and proactively responding to the changing needs of industries, parents, society and global at large. We provide equal opportunity and holistic inclusive education to all.



CHAIRMAN - ACADEMIC COUNCIL



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For the students admitted during 2023


CHAIRMAN - ACADEMIC COUNCIL

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1. PREAMBLE

Excel Engineering College established during 2007 is a NAAC A+ grade certified institution which offers various Undergraduate and Postgraduate Degree programmes in Engineering and Technology. Aeronautical Engineering, Mechanical Engineering, Computer Science & Engineering and Electronics & Communication Engineering are accredited by National Board of Accreditation (NBA). The college is conferred with autonomous status for all the programmes during the academic year 2020-2021. The College is dedicated in serving the nation by producing young, dynamic, energetic and far sighted industrious engineers who can face the challenges of the changing global scenario.

2. SCOPE

This regulation is applicable to all students admitted to programmes of the institution from the Academic Year (AY) 2023-2024 onwards.

3. PRELIMINARY DEFINITIONS AND NOMENCLATURE

- I. **“Programme”** means Degree Programme that is, B.E. / B.Tech. Degree Programme.
- II. **“Discipline”** means Branch or specialization of B.E. / B.Tech. Degree Programme, like Civil Engineering, Information Technology, etc.
- III. **“Course”** means a theory or a laboratory subject that is normally studied in a semester, like Mathematics, Physics, Engineering Graphics, and Circuit Theory etc.
- IV. **“Chairperson, Academic Council”** means the authority of the Autonomous Institution who is responsible for all academic activities of the Institute/Departments for implementation of relevant Rules and Regulations.
- V. **“Controller of Examinations”** means the authority of the Autonomous Institute who is responsible for all activities of the internal assessment and final examinations.
- VI. **“Head of the Institution”** means the Principal of the college.
- VII. **“Chairperson, BoS”** means Chairperson of Board of Studies or Head of the Department of each discipline.
- VIII. **“Head of the Department”** means Head of the Department concerned.
- IX. **“Academic Advisory Committee (AAC)”** includes Principal, Director, CoE and HoD concerned.
- X. **“Programme Advisory Committee (PAC)”** includes Head of the Programme, External Expert, Senior Faculty Members.

- XI. **“Department Academic and Advisory Committee (DAAC)”** includes Head of the department, senior faculty members, Faculty advisors and mentors of the students.
- XII. **“Credit”** means a numerical value allocated for each course to describe the student's workload required per week.
- XIII. **“Grade”** means the letter grade assigned to each course based on the range of marks specified.
- XIV. **“Grade Point”** means a numerical value (0 to 10) allocated based on the grade assigned to each course.
- XV. **“University”** means Anna University, Chennai.
- XVI. **“LES”** means Lateral Entry Scheme.
- XVII. **“CBCS”** means Choice Based Credit System.
- XVIII. **“Course Instructor”** means the faculty of the concerned theory or laboratory course who handle the course.
- XIX. **“Course Coordinator”** means the faculty coordinates the delivery, performance monitoring and review of theory or laboratory course.
- XX. **“Professional Elective Courses”** (PEC) include the elective courses relevant to the chosen specialization/branch.
- XXI. **“Open Elective Courses”** (OEC) include the courses offered by a branch to other branches, from the list specified in the respective curriculum of the B.E. / B.Tech. Programmes.
- XXII. **“Value Added Course”** (VAC) means a course that will be offered by the department to bridge the gap between the curriculum and the requirements of the industry, which could be selected by any student in the college.
- XXIII. **“Online Course”** (OLC) means a course that would be offered by premier institutions like IITs, IISc, etc. through online platform (NPTEL / GIAN / CCNA / CISCO / ORACLE / ANSYS / LABVIEW / MOOCS / COURSERA, etc.) suggested by the concerned Department and approved by DAAC.
- XXIV. **“Internship”** (IS) means a period of time that the student would be deputed to undergo in- house training in reputed Industries or R & D organizations.

4. ADMISSION

Candidate, seeking admission to B.E./B.Tech. Programme, shall satisfy the conditions of admission prescribed by the Directorate of Technical Education and Anna University, Chennai as given below.

4.1 Regular Admission

Candidates seeking admission to the first semester of the eight semesters 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 or authority accepted by the Syndicate of Anna University as equivalent thereto.

(OR)

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

4.2 Lateral Entry Admission (LES)

The candidates who possess 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. Programmes in any branch of study as per the eligibility criteria prescribed by the Directorate of Technical Education from time to time.

(Or)

The candidates who possess the Bachelor Degree in Science (B.Sc.) (10+2+3 stream) with Mathematics as a subject in B.Sc. are eligible to apply for Lateral Entry admission to the third semester of B.E./B.Tech. Programmes as per the eligibility criteria prescribed by the Directorate of Technical Education from time to time. Such candidates shall undergo two additional Engineering subject(s) one each in third and fourth semesters, as bridge courses.

5. PROGRAMMES OFFERED

A candidate may be offered admission to any one of the B.E./B.Tech. Programmes offered by the Institution.

B. E. Programmes

1. Aeronautical Engineering (AE)
2. Bio Medical Engineering (BM)
3. Civil Engineering (CE)
4. Computer Science and Engineering (CSE)
5. Electrical and Electronics Engineering (EEE)
6. Electronics and Communication Engineering (ECE)
7. Mechanical Engineering (ME)
8. Safety and Fire Engineering (SFE)

B. Tech. Programmes

1. Agricultural Engineering (AG)
2. Artificial Intelligence and Data Science (AI&DS)
3. Computer Science and Business systems (CSBS)


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4. Food Technology (FT)
5. Information Technology (IT)
6. Petrochemical Technology (PCT)

5.1 Honours and Minor Degrees

The students shall register for Honours degree from the respective Programme. The Honours may be specialization in the same vertical of the Programme or across all verticals of the Programme. The following are the eligibility norms for the Honours with specialization and Honours degree.

(i) B.E./B.Tech. Honours (specialization in the same discipline):

- a. The student should have earned additionally a minimum of 18 credits from a vertical of the same Programme.
- b. Should have passed all the courses in the first attempt.
- c. Should have earned a minimum CGPA of 7.50.

The following are the Specialization in which Honours Degree is being offered by the Departments.

Department	Honours Specialization	
Aeronautical Engineering	Stream I	Aerodynamics
	Stream II	Propulsion
	Stream III	Aircraft Structure and Design
Agricultural Engineering	Stream I	Agricultural Process Engineering
	Stream II	Soil and Water Conservation Engineering
	Stream III	Farm Machinery and Power
Artificial Intelligence and Data Science	Stream I	Computer Automation
	Stream II	Cyber Security and Forensics
	Stream III	Internet of Things
Biomedical Engineering	Stream I	Biomedical Signal and Image Processing (BSIP)
	Stream II	Health Care Systems (HCS)
	Stream III	Bioengineering (BE)
Civil Engineering	Stream I	Environmental and Water Resources Engineering
	Stream II	Structural Engineering
	Stream III	Construction Engineering and Management
Computer Science and Engineering	Stream I	Artificial Intelligence and Machine Learning
	Stream II	Cyber Security and Forensics
	Stream III	Internet of Things
Computer Science and Business Systems	Stream I	Artificial Intelligence & Machine Learning
	Stream II	Cyber Security and Forensics
	Stream III	Internet of Things
Electrical and Electronics Engineering	Stream I	Embedded and Control Drives
	Stream II	Design and Electrical Management
	Stream III	Power and Energy sources
Electronics and Communication Engineering	Stream I	Networking and signal processing
	Stream II	VLSI Design
	Stream III	Embedded and IoT

Food Technology	Stream I	Food Processing Technology
	Stream II	Food Design Engineering
	Stream III	Advanced Food Technology
Information Technology	Stream I	Artificial Intelligence
	Stream II	Cyber security
	Stream III	Data science
	Stream IV	Internet of Things
Mechanical Engineering	Stream I	Design Engineering
	Stream II	Thermal Engineering
	Stream III	Manufacturing Engineering
	Stream IV	Automobile Engineering
Petro chemical Technology	Stream I	Upstream processes
	Stream II	Chemical process Technology
Safety and Fire Engineering	Stream I	Industrial Safety Engineering
	Stream II	Safety Engineering
	Stream III	Fire Engineering

The students shall be permitted to register for the courses from V Semester onwards provided the marks earned by the students until III semester should be of CGPA 7.50 and above and cleared all the courses in the first attempt.

(ii) B.E. / B.Tech. Honours

- The students should have earned additional courses (minimum of 18 credits) from more than one vertical of the same Programme.
- Should have passed all the courses in the first attempt.
- Should have earned a minimum CGPA of 7.50.

If a student decides not to opt for Honours, after completing certain number of additional courses, the additional courses studied shall be considered instead of the Professional Elective courses which are part of the curriculum. If the student has studied more number of such courses than the number of Professional Elective courses required as per the curriculum, the courses with higher grades shall be considered for the calculation of CGPA. Remaining courses shall be printed in the mark sheet, however, they will not be considered for calculation of CGPA.

(iii) B.E. / B.Tech. Minor degree with specialisation from other programmes

Students shall be permitted to register for minor degree specialized from other departments.

The following are the eligibility norms for the Minor degree with specialization.

- The student should have earned additionally a minimum of 18 credits in any one of the verticals of other B.E / B.Tech programmes.
- Students can earn maximum of 6 credits in online mode (SWAYAM / NPTEL platform), out of these 18 credits as approved by the Dept Academic & Advisory Committee (DAAC).

The following are the minor degree offered by the departments.

Minor Degree	Department
Drone Technology	Aeronautical Engineering
Land and Water Management Engineering	Agricultural Engineering
Artificial Intelligence	Artificial Intelligence and Data Science
Bioinformatics	Biomedical Engineering
Environmental Pollution Control	Civil Engineering
Data Science	Computer science and engineering
Cyber Security and Data Privacy	Computer Science and Business Systems
Electric Vehicles	Electrical and Electronics Engineering
Embedded Systems and IoT	Electronics and Communication Engineering
Beverage Technology	Food Technology
Blockchain Technology	Information Technology
Automotive Engineering	Mechanical Engineering
Refining Technology	Petro chemical engineering
Safety Engineering	Safety and Fire Engineering
Environment and Sustainability	Science and Humanities
Entrepreneurship	Master of Business Administration

The students will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above.

If a student decides not to opt for Minor degree, after completing certain number of courses, the additional courses studied shall be considered instead of Open Elective courses which are part of the curriculum. If the student has studied more number of such courses than the number of open electives required as per the curriculum, the courses with higher grades shall be considered for calculation of CGPA. Remaining courses shall be printed in the mark sheet, however, they will not be considered for calculation of CGPA.

B.E. / B. Tech. (Hons) Specialisation in the same discipline, B.E / B.Tech. Honors and B.E./B.Tech. Minor degree in other specialisation will be optional for students.

6. STRUCTURE OF THE PROGRAMMES

Every B.E. / B. Tech. Programme will have a curriculum with syllabi consisting of theory, theory with practical, practical and mandatory courses that shall be categorized as follows:

- Humanities and Social Sciences (HSS)** courses include Language Electives, Engineering Ethics and Human Values, Communication skills, Environmental Science and Engineering, Heritage of Tamils and Tamils and Technology etc.,.
- Basic Sciences (BS)** courses include Mathematics, Physics, Chemistry, etc.
- Engineering Sciences (ES)** courses include Engineering practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.

- iv. **Professional Core (PC)** courses include the core courses relevant to the chosen specialization /branch.
- v. **Professional Elective (PE)** courses include the elective courses relevant to the chosen specialization /branch.
- vi. **Open Elective (OE)** courses include the courses from other programmes which a student can choose from the list specified in the curriculum including NCC.
- vii. **Employability Enhancement Courses (EEC)** includes Project Work and/or Internship, Seminar, Professional Practices, Case Study and Industrial/Practical Training.
- viii. **Mandatory Courses (MC)** includes induction training, Environmental sciences, interpersonal skill, soft skills and Indian Traditional knowledge.

6.1 Field / Industrial Visit /Internship

In order to provide the experiential learning to the students, Head of the Department shall take efforts to arrange at least two industrial visits / field visits per year. The students shall also undergo compulsory internship for two weeks during summer / winter vacation between III and VI semesters. The assessment for the internship will be conducted during sixth semester.

6.2 Value Added Courses

Department shall list Programme Advisory Committee approved value added courses at the beginning of the academic year. Students, who wish to obtain certification from the enlisted courses shall register for the courses. After the student successfully completes a Professional /Technical certification course, the DAAC shall map it to a Professional Elective course and transfer the credits appropriately, if the student applies for credit mapping for a maximum of three credits.

In case of credits earned through online mode from a University/Institution approved by the respective Programme Advisory Committee (PAC), the credits may be transferred after due approval procedures from Department Academic and Advisory Committee (DAAC).

6.3 Online Courses

Students shall be permitted to register in reputed online course platforms (SWAYAM /NPTEL) before eighth semester for skill development, humanities, management, Design/ Research methodology/ entrepreneurship and other engineering courses (which are provided with certificate after evaluation of the performance) with prior approval from DAAC of the department concerned. The Mentors shall prepare the list of NPTEL Courses registered by the students and submit the same to the CoE with the approval of DAAC.

6.4 One credit courses offered by the Industry Expert

Students shall register for one credit courses for a minimum of 15 periods (lecture mode) or 30 hours (practical mode) duration during third to sixth semester when it is offered. Experts from the industry may design such specialized one-credit courses based on the current technical skill

requirements. The industry expert shall prepare the syllabus and submit to the department concerned. The Department Academic and Advisory Committee (DAAC) shall review and approve the syllabus, course plan, and pedagogy and assessment pattern of the course.

6.5 Personality and Character Development

Every student shall undergo Personality Development Programmes for a duration via, NCC / NSS / YRC / YOGA / Sports and Games / Technical and Non-technical Club activities during the course of study. The attendance of the personality and character development courses / events shall be maintained on the regular basis by the concerned faculty Coordinators.

7. MEDIUM OF INSTRUCTION

The medium of instruction for the entire undergraduate Programme will be English only (Except for language courses other than English).

8. CREDIT ASSIGNMENT

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

Contact Periods	Credits
1 Lecture Period	1
1 Tutorial Period	1
2 Laboratory Periods (also for EEC courses like Seminar/Mini Project / Design Project / Major Project	1
Internship of 2 weeks duration	1
Internship of 4 weeks duration	2
Internship of 6 weeks and above duration	3

The following is the credit distribution for the Programme structure.

CREDIT DISTRIBUTION

S.No.	Category	Total Credits (AICTE)	Credits in %
1.	HSS	9 (10-14)	5.45%
2.	BS	24 (22-28)	14.55%
3.	ES	26 (24)	15.76%
4.	PC	66 (48)	40.00%
5.	PE	18 (18)	10.91%
6.	OE	9	5.45%
7.	EEC	13 (12-16)	7.88%
8.	MC	No Credit	
Total		165	100%

Each semester curriculum shall normally have a blend of lecture courses not exceeding 7 courses and Laboratory courses not exceeding 4 courses. The students can register for Professional Elective/Open Elective courses in respective semester, starting from the fifth semester, provided the pre-requisite conditions for the respective courses are satisfied.

9. CREDIT REQUIREMENT FOR PROGRAMMES

For the successful completion of B.E./B.Tech. Programme a regular student must earn 165 credits within eight Semesters. Lateral-entry student must earn 125-127 credits within six semesters. Additional credits earned by the student will be included in the mark sheet but will not be considered for the CGPA.

10. DURATION OF THE PROGRAMME

- 10.1. A student is ordinarily expected to complete the B.E. / B.Tech. Programme in 8 semesters (four academic years) / six semesters (three academic years) for lateral entry students, but in any case not more than 14 Semesters for HSC (or equivalent) candidates and not more than 12 semesters for Lateral Entry Candidates.
- 10.2. 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 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 may conduct additional classes for improvement, special coaching, model test etc., over and above the specified periods.
- 10.3. The total period for completion of the Programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 10.1 irrespective of the period of break of study in order that he/she may be eligible for the award of the degree (vide clause 18).

11. COURSE REGISTRATION

Each student, on admission shall be assigned to a Chief Mentor / Mentor (vide Clause 20) who shall advise / counsel the student about the details of the academic Programme and the choice of course(s) considering the student's academic background and career objectives

Every student shall enroll for the courses of the succeeding semester, in the current semester. However, the student shall confirm the enrollment by registering for the courses within the first five working days after the commencement of the semester concerned. The change of course is not permitted after confirmation of the registration.

After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Continuous Assessment marks and appear for the Final Examinations.

Each student, on admission to the Programme, shall register for all the courses prescribed in the curriculum in the first Semester of study (III Semester for students admitted under lateral entry stream).

In case, if a student fails to register the course(s), he/ she may be permitted to register the same in the subsequent semesters or when it is offered

The student shall register for the courses with the guidance of the student's Chief Mentor / Mentor. If a student wishes, the student may drop or add courses from III semester (vide Clause 12) within five working days after the commencement of the semester concerned and complete the registration process duly authorized by the Chief Mentor /Mentor.

12. FLEXIBILITY TO ADD OR DROP COURSES

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 by opting one- credit courses or additional courses.

From the III to VII semesters (from IV to VII Semesters in case of lateral entry students), the student has the option of registering for additional courses or dropping existing courses. The total number of credits that a student can add or drop is limited to 8, subject to a maximum of 2 courses in a given Semester. In such cases, the attendance requirement as stated in Clause 16 is mandatory. However the student has to earn the credits for the dropped courses within next two semesters.

The student shall register Mini Project work in semester VI, design project in semester VII and major Project in semester VIII only.

13. FAST TRACK SCHEME

Fast Track scheme is designed specifically for students with good academic records to take up internship / major project in industries or in foreign universities. It presents a unique opportunity for the students to complete the theory courses of the program in seven semesters. It allows students to take up the VII and VIII semester theory courses in V, VI and VII semesters itself. Students can go for internship during the VIII semester and complete the VIII semester Project Work in well reputed Industries / organizations offering Placement to the students / R & D organizations / Premier Institutions both in India and Abroad, as part of their internship.

The guidelines presented below will be used to select the students for Fast track

- i. Regular Students who are in the V semester with a minimum CGPA of 7.5 up to IV semesters.
- ii. Lateral entry Students who are in the V semester with a minimum CGPA of 7.5 from III and IV semesters.
- iii. Those who have completed all the courses up to IV semester (without standing arrears).

14. PROVISION FOR EXEMPTION FROM ELECTIVE COURSES DURING VII AND VIII SEMESTER

The students may be allowed to exempt elective courses during seventh or eighth semester if they have earned sufficient credits during previous semesters from the following modes.

- i) Specified number courses under fast track mode.
- ii) Three one credit courses before seventh / eighth semester.
- iii) Online course with three credits to replace the course
- iv) Internship with three credits
- v) Value added courses with three credits

The students of the above category shall produce the required records of the above to the DAAC. The DAAC may send recommendations to AAC for the mapping of the course and the same will be recommended and forwarded to CoE.

15. REAPPEARANCE REGISTRATION

If a student fails in a theory course, the student shall do reappearance registration (Examination) for that course in the subsequent semesters or when it is offered next.

On registration, a student may attend the classes for the reappearance registration courses, if the student wishes, and the attendance requirement (vide Clause 16) is not compulsory for such courses.

If the theory course, in which the student has failed, is either a professional elective or an open elective, the student may register for the same professional elective or open elective course respectively in the subsequent semesters. However, the change of elective courses is not permitted.

If a student is prevented from writing the final examination of a course or several courses due to lack of attendance, the student has to register for that / those course(s) again, when offered next, attend the classes and fulfill the requirements as per Clause 16.1.

16. ATTENDANCE REQUIREMENTS FOR COMPLETION OF THE SEMESTER

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

Ideally every student is expected to attend all classes and earn 100% attendance. However, in order to allow provision for certain unavoidable reason such as medical / personal grounds / participation in sports, the student is expected to earn a minimum of 75% attendance. Therefore, he/she shall secure not less than 75% of overall attendance in that semester taking into account the total number of periods in all courses attended by the candidate as against the total number of periods in all courses offered during that particular semester.

- 16.2. However, a candidate who could secure attendance between 65% and 74% in the current semester due to medical reasons (hospitalization / accident / specific illness) or due to participation in the University / State / National / International level Sports events / NCC events with prior permission from the Head of the Department concerned can get exemption from the prescribed attendance requirement and he/she shall be permitted to appear for that particular semester examinations. Such Candidate, who claim for the above shall submit the required certificates at the time of registration for the Final Examination.
- 16.3. Candidates who secure less than 65% overall attendance will not be permitted to write the Final Examinations and are not permitted to move to next / subsequent semester. They are required to repeat the incomplete semester during the next academic year.

17. WITHDRAWAL FROM SEMESTER EXAMINATION

- 17.1. A student may, for valid reasons (medically unhealthy / unexpected family situations / Sports person representing Tamil Nadu / India with prior permission for participation from Principal / CoE / DAAC), be granted permission to withdraw (after registering for the examinations) from appearing for any course or courses in the Final Examination of a particular semester. The student may withdraw by following the due process of the CoE's office before the commencement of examination. This facility can be availed only once during the entire duration of the degree Programme.
- 17.2. Withdrawal from final examination will be valid only if the student is, otherwise, eligible to write the examination with no history of arrears and the application for withdrawal is made to the CoE, prior to the examination in the course or courses concerned. The application for withdrawal should be recommended by the Head of the Department concerned and approved by the Head of the Institution.

18. PROVISION FOR AUTHORIZED BREAK OF STUDY

- 18.1. A student is permitted to go on break of study for a maximum period of one year as a single spell.
- 18.2. 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 candidate may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study. If a candidate intends to temporarily discontinue the Programme in the middle of the semester for valid reasons, and to rejoin the Programme in a subsequent year, permission may be granted based on the merits of the case provided he / she applies to the Head of the Institution in advance, but not later than the last date for registering for the final examination of the semester in question, through the Head of the Institution stating the reasons therefore and the probable date of rejoining the Programme.
- 18.3. The candidates permitted to rejoin 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 rejoining. The students rejoining in new Regulations shall apply to the Head of the Institution, in the prescribed format through Head of the Department at the beginning of the readmitted semester itself for prescribing additional courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.

18.4. The authorized break of study would not be counted towards the duration specified for passing all the courses for the purpose of classification (vide Clause31).

18.5. 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 specified in clause 10.1 irrespective of the period of break of study in order that he/she may be eligible for the award of the degree.

18.6. If any student is prevented for want of required attendance, the period of prevention shall not be considered as authorized "Break of Study".

18.7. If a student 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 Principal with due proof to that effect.

18.8. No fee is applicable to students during the break of study period.

19. PROVISION FOR SCRIBE

The Institution will provide a scribe to students who are physically incapacitated to write the examination. Detailed guidelines will be available in the office of the Controller of Examinations for follow up by students.

20. CHIEF MENTOR / MENTOR

To help the students in planning their courses of study and for general advice on the academic Programme, the Head of the Department of the student will attach a certain number of students to a faculty member of the Department who shall function as Chief Mentor / Mentor for those students during their period of study. Such Chief Mentor / Mentor shall advise the students and monitor the courses taken by the students, check the attendance and progress of the students attached to him / her and counsel them periodically. If necessary, the Mentor may also discuss with or inform the parents about the progress / performance of the students concerned.

The responsibilities for the Chief Mentor / Mentor shall be:

- i. To act as the channels of communication across the HoD, the students of the respective class and Parents.
- ii. To collect and maintain various statistical details of academic and other activities of the students.

- iii. To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- iv. To monitor the academic performance of the students including attendance and to inform the class committee.
- v. To attend the students' welfare activities like awards, medals, scholarships and industrial visits.
- vi. To attend the students' grievance and redressal requirements and help them.

21. CLASS COMMITTEE

A class committee consists of teachers of the class concerned, student representatives and a chairperson, who does not handle any subject for the class. It is like the "Quality Circle" (more commonly used in industries), with the overall goal of improving the teaching-learning process. The functions of the class committee include:

- i. Solving the problems experienced by students in the classroom and in the laboratories in consultation with Head of the Department / Class Committee Coordinator.
- ii. Clarifying the Regulations of the degree Programme and the details of rules there in.
- iii. Informing the student representatives, the academic schedule including the mode and date of assessments and the syllabus coverage for each assessment.
- iv. Informing the student representatives, the details of Regulations regarding weightage used for each assessment.
- v. Analyzing the performance of the students of the class after each periodic test and finding ways and means of improving the performance of the students.
- vi. Identifying the slow learners and helping them to come up by guidance and/or by providing additional coaching.

The class committee is normally constituted by the Head of the Department. However, if the students of different branches are mixed in each class the class committee is to be constituted by the concerned HoDs. The class committee shall be constituted within a week from the date of commencement of a semester. At least 4 student-representatives from the respective class (typically 2 boys and 2 girls) shall be included in the class committee. The Chief Mentor of the class may invite the class committee members and the Head of the Department to the class committee meeting. The Chief Mentor is required to prepare the minutes of every meeting, submit the same to the Head of the Department and then to the Principal within three working days of the meeting and arrange to circulate the same among concerned class committee members.

The first meeting of the class committee shall be held within fifteen days from the date of commencement of the semester. The nature and weightage of continuous assessments shall be informed in the first meeting, and the same shall be communicated to the students. Two or three subsequent meetings in a semester may be held at suitable intervals. During these meetings the student members representing the entire class, shall meaningfully interact and

express their opinions and suggestions of the class students to improve the effectiveness of the teaching- learning process.

22. COURSE COMMITTEE FOR COMMON COURSES

Each common theory course offered to more than one discipline or more than one class handled by different faculty members, shall have a “Course Committee” comprising all the teachers teaching the course with one of them nominated as Course Coordinator. The nomination of the Course Coordinator shall be made by the Head of the Department in consultation with Heads of Departments of the participating discipline. The “Course Committee” shall meet as often as possible and ensure uniform delivery and evaluation of continuous assessments after arriving at a common scheme of evaluation (subject to Clause 23). Wherever feasible, the common course committee shall prepare a common question paper for the test(s).

23. ASSESSMENT PROCEDURE FOR THE AWARD OF MARKS

The total marks for each course generally (Theory, Practical, Integrated Course, Project Work) will be 100, comprising of two components namely Internal Assessment Examination (IAE) and Final Examination (FE). Each course, both theory and laboratory shall be evaluated for a maximum of 100 marks.

23.1 Theory Courses

Three Internal Assessment Examinations (IAE) each carrying 50 marks shall be conducted during the semester. Formative assessment shall be used to assess the continuous learning. The award of marks shall be as follows

Each theory course shall be evaluated for a maximum of 100 marks.

Internal Assessment : 40 Marks

Final Examinations : 60 Marks

Assessment	Marks	Weightage	IA Marks	Marks		
				IA	FE	Total
IAE – I	50	5	25	40	60	100
IAE – II	50	10				
IAE – III	50	10				
Quiz / Presentation / Tutorial	10	5	15			
Video presentation / Assignment	10	5				
Attendance	10	5				

23.2 Theory Courses with Practical Component

Each Theory Course with Practical Component shall be evaluated separately for theory component and laboratory component as follows.

Assessment	Marks	Weightage	Marks	Marks		
				IA	FE	Total
IAE – I	50	5	25	50	50	100
IAE – II	50	10				
IAE – III	50	10				
Rubrics based CA	100	10	25			
Model Examination	100	10				
Attendance	10	5				

23.3 Laboratory courses

Each laboratory course shall be evaluated for a maximum of 100 marks. The performance of the students in the final examinations for laboratory courses are assessed by two Examiners viz. Examiner-I, Examiner-II wherein the Examiner-I would be the laboratory course in-charge and Examiner-II would be the faculty member from the panel of expert nominated by the Controller of Examination.

Continuous Assessment : 60 Marks

Final Examination : 40 Marks

Assessment	Marks	Weightage	Marks		
			CA	FE	Total
Rubrics based Continuous Assessment	100	40	60	40	100
Preparatory Examination	100	20			

23.4 Mini Project and Design Project

During sixth and seventh semester of study the students have to register for mini project and Design project respectively. Students can do the project either by individual or by group having maximum four in a batch with the guidance of a faculty member. Head of the department will nominate a review committee and a faculty coordinator to monitor the progress.

Assessment	Marks	CA	Final Examination (60)					Total
			Project Report		Viva-Voce Examination			
			Internal	External	Internal	External	Supervisor	
Review 1	10	40	10	10	10	20	10	
Review 2	15							
Review 3	15							

23.5 Major Project

Major Project work may be assigned to a single student or to a group of students not exceeding 4 per group, under the supervision of faculty guide(s).

The Project Report, prepared according to the approved guidelines and duly signed by the guide and the Head of the Department, shall be submitted to the department as per the timeline announced by the department. The Final Examination for project work shall consist of evaluation of the final project report by an external examiner, followed by a viva-voce examination conducted separately for each student, by a committee consisting of the external examiner, internal examiner and project coordinator. The Controller of Examinations (CoE) shall appoint Internal and External Examiners for the Final Examination of the Project Work.

The Continuous Assessment Marks and Final Examinations marks (FE) for Project Work and the Viva-Voce Examination will be distributed as below.

Assessment	Marks	CA	Final Examination (60)					Total
			Project Report		Viva-Voce Examination			100
			Internal	External	Internal	External	Supervisor	
Review 1	10	40	10	10	10	20	10	
Review 2	10							
Review 3	10							
Publication	10							

23.6 Assessment for internship (Continuous Internal Assessment only)

The Head of the department will nominate a faculty guide and a supervisor from the concerned industry. The internship is assessed by both the faculty guide and supervisor.

Assessment	Marks	Total Marks
Review 1	40	100
Review 2	40	
Report / Case study	20	

23.7 Assessment for value added courses / Certificate Courses (Continuous Internal Assessment only)

The value added courses shall carry 100 marks for one to three credits and will be evaluated through continuous assessment only. Two Assessments and one evaluation shall be conducted during the semester by the Department concerned. The list of students along with the marks and the grades earned may be forwarded to the Controller of Examinations for the appropriate action at least one month before the commencement of Final Examinations.

Assessment	Marks	Total Marks
Assessment I	25	100
Assessment II	25	
Final Assessment	50	

23.8 Assessment for Online courses

All the online courses carry a weightage of credits specified by NPTEL from time to time. These credits may be considered in lieu of a suitable professional/open electives. Student shall earn any numbers of credits and they can claim for transfer of credits before eighth semester.

NPTEL Score and the corresponding equivalent score offered is given below.

NPTEL SCORE	< 40	40 - 45	46 - 50	51 - 60	61 - 70	71 - 80	81 - 100
LETTER GRADE	< 50 U	50 – 55 C	56 – 60 B	61 – 70 B+	71 – 80 A	81 – 90 A+	91 – 100 O

23.9 Assessment for one credit courses (Continuous Internal Assessment)

- A one credit course shall carry 100 marks and shall be evaluated through continuous assessment only. The question paper pattern and scheme will be decided by the industry expert and will be approved by the DAAC.
- The Head of the Department may identify a faculty member as the coordinator for the course.
- The faculty coordinator shall coordinate with the industry expert for conducting the classes and for conducting Internal Assessment Examination.
- The grades shall be assigned to the students based on their performance and included in the mark sheet as additional credits
- Students may skip one elective course if they complete three one credit courses.

Assessment	Marks	Weightage	Marks		
			CA	FE	Total
Assessment I	50	30	100	0	100
Assessment II	50	30			
Final Assessment	50	30			
Assignment / Case Study	10	10			

23.10 Assessment for Mandatory Courses (Continuous Assessment only)

Assessment	Marks	Weightage	Marks		
			CA	FE	Total
IAE-I	50	30	100	0	100
IAE-II	50	30			
IAE-III	50	30			
Attendance	10	10			

The overall attendance is considered for awarding internal assessment marks. The mark split-up for the same will be as follows:

Attendance	Marks
Below 75%	0
75 -79%	1
80-84%	2
85-89%	3
90-94%	4
95-100%	5

24. OPTIONAL TESTS

A student becomes eligible to appear for an optional examination only under the following circumstances: (i) absent for Internal Assessment Examinations (IAE I, IAE II or IAE III) on account of medical reasons (hospitalization / accident / specific illness), or (ii) participation in the College / University / State / National / International level Sports, NCC / NSS events with prior permission from the Head of the Institution and (iii) on satisfying the conditions (i) or (ii), the student shall register for the Optional Tests, through the concerned member of faculty who handles the course and the same is to be submitted to the Controller of Examinations through the respective Head of the Department.

25. VALIDITY OF INTERNAL ASSESSMENT MARKS

The assessment marks scored is applicable for subsequent two attempts. From third attempt onwards the internal marks become invalid and the student have to score 50 % marks in the final examination to get pass in the particular subject.

26. MALPRACTICE

Students are prohibited from entering into the Examination Halls / Laboratories with any book or portion of book, manuscript, or any unauthorized written/ printed/ electronic content, communicating with or copying from each other or communicating with anyone outside the Examination Hall / Laboratories or misbehaving with invigilators. Electronic gadgets, Programmable calculator and Mobile Phone shall not be permitted inside the Examination hall / Laboratories. However, any required code-books 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 severely as per the rules prescribed by the controller of Examinations.

27. PASSING REQUIREMENTS

A candidate who secures not less than 50% of total marks prescribed for the course (Internal Assessment + Final Examination) with a minimum 45% of the marks prescribed for the Final Examinations, 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).

If a student fails to secure a pass in any of the courses, the student shall register for the courses again, in the subsequent semester.

The passing requirement for the courses which are assessed purely through internal assessments is 50% of the internal assessment marks only.

If a student has failed in the final examination he/she may be allowed to register for the course in the next semester itself.

28. AWARD OF LETTER GRADES

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. For those students who have not passed the examination, Reappearance (U) shall be awarded as shown in the below Table.

For those students who have passed the course, the relative grading shall be done. The marks of those students who have passed only shall be inputted in the software developed for relative grading. 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 or equal to 30 then the fixed grading shall be followed with the grade range as specified below.

O	A+	A	B+	B	C	U
91 - 100	81 - 90	71 - 80	61 - 70	56 - 60	50 - 55	< 50

The performance of a student shall be reported using letter grades, each carrying certain points as detailed below:

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

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".

'SA' denotes shortage of attendance and hence prevented from writing the end semester Examinations. 'SA' will appear only in the result sheet.

"U" denotes that the student has failed to pass in that course. "WD" denotes **withdrawal** from the exam for the particular course. The grades U and WD will figure both in the Grade Sheet as well as in the Result Sheet. In both cases, the student has to appear for the End Semester Examinations.

If the grade U is given to Theory Courses/ Laboratory Courses it is not required to satisfy the attendance requirements, but has to appear for the end semester examination and fulfil the passing requirements to earn a pass in the respective courses.

If the grade U is given to EEC (Employability Enhancement Course) (except Project Work), which are evaluated only through internal assessment, the student shall register for the course again in the subsequent semester, fulfill the passing requirements to earn pass in the course. However, attendance requirement need not be satisfied.

29. GRADE SHEET

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

- The list of courses enrolled during the semester and the grade scored.

- The Grade Point Average (GPA) for the semester and
- The Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards.

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

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.

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

Where **C_i** is the number of credits assigned to the course

GP_i is the point corresponding to the grade obtained for each course

n is number of all courses successfully cleared during the particular semester in the case of GPA and during all the semesters in the case of CGPA.

The **CGPA** is rounded off to two decimals.

30. ELIGIBILITY FOR THE AWARD OF DEGREE

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

- Successfully gained the required number of total credits as specified in the curriculum corresponding to the student's Programme within the stipulated time.
- Successfully completed the course requirements appeared for the final examinations and passed all the subjects prescribed in all the 8 semesters within a maximum period of 7 years and 6 years in 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.
- No disciplinary action pending against the student.

31. CLASSIFICATION OF THE DEGREE AWARDED

31.1 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). Withdrawal from examination (vide Clause 17) 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 and four years in the case of lateral entry for award of First class with Distinction.
- Should NOT have been prevented from writing semester examination due to lack of attendance in any semester.

31.2 First Class:

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 and (6 semesters in the case of Lateral Entry) within Five years and Four years in the case of Lateral Entry.
- One year authorized break of study (if availed of) or prevention from writing the final 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 for award of First class.
- Should have secured a CGPA of not less than 6.50

31.3 Second Class:

All other students (not covered in clauses 31.1 and 31.2) who qualify for the award of the degree (vide Clause 30) shall be declared to have passed the examination in Second Class.

A candidate who is absent in final 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.

32.PHOTOCOPY /REVALUATION

If a student fails in a theory course the student can apply for photocopy of his/her semester examination answer paper on payment of the prescribed fee through proper application to the Controller of Examinations through the Head of the Department. 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 Department. Revaluation is not permitted for practical courses and for project work.

33.REVIEW

Candidates 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 Controller of Examination through the Head of the Department. Candidates applying for Revaluation only are eligible to apply for Review.

34.AWARD OF DEGREE

The degree will be issued by Anna University, Chennai and the consolidated Grade Sheet will be issued by the institution. The consolidated grade sheet will specify additional credits,

specialization and distinctions that the student has earned during the course of the study.

35.DISCIPLINE

A student is expected to follow the rules and regulations laid down by the Institute and the affiliating University, as published from time to time. Any violations, if any, shall be treated as per the procedures stated thereof.

If a student indulges in malpractice in any of the Internal Assessment Examinations / final Examinations, he / she shall be liable for punitive action as prescribed by the Controller of Examination from time to time.

36.REVISION OF REGULATION, CURRICULUM AND SYLLABI

The Institution may from time to time revise, amend or change the Regulations, scheme of examinations and syllabi if found necessary. However, a Standing Committee which shall be constituted by Principal on need basis for any special case, which falls beyond the above rules and regulations they will offer suitable interpretations/clarification/amendments required for special case. All such exceptions will have to be ratified at the next meeting of the Academic Council. The decision of the Academic Council is final.