

**KONGU ENGINEERING COLLEGE, PERUNDURAI, ERODE – 638060**

**(Autonomous)**

**REGULATIONS 2024**

**CHOICE BASED CREDIT SYSTEM AND OUTCOME BASED EDUCATION**

**BACHELOR OF ENGINEERING (BE) / BACHELOR OF TECHNOLOGY (BTech)  
DEGREE PROGRAMMES**

**These regulations are applicable to all candidates admitted into BE/BTech Degree programmes from the academic year 2024 – 2025 onwards.**

**1. DEFINITIONS AND NOMENCLATURE**

In these Regulations, unless otherwise specified:

- i. “University” means ANNA UNIVERSITY, Chennai.
- ii. “College” means KONGU ENGINEERING COLLEGE.
- iii. “Programme” means Bachelor of Engineering (BE) / Bachelor of Technology (BTech) Degree programme
- iv. “Branch” means specialization or discipline of BE/BTech Degree programme, like Civil Engineering, Information Technology, etc.
- v. “Course” means a Theory / Theory cum Practical / Practical course that is normally studied in a semester like Mathematics, Physics etc.
- vi. “Credit” means a numerical value allocated to each course to describe the candidate’s workload required per week.
- vii. “Grade” means the letter grade assigned to each course based on the marks range specified.
- viii. “Grade point” means a numerical value (0 to 10) allocated based on the grade assigned to each course.
- ix. “Principal” means Principal of Kongu Engineering College.
- x. “Controller of Examinations (COE)” means authorized person who is responsible for all examination related activities of the College.
- xi. “Head of the Department (HOD)” means Head of the Department concerned.

## 2. PROGRAMMES AND BRANCHES OF STUDY

The following programmes and branches of study approved by Anna University, Chennai and All India Council for Technical Education, New Delhi are offered by the College.

Programme	Branch
BE	Civil Engineering
	Mechanical Engineering
	Electronics and Communication Engineering
	Computer Science and Engineering
	Electrical and Electronics Engineering
	Electronics and Instrumentation Engineering
	Mechatronics Engineering
	Automobile Engineering
	Computer Science and Design
BTech	Chemical Engineering
	Information Technology
	Food Technology
	Artificial Intelligence and Data Science
	Artificial Intelligence and Machine Learning

## 3. ADMISSION REQUIREMENTS

### 3.1 First Semester Admission

The candidates seeking admission to the first semester of the eight semester BE / BTech Degree Programme:

Should have passed the Higher Secondary Examination (10 + 2) in the academic stream with Mathematics, Physics and Chemistry as three of the four subjects of study under Part-III subjects of the study conducted by the Government of Tamil Nadu or any examination of any other University or authority accepted by the Anna University, Chennai 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.

They should also satisfy other eligibility conditions as prescribed by the Anna University, Chennai, Directorate of Technical Education, Chennai and Government of Tamilnadu from time to time.

### **3.2 Lateral Entry Admission**

The candidates who possess a Diploma in Engineering / Technology awarded by the Directorate of Technical Education, Tamilnadu or its equivalent are eligible to apply for Lateral entry admission to the third semester of BE / BTech. Programme.

(OR)

The candidates who possess a Bachelor of Science (B.Sc.) (10+2+3 stream) with Mathematics as one of the subjects at the BSc level from a recognised University are eligible to apply for Lateral entry admission to the third semester of BE / BTech. Such candidates shall undergo two additional Engineering course(s) in the third and fourth semesters as prescribed by the College.

They should also satisfy other eligibility conditions prescribed by the Anna University, Chennai, Directorate of Technical Education, Chennai and Government of Tamilnadu from time to time.

## **4. STRUCTURE OF PROGRAMMES**

### **4.1 Categorisation of Courses**

The BE / BTech programme shall have a curriculum with syllabi comprising of theory, theory cum practical, practical courses in each semester, professional skills training/industrial training, project work, internship, etc that have been approved by the respective Board of Studies and Academic Council of the College. All the programmes have well defined Programme Outcomes (PO), Programme Specific Outcomes (PSO) and Programme Educational Objectives (PEOs) as per Outcome Based Education (OBE). The content of each course is designed based on the Course Outcomes (CO). The courses shall be categorized as follows:

- i. Humanities, Sciences & Management (HS) courses including English for Effective Communication, Universal Human Values and Yoga & Values for Holistic Development.
- ii. Basic Science (BS) Courses
- iii. Engineering Science (ES) Courses
- iv. Professional Core (PC) Courses
- v. Professional Elective (PE) Courses
- vi. Open Elective (OE) Courses
- vii Employability Enhancement Courses (EC) like Project work, Professional Skills/Industrial Training, Comprehensive Test & Viva, Entrepreneurships/Start ups and Internship / In-plant Training in Industry or elsewhere
- vii Value Added Courses (VAC) are offered to the students optionally to provide additional value to the programme, for enhancing the knowledge and skills of the student.

- ix. Off Campus Courses (OC) are the courses that can be undergone by the student, offered by other institutions.
- x. Audit Courses (AC)
- xi. Mandatory Courses (MC) like Student Induction Program, Environmental Science and Quantitative Aptitude.
- xii Honours Degree Courses (HC)

## 4.2 Credit Assignment and Honours Degree

### 4.2.1. Credit Assignment

Each course is assigned certain number of credits as follows:

Contact period per week	Credits
1 Lecture / Tutorial Period	1
2 Practical Periods	1
2 Project Work Periods	1
40 Training / Internship Periods	1
Four weeks duration of SWAYAM-NPTEL	1

The minimum number of credits to complete the BE/BTech programme is 164.

### 4.2.2 Honours Degree

Students always have a passion or fascination for a particular field or a line of thinking or study and Honours Degree option enables the student to nurture this interest from. Students shall obtain Honours degree by successful completion of additional courses over and above the courses prescribed in the respective curriculum from 'FIFTH' semester onwards. Additional courses shall be either a 'CAPSTONE DESIGN PROJECT' or 'SIX ELECTIVE COURSES'.

- i. Students shall earn 18 credits and split up of credits shall be given in the respective curriculum.
- ii. Eligibility for any student to opt for the Honours degree is that, the student should earn a minimum GPA of 8.5 in 'THIRD' and 'FOURTH' semesters and also students should not have any history of arrears from first semester.

#### 4.2.2.1 Capstone Design Project for 'HONOURS' Degree

- i. Capstone Design project provides an opportunity to work in a team to design and develop a product, focusing to evolve solutions for real-time problems, starting from Problem definition, Specification formulation within given constraints, Review of design process and design ideation, Human factors, Market research, Product and patent research, fabrication considerations, Safety and risk assessment, Liability and ethics, Environmental and sustainability considerations, Proof-of-concept methods, Codes and Standards, etc. and finally to test prototype(s).
- ii. A group comprising of 4 to 6 students, spread over minimum of two departments and maximum of three departments, shall opt for Capstone Design Project in 'THREE PHASES' from V to VII semester, in addition to the courses as prescribed in the curriculum. It is mandatory that students from at least TWO departments shall be a

part of the project group and the number of students from each department shall be at least TWO.

- iii. A Mentor shall be identified by the students from any one of the participating Department and Head of the Department of the Mentor's Department shall constitute a Project Review Committee (PRC) consisting of Mentor, one faculty – from the department of the students (other than the Mentor's Department) in the group and one expert from industry in the relevant field. Student shall also identify Co-Mentor(s) from the participating department(s).
- iv. During the Capstone Design Project, the student groups are encouraged to participate in events such as Hackathon, Industrial Expo to showcase and pitch their inventions.
- v. Evaluation of Capstone Design Project is by continuous assessment (Three periodical reviews) in each semester by the PRC and Viva-voce examination at the end of each semester. Viva-Voce examination shall be conducted with panel of internal examiners (PRC) and ONE external examiner. Weightage for Continuous assessment is 60% and for project report evaluation along with Viva-voce examination is 40%.
- vi. Every student in the group shall secure a minimum 45% of marks in Project report evaluation & viva-voce examination and also obtain a 50% of total marks in the Continuous assessments + (Project report evaluation & viva-voce examination) for getting 'PASS' in the particular phase of Capstone Design Project. Upon successful completion of the particular phase, the students shall be allowed to proceed to the next phase. In case, if any student in the group is not able to secure 'PASS' as prescribed above, the student shall discontinue from the Capstone Design Project and shall not associate with the Capstone Design Project furthermore.
- vii. After earning 18 credits through the successful completion of the Capstone Design Project (CDP), 'HONOURS' shall be conferred along with 'Certificate of Appreciation' to the students in this group, who secure 8.50 or higher CGPA, without any history of arrears. If the student in the group, after successful completion of Capstone Design Project secures less than 8.50 CGPA, 'HONOURS' degree shall not be conferred. However, the result of Capstone Design Project shall feature in the Grade sheet and a 'Certificate of Appreciation' shall be issued to those students.

#### **4.2.2.2 Elective Courses for 'HONOURS' Degree**

- i. Students shall opt for 'Honours' Degree by undergoing 'FIVE' or 'SIX' additional elective courses from the Honours courses from V to VII semester as listed in the respective curriculum. The student has to earn 18 additional credits through the course works, which are related to the major discipline of study. Evaluation and 'PASS' requirement of these courses is as per Clauses 12.1, 12.2 and 12.3 for Theory & Theory cum Practical courses respectively.
- ii. On successful completion of five or six elective courses, 'HONOURS' shall be conferred to the students, who secure a CGPA of 8.50 or higher, without any history of arrears. If the student after successful completion of 'FIVE' or 'SIX' courses secures less than 8.50 CGPA, 'HONOURS' degree shall not be conferred.
- iii. If the student decides to opt out of Honours Degree, after successful completion of certain number of course work(s), these course(s) shall be treated as equivalent to PEC(s). In such case, the student shall be permitted to drop the equal number of PEC(s).
- iv. If the student successfully completes more number of PECs over and above the 'SIX'

or 'FIVE' mandatory courses, the courses with higher grades shall be considered for the calculation of CGPA. Remaining courses shall be only printed on the grade sheet and grade obtained in these courses shall not be considered for computation of CGPA.

The Honours degree programmes recommended by the respective boards of studies are given below:

SNo	Honours Degree in Emerging Areas	To be offered as Honours, only for the following Programmes mentioned against the Honours
1.	Construction Technology	BE – Civil Engineering
2.	Smart Cities	BE – Civil Engineering
3.	Smart Manufacturing	BE – Mechanical Engineering
4.	Computational Product Design	BE – Mechanical Engineering
5.	Intelligent Autonomous Systems	BE – Mechatronics Engineering
6.	E-Mobility	BE – Automobile Engineering
7.	Artificial Intelligence and Machine Learning	BE – Electronics and Communication Engineering
8.	System on Chip Design	BE – Electronics and Communication Engineering
9.	Electric Vehicles	BE – Electrical and Electronics Engineering
10.	Micro-grid Technologies	BE – Electrical and Electronics Engineering
11.	Intelligent Sensors Technology	BE – Electronics and Instrumentation Engineering
12.	Smart Industrial Automation	BE – Electronics and Instrumentation Engineering
13.	Data Science	BE – Computer Science and Engineering
14.	Cyber Security	BE – Computer Science and Engineering
15.	Data Science	BTech – Information Technology
16.	Cyber Security	BTech – Information Technology
17.	Petroleum and Petrochemical Engineering	BTech – Chemical Engineering
18.	Waste Technology	BTech – Chemical Engineering
19.	Food Processing and Management	BTech – Food Technology
20.	Virtual and Augmented Reality	BE- Computer Science and Design
21.	Data Science	BE- Computer Science and Design
22.	Internet of Things (IoT)	BTech – Artificial Intelligence and Data Science
23.	Block Chain Technology	BTech – Artificial Intelligence and Data Science
24.	Internet of Things (IoT)	BTech – Artificial Intelligence and Machine Learning
25.	Block Chain Technology	BTech – Artificial Intelligence and Machine Learning

The courses specified under Honours degree in the emerging area may include theory, theory cum practical, practical, project work, etc. under the particular vertical. A candidate can choose and study these specified courses from fifth semester onwards and he/she shall successfully complete the courses within the stipulated time vide clause 5. Total number of credits earned in each semester may vary from candidate to

candidate based on the courses chosen. The registration, assessment & evaluation pattern and classification of grades of these courses shall be the same as that of the courses in the regular curriculum of the programme of the candidate vide clause 6, clause 7 and clause 14 respectively.

#### **4.2.3 Minor Degree**

i. Eligibility for any student to opt for the Minor degree is that the student should earn a minimum GPA of 8.50 in III and IV semesters.

ii. A student can register for a ‘Minor’ degree, from the V semester by registering basket of courses as prescribed in the curriculum of the UG Programme offered by the department other than the parent department of the student. Evaluation and ‘PASS’ requirement of these courses is as per Clauses 12.1, 12.2 and 12.3 for Theory & Theory cum Practical courses respectively.

iii. In order to get a Minor Degree, a student has to successfully complete the basket of courses as prescribed in the curriculum of the Department offering the Minor Degree and earn 18 extra credits. Grades obtained in the basket of courses shall also be considered for computation of CGPA, along with the courses in the curriculum for the programme (mainstream).

iv. If the student decides to opt out of Minor Degree, after successful completion of certain number of course(s), these course(s) can be treated as equivalent to OE(s). In such case, the student shall be permitted to drop the equal number of OE(s).

v. If the student successfully completes more number of OEs over and above the courses prescribed in the curriculum, the courses with higher grades shall be considered for the computation of CGPA. Remaining courses shall be only printed on the grade sheet and grade obtained in these courses shall not be considered for computation of CGPA.

vi. Minor Degree shall be reflected in the degree certificate as “B. E., / B. Tech., in XYZ Engineering with Minor in ABC”, where ‘XYZ’ is the Major Discipline of study and ‘ABC’ is the Discipline in which Minor Degree is offered.

4.2.4 The students shall be permitted to opt for either ‘Honours’ or ‘Minor’ Degree, during the programme.

### **4.3 Employability Enhancement Courses**

A candidate shall be offered with the employability enhancement courses like project work, mini projects, internship, professional skills training/industrial training, comprehensive test & viva, and entrepreneurs/start-ups during the programme to gain/exhibit the knowledge/skills.

#### **4.3.1 Professional Skills Training/ Industrial Training / Entrepreneurships / Start Ups/ Inplant Training**

A candidate may be offered with appropriate training courses imparting programming skills, communication skills, problem solving skills, aptitude skills etc. It is offered in two phases as phase I in fourth semester and phase II in fifth semester including vacation periods and each phase can carry two credits.

(OR)

A candidate may be allowed to go for training at research organizations or industries for a required number of hours in fifth semester vacation period. Such candidate can earn two credits for this training course in place of Professional Skills Training course II in fifth semester. He/She shall attend Professional Skills Training Phase I in fourth semester and can earn two credits.

(OR)

A candidate may be allowed to set up a start-up and work part-time for the start-ups by applying his/her innovations and can become a student entrepreneur during BE/BTech programme. Candidates can set up their start up from fifth semester onwards either inside or outside of the college. Such student entrepreneurs may earn 2 credits in place of Professional Skills Training II. The area in which the candidate wants to initiate a start-up may be interdisciplinary or multidisciplinary. The progress of the startup shall be evaluated by a panel of members constituted by the Principal through periodic reviews.

#### **4.3.2 Comprehensive Test and Viva**

The overall knowledge of the candidate in various courses he/she studied shall be evaluated by (i) conducting comprehensive tests with multiple choice questions generally with pattern similar to GATE and/or (ii) viva-voce examination conducted by a panel of experts assigned by the Head of the department. The members can examine the knowledge of the candidate by asking questions from various domains and the marks will be assigned based on their answers. This course shall carry two credits.

#### **4.3.3 Full Time Project through Internships**

The curriculum enables a candidate to go for full time project through internship during a part of seventh semester and/or entire final semester and can earn credits vide clause 7.6.

A candidate is permitted to go for full time projects through internship in seventh semester with the following condition: The candidate shall complete a part of the seventh semester courses with a total credit of about 50% of the total credits of seventh semester including Project Work-II Phase-I in the first two months from the commencement of the seventh semester under fast track mode. The balance credits required to complete the seventh semester shall be earned by the candidate through either approved One Credit Courses /Off Campus courses / Self Study Courses or Add/Drop courses as per clause 4.4 and clause 4.5 respectively.

A candidate is permitted to go for full time projects through internship during eighth semester. Such candidate shall earn the minimum number of credits



required to complete eighth semester other than project through either approved One Credit Courses /Off Campus Courses / Self Study Courses or Add/Drop courses as per clause 4.4 and clause 4.5 respectively.

Assessment procedure is to be followed as specified in the guidelines approved by the Academic Council.

**4.3.4** A student shall go for in-plant training for duration of two weeks during the entire programme. It is mandatory for all the students.

**4.3.5 Projects/Mini Projects/Micro Projects**

In order to enhance the practical knowledge and project development skills for the candidates, Projects/Mini Projects/Micro Projects are incorporated in the curriculum. Assessment procedure is to be followed as specified in the clause 7.6 and 7.7 for Projects and Mini Projects.

**4.4 Value Added Courses / Off Campus Courses / Industrial Project / Self Study Courses**

The candidates may optionally undergo Value Added Courses / Online Courses / Industrial Project / Self Study Courses as elective courses. The credits earned through these courses can be considered for the calculation of CGPA.

**4.4.1 Value Added Courses:** These courses shall carry one credit each and shall be offered by the college with the prior approval from respective Board of Studies. A candidate can earn a maximum of four credits through these courses during the entire duration of the programme. A candidate can register for only one such course in each semester.

**4.4.2 Off Campus Courses:** Candidates may be permitted to earn credits for off campus courses, offered by NPTEL / SWAYAM / a University / Other Agencies, approved by respective Board of Studies.

Students are also permitted to study courses of a particular semester in a University / Institution abroad based on MoU. A learning agreement shall be evolved to map all the courses offered in the programme and the courses offered in University abroad as per the procedure outlined by the Centre for Academic Courses. The credits earned by the students in the University abroad shall be transferred as per the learning agreement.

**4.4.3 Self Study Courses:** The Department may offer an elective course in the regular curriculum as a self study course. However, mode of assessment for a self study course will be the same as that used for other courses. The candidates shall study such courses on their own under the guidance of member of the faculty following due approval procedure. Self study course is limited to one per semester.

**4.4.4 Industrial Project :** A candidate may be allowed to do industrial project at research organizations or industries with the prior permission from the Principal. A candidate can earn two credits for such industrial projects in that semester. The evaluation is based on continuous assessments only for a maximum of 100 marks based on the rubrics. This option shall be availed only once during the entire duration of the programme. Industries / organizations

may assign their project to a single candidate or to a group of candidates not exceeding 4 candidates in a group. It can be offered for a required number of hours in any one of the semesters during the entire programme. He / She shall submit the industrial project report along with attendance and completion certificate from the organization and shall attend the viva voce as per the schedule given from COE.

**4.4.5** The elective courses in the final year may be exempted if a candidate earns the required credits vide clause 4.4.1, 4.4.2, 4.4.3 and 4.4.4 by registering the required number of courses in advance. Maximum of two elective courses in a semester can be permitted to exempt in the final year of the respective programme.

**4.4.6** A candidate can earn a maximum of 30 credits through all one credit courses, off campus courses, industrial project and self study courses during the entire duration of the programme.

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

**4.5.1** A candidate has to earn the total number of credits specified in the curriculum of the respective programme of study in order to be eligible to obtain the degree. However, if the candidate wishes, then the candidate is permitted to earn more than the total number of credits prescribed in the curriculum of the candidate's programme. The total number of credits that a student can add/drop in a semester is limited to 6, subject to a maximum of 2 courses including Honours/ Minor degree courses.

**4.5.2** From the first to seventh semesters the candidates have the option of registering for additional elective/Honours courses or dropping of already registered additional elective/Honours courses within two weeks from the start of the semester. Add / Drop is only an option given to the candidates. ??(honours cannot be studied from first semester. Honours eligibility to be known after fourth semester only. Honours can be dropped out only for the ineligible students only.)

**4.6** Maximum number of credits the candidate can enroll in a particular semester cannot exceed 36 credits. However, this does not include the number of Re-appearance (U) and Withdrawal courses registered by the student for the appearance of Examination.

**4.7** The blend of different courses shall be so designed that the candidate at the end of the programme would have been trained not only in his / her relevant professional field but also would have developed to become a socially conscious human being.

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

### **5. DURATION OF THE PROGRAMME**

**5.1** A candidate is normally expected to complete the BE / BTech Degree programme in 8 consecutive semesters/4 Years (6 semesters/3 Years for lateral entry candidate), but in any case not more than 14 semesters/7 Years (12 semesters/6 Years for lateral entry candidate).

- 5.2** Each semester shall consist of a minimum of 90 working days including continuous assessment test period. The Head of the Department shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus for the course being taught.
- 5.3** The total duration for completion of the programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum duration specified in clause 5.1 irrespective of the period of break of study (vide clause 11) or prevention (vide clause 9) in order that the candidate may be eligible for the award of the degree (vide clause 15). Extension beyond the prescribed period shall not be permitted.

## **6. COURSE REGISTRATION FOR THE EXAMINATION**

- 6.1** Registration for the end semester examination is mandatory for courses in the current semester as well as for the arrear courses failing which the candidate will not be permitted to move on to the higher semester.
- 6.2** The courses dropped in earlier semesters can be registered in the subsequent semesters.
- 6.3** If a candidate is prevented from writing end semester examination of a course due to lack of attendance, the candidate has to attend the classes, when offered next, and fulfill the attendance requirements as per clause 8 and earn continuous assessment marks. If the course, in which the candidate has a lack of attendance, is an elective, the candidate may register for the same or any other elective course in the subsequent semesters and that will be considered as an attempt for the purpose of classification.
- 6.4** A candidate shall register for the additional courses for getting the Honours degree from fifth semester onwards.
- 6.5** Professional elective courses shall be selected in the specialized groups given as verticals. Students shall choose the courses from various Verticals as specified in the respective curriculum. A student can choose all the Professional Elective Courses either from one of the verticals or a combination of courses from more than one vertical in a semester.

## **7. ASSESSMENT AND EXAMINATION PROCEDURE FOR AWARDING MARKS**

- 7.1** The BE/BTech programmes consist of Theory Courses, Theory cum Practical courses, Practical courses, Comprehensive Test and Viva, Project Work, Industrial Training /Professional Skills Training, Internship/In-plant Training and Entrepreneurships/ Start ups. Performance in each course of study shall be evaluated based on (i) Continuous Assessments (CA) throughout the semester and (ii) End Semester Examination (ESE) at the end of the semester except for the courses which are evaluated based on continuous assessment only. Each course shall be evaluated for a maximum of 100 marks as shown below:

<b>Sl. No.</b>	<b>Category of Course</b>	<b>Continuous Assessment Marks</b>	<b>End Semester Examination Marks</b>
1.	Theory	40	60
2.	Theory cum Practical (The distribution of marks shall be decided based on the credit weightage assigned to theory and practical components.)	50	50
3.	Practical	60	40
4.	Professional Skills Training / Comprehensive Test & Viva / Entrepreneurships / Start ups / Mandatory Course/Industrial Training/ Universal Human Values / Yoga and Values for Holistic Development, Heritage of Tamils (HT)/ Tamils and Technology (TT) / Industrial Project / Mini Project	100	---
5.	Project Work I / Project Work II Phase I / Project Work II Phase II / Internships	50	50
6.	One credit Course	The distribution of marks shall be decided based on the credit weightage assigned	---
7.	All other Courses		

**7.2** Examiners for setting end semester examination question papers for theory courses, theory cum practical courses and practical courses and evaluating end semester examination answer scripts, project works, internships and entrepreneurship/start-ups shall be appointed by the Controller of Examinations after obtaining approval from the Principal.

### **7.3 Theory Courses**

For all theory courses out of 100 marks, the continuous assessment shall be 40 marks and the end semester examination shall be for 60 marks. However, the end semester examinations shall be conducted for 100 marks and the marks obtained shall be reduced to 60. The continuous assessment tests shall be conducted as per the schedule laid down in the academic schedule. The total of the continuous assessment marks and the end semester examination marks shall be rounded off to the nearest integer.

- 7.3.1** The assessment pattern for awarding continuous assessment marks shall be as follows:

Sl. No.	Type	Max. Marks	Remarks
1.	Test - I	20	Average of three tests (20 marks)
	Test - II	20	
	Test - III	20	
2.	Term Work & Self Learning: (Tutorial / Problem Solving / Simulation / Micro Project / Assignment / Seminar / Case Studies / Online courses / Industrial Visit /Any other activity relevant to the course )	15	Type of assessment is to be chosen based on the nature of the course and to be approved by Principal
3.	Others: Paper Presentation in Conference / Comprehension / Activity based learning / Class notes	05	To be assessed by the Course Teacher based on any one type.
Total		40	Rounded off to the one decimal place

However, the assessment pattern for awarding the continuous assessment marks may be changed based on the nature of the course and it is to be approved by the Principal.

- 7.3.2** A reassessment test or tutorial covering the respective test or tutorial portions may be conducted for those candidates who were absent with valid reasons (Sports or any other reason approved by the Principal).

- 7.3.3** The end semester examination for theory courses shall be for a duration of three hours and shall be conducted between November and January during odd semesters and between April and June during even semesters of every year.

#### **7.4 Theory cum Practical Courses**

For courses involving theory and practical components, the evaluation pattern as per the clause 7.1 shall be followed. Depending on the nature of the course, the end semester examination shall be conducted for theory and the practical components. The apportionment of continuous assessment and end semester examination marks shall be decided based on the credit weightage assigned to theory and practical components approved by Principal.

#### **7.5 Practical Courses**

For all practical courses out of 100 marks, the continuous assessment shall be for 60 marks and the end semester examination shall be for 40 marks. Every exercise / experiment shall be evaluated based on the candidate's performance during the practical class and the candidates' records shall be maintained.

**7.5.1** The assessment pattern for awarding continuous assessment marks for each course shall be decided by the course coordinator based on rubrics of that particular course, and shall be based on rubrics for each experiment with the prior approval from Head of the relevant department.

**7.5.2** The end semester examination shall be conducted for a maximum of 100 marks for duration of 3 hours and reduced to 40 marks. The appointment of examiners and the schedule shall be decided by with the prior approval from Head of the relevant department.

## **7.6 Project Work I /Project Work II Phase I / Project Work II Phase II**

**7.6.1** Project work shall be assigned to a single candidate or to a group of candidates not exceeding 4 candidates in a group. The project work is mandatory for all the candidates.

**7.6.2** The Head of the Department shall constitute review committee for project work. There shall be two assessments by the review committee during the semester. The candidate shall make presentation on the progress made by him/her before the committee.

**7.6.3** The continuous assessment and end semester examination marks for Project Work I/ Project Work II Phase I /Project Work II Phase II and the Viva-Voce Examination shall be distributed as below.

Continuous Assessment (Max. 50 Marks)						End Semester Examination (Max. 50 Marks)			
Zeroth Review		Review I (Max.. 20 Marks)		Review II (Max. 30 Marks)		Report Evaluation (Max. 20 Marks)	Viva - Voce (Max. 30 Marks)		
Rv. Com	Super visor	Review Committee (excluding supervisor )	Super visor	Review Committee (excluding supervisor)	Super visor	Exr. 1	Super visor	Exr.1	Exr.2
0	0	10	10	15	15	20	10	10	10

**7.6.4** The Project Report prepared according to approved guidelines and duly signed by the Supervisor shall be submitted to Head of the Department. The candidate(s) must submit the project report within the specified date as per the academic schedule of the semester. If the project report is not submitted within the specified date then the candidate is deemed to have failed in the Project Work and redo it in the subsequent semester.

**7.6.5** If a candidate fails to secure 50% of the continuous assessment marks in the project work, he / she shall not be permitted to submit the report for that particular semester and shall have to redo it in the subsequent semester and satisfy attendance requirements.

**7.6.6** The end semester examination of the project work shall be evaluated based on the project report submitted by the candidate in the respective semester and viva-voce examination by a committee consisting of two examiners and supervisor of the project work.

**7.6.7** If a candidate fails to secure 50 % of the end semester examination marks in the project work, he / she shall be required to resubmit the project report within 30 days from the date of declaration of the results and a fresh viva-voce examination shall be conducted as per clause 7.6.6.

**7.6.8** A copy of the approved project report after the successful completion of viva-voce examination shall be kept in the department library.

## **7.7 Industrial Training / Industrial Project:**

A student may optionally undergone Industrial training / industrial project only once in the entire duration of the programme.

### **Industrial Training:**

After completion of Industrial training, the candidate shall submit a brief report on the training undergone and a certificate obtained from the organization concerned. The evaluation will be made based on this report and a Viva-Voce Examination. A copy of the certificate (issued by the Organization) submitted by the candidate shall be attached to the mark list and sent to Controller of Examinations by the respective Head of the Department.

Continuous Assessment (Max. 100 Marks)		
Report Evaluation (Max. 40 Marks)	Viva - Voce (Max. 60 Marks)	
Review Committee	Guide	Review Committee
40	20	40

### **Industrial Project:**

This course shall be assigned to a single candidate or to a group of candidates not exceeding 4 candidates in a group. The Project Report prepared according to approved guidelines and duly signed by the Supervisor shall be submitted to Head of the Department. The candidate(s) must submit the project report within the specified date as per the academic schedule of the semester. The evaluation is based on continuous assessment (100-0-100) only for a maximum of 100 marks based on the rubrics. The marks distribution is given below.

Continuous Assessment (Max. 100 Marks)								
Zeroth Review		Review I (Max.. 20 Marks)		Review II Max.. 30 Marks)		Review III (Max. 50 Marks)		
						Report Evaluation (Max. 20 Marks)	Viva - Voce (Max. 30 Marks)	
Review Commi tee	Super visor	Review Committee (excluding supervisor)	Super visor	Review Committee (excluding supervisor)	Super visor	Review Committee	Super visor	Review Committee
0	0	10	10	15	15	20	10	20

If the project report is not submitted within the specified date then the registration of these courses for the candidate will be cancelled.

If a candidate fails to secure 50 % of the continuous assessment marks in these courses, he / she shall not be allowed to reappear for the same in the next semesters. For such candidates, the marks earned shall not be printed in grade sheet.

#### **7.8 Professional Skills Training**

Phase I training shall be conducted for minimum of 80 hours in 3<sup>rd</sup> semester vacation and during 4<sup>th</sup> semester. Phase II training shall be conducted for minimum of 80 hours in 4<sup>th</sup> semester vacation and during 5<sup>th</sup> semester. The evaluation procedure shall be approved by the board of the offering department and Principal.

#### **7.9 Comprehensive Test and Viva**

A candidate can earn 2 credits by successfully completing this course. The evaluation procedures shall be approved by the Principal.

#### **7.10 Entrepreneurships/ Start ups**

A start up/business model may be started by a candidate individually or by a group of maximum of three candidates during the programme vide clause 4.3.1. The head of the department concerned shall assign a faculty member as a mentor for each start up.

A review committee shall be formed by the Principal for reviewing the progress of the Start ups / Business models, innovativeness, etc. The review committee can recommend the appropriate grades for academic performance for the candidate(s) involved in the start ups. This course shall carry a maximum of two credits in fifth semester and shall be evaluated through continuous assessments for a maximum of 100 marks vide clause 7.1. A report about the start ups is to be submitted to the review committee for evaluation for each start up and the marks will be given to Controller of Examinations after getting approval from Principal.

#### **7.11 In-Plant Training**

Each candidate shall go for In-Plant training for a duration of minimum of two weeks during the entire programme of study and submit a brief report about the training undergone and a certificate issued from the organization concerned.

#### **7.12 Value Added Courses**

For all one credit courses out of 100 marks, the continuous assessment shall be 50 marks and the model examination shall be for 50 marks. Minimum of two continuous assessments tests shall be conducted during the one credit course duration by the offering department concerned. Model examination shall be conducted at the end of the course.

#### **7.13 Off Campus Course**

The Board of Studies will provide methodology for the evaluation of the online courses. The Board can decide whether to evaluate the online courses through continuous assessment and end semester examination or through end semester examination only. In case of credits earned through online mode from NPTEL / SWAYAM / a University / Other Agencies approved by Chairman, Academic Council, the credits may be transferred and grades shall be assigned accordingly.



#### **7.14 Self Study Course**

The member of faculty approved by the Head of the Department shall be responsible for periodic monitoring and evaluation of the course. The course shall be evaluated through continuous assessment and end semester examination. The evaluation methodology shall be the same as that of a theory / theory cum practical course.

#### **7.15 Audit Course**

A candidate may be permitted to register for specific course not listed in his/her programme curriculum and without undergoing the rigors of getting a 'good' grade, as an Audit course, subject to the following conditions.

The candidate can register only one Audit course in a semester starting from second semester subject to a maximum of two courses during the entire programme of study. Such courses shall be indicated as 'Audit' during the time of registration itself. Only courses currently offered for credit to the candidates of other branches can be audited.

A course appearing in the curriculum of a candidate cannot be considered as an audit course. However, if a candidate has already met the Professional Elective and Open Elective credit requirements as stipulated in the curriculum, then, a Professional Elective or an Open Elective course listed in the curriculum and not taken by the candidate for credit can be considered as an audit course.

Candidates registering for an audit course shall meet all the assessment and examination requirements (vide clause 7.3) applicable for a credit candidate of that course. Only if the candidate obtains a performance grade, the course will be listed in the semester Grade Sheet and in the Consolidated Grade Sheet along with the grade 'SC' (Successfully Completed). Performance grade will not be shown for the audit course.

Since an audit course has no grade points assigned, it will not be counted for the purpose of GPA and CGPA calculations.

#### **7.16 Mandatory Courses**

A candidate joined in first semester shall attend and complete a mandatory course namely Student Induction Program of duration three weeks at the beginning of first semester. The students shall complete three mandatory courses Environmental Science, Quantitative Aptitude – I and Quantitative Aptitude - II. No credits shall be given for mandatory courses and shall be evaluated through continuous assessment tests only vide clause 7.1 for a maximum of 100 marks each. Upon the successful completion, these courses will be listed in the semester grade sheet and in the consolidated grade sheet with the grade "SC" (Successfully Completed). Since no grade points are assigned, these courses will not be counted for the purpose of GPA and CGPA calculations.

#### **7.17 Universal Human Values (UHV), Yoga and Values for Holistic Development (YVHD), Heritage of Tamils (HT) and Tamils and Technology (TT)**

Courses YVHD shall be offered to all first year candidates of all BE/ BTech programmes to impart knowledge on yoga and human values. Course UHV shall be offered to all the second year BE/ BTech students. These courses shall carry a maximum of 100 marks each and shall be evaluated through continuous assessment tests only vide clause 7.1. The candidate(s) can earn 2 credits for UHV and 1 credit each for YVHD, HT and TT by successfully completing these courses. Three continuous assessment tests will be conducted and the average marks of best two will be taken for the calculation of grades.

## **8. REQUIREMENTS FOR COMPLETION OF A SEMESTER**

- 8.1** A candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester and permitted to appear for the examinations of that semester.
- 8.1.1** Ideally, every candidate is expected to attend all classes and secure 100 % attendance. However, a candidate shall secure not less than 80 % (after rounding off to the nearest integer) of the overall attendance taking into account the total number of working days in a semester.
- 8.1.2** A candidate who could not satisfy the attendance requirements as per clause 8.1.1 due to medical reasons (hospitalization / accident / specific illness) but has secured not less than 70 % in the current semester may be permitted to appear for the current semester examinations with the approval of the Principal on payment of a condonation fee as may be fixed by the authorities from time to time. The medical certificate needs to be submitted along with the leave application. A candidate can avail this provision only once during the entire duration of the degree programme.
- A candidate who could not satisfy the attendance requirements as per clause 8.1.1 due to his/her entrepreneurship/ start ups activities, but has secured not less than 60 % in the current semester can be permitted to appear for the current semester examinations with the recommendation of review committee and approval from the Principal.
- 8.1.3** In addition to clause 8.1.1 or 8.1.2, a candidate shall secure not less than 60 % attendance in each course.
- 8.1.4** A candidate shall be deemed to have completed the requirements of study of any semester only if he/she has satisfied the attendance requirements (vide clause 8.1.1 to 8.1.3) and has registered for examination by paying the prescribed fee.
- 8.1.5** Candidate's progress is satisfactory.
- 8.1.6** Candidate's conduct is satisfactory and he/she was not involved in any indisciplined activities in the current semester.
- 8.2.** The candidates who do not complete the semester as per clauses from 8.1.1 to 8.1.6 except 8.1.3 shall not be permitted to appear for the examinations at the end of the semester and not be permitted to go to the next semester. They have to repeat the incomplete semester in next academic year.
- 8.3** The candidates who satisfy the clause 8.1.1 or 8.1.2 but do not complete the course as per clause 8.1.3 shall not be permitted to appear for the end semester examination of that course alone. They have to repeat the incomplete course in the subsequent semester when it is offered next.

## **9. REQUIREMENTS FOR APPEARING FOR END SEMESTER EXAMINATION**

- 9.1** A candidate shall normally be permitted to appear for end semester examination of the current semester if he/she has satisfied the semester completion requirements as per clause 8, and has registered for examination in all courses of that semester. Registration is mandatory for current semester examinations as well as for arrear examinations failing which the candidate shall not be permitted to move on to the higher semester.
- 9.2** When a candidate is deputed for a National / International Sports event during End Semester examination period, supplementary examination shall be conducted for such a candidate on return after participating in the event within a reasonable period of time. Such appearance shall be considered as first appearance.
- 9.3** A candidate who has already appeared for a course in a semester and passed the examination is not entitled to reappear in the same course for improvement of letter grades / marks.

## **10. PROVISION FOR WITHDRAWAL FROM EXAMINATIONS**

- 10.1** A candidate may, for valid reasons, be granted permission to withdraw from appearing for the examination in any regular course or all regular courses registered in a particular semester. Application for withdrawal is permitted only once during the entire duration of the degree programme.
- 10.2** The withdrawal application shall be valid only if the candidate is otherwise eligible to write the examination (vide clause 9) and has applied to the Principal for permission prior to the last examination of that semester after duly recommended by the Head of the Department.
- 10.3** The withdrawal shall not be considered as an appearance for deciding the eligibility of a candidate for First Class with Distinction/First Class.
- 10.4** If a candidate withdraws a course or courses from writing end semester examinations, he/she shall register the same in the subsequent semester and write the end semester examinations. Withdrawal of a course or courses shall not be permitted in the final semester of the programme in which the candidate is studying.

## **11. PROVISION FOR BREAK OF STUDY/TRANSFER FROM OTHER INSTITUTIONS**

### **11.1 PROVISION FOR BREAK OF STUDY**

- 11.1.1** A candidate is normally permitted to avail the authorised break of study under valid reasons (such as accident or hospitalization due to prolonged ill health or any other valid reasons) and to rejoin the programme in a later semester. He/She shall apply in advance to the Principal, through the Head of the Department, stating the reasons therefore, in any case, not later than the last date for registering for that semester examination. A candidate is permitted to avail the authorised break of study only once during the entire period of study for a maximum period of one year. However, in extraordinary situation the candidate may apply for additional break of study not exceeding another one year by paying prescribed fee for the break of study.

- 11.1.2** The candidates permitted to rejoin the programme after break of study / prevention due to lack of attendance shall be governed by the rules and regulations in force at the time of rejoining.
- 11.1.3** The candidates rejoining in new Regulations shall apply to the Principal in the prescribed format through Head of the Department at the beginning of the readmitted semester itself for prescribing additional/equivalent courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.
- 11.1.4** The total period of completion of the programme reckoned from the commencement of the semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5 irrespective of the period of break of study in order to qualify for the award of the degree.
- 11.1.5** If any candidate is prevented for want of required attendance, the period of prevention shall not be considered as authorized break of study.
- 11.1.6** If a candidate has not reported to the college for a period of two consecutive semesters without any intimation, the name of the candidate shall be deleted permanently from the college enrollment. Such candidates are not entitled to seek readmission under any circumstances.

## **11.2 TRANSFER FROM OTHER INSTITUTIONS**

The candidate who have transferred from other institutions from other institutions can be allowed to join in any of the semester in all programmes. Such candidates rejoining in new Regulations shall apply to the Principal in the prescribed format through Head of the Department at the beginning of the readmitted semester itself for prescribing additional/equivalent courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.

## **12. PASSING REQUIREMENTS**

- 12.1** A candidate who secures not less than 50 % of total marks (continuous assessment and end semester examination put together) prescribed for the course with a minimum of 45 % of the marks prescribed for the end semester examination in all category of courses vide clause 7.1 except for the courses which are evaluated based on continuous assessment only shall be declared to have successfully passed the course in the examination.
- 12.2** A candidate who secures not less than 50 % in continuous assessment marks prescribed for all category of courses vide clause 7.1 which are evaluated based on continuous assessment only shall be declared to have successfully passed the course. If a candidate secures less than 50% in the continuous assessment marks, he / she shall have to re-enroll for the same in the subsequent semester and satisfy the attendance requirements.
- 12.3** For a candidate who does not satisfy the clause 12.1, the continuous assessment marks secured by the candidate in the first attempt shall be retained and considered valid for subsequent attempts. However, from the fourth attempt onwards the marks scored in

the end semester examinations alone shall be considered, in which case the candidate shall secure minimum 50 % marks in the end semester examinations to satisfy the passing requirements. (1+2 attempts?)

### 13. REVALUATION OF ANSWER SCRIPTS

A candidate shall apply for a photocopy of his / her semester examination answer script within a reasonable time from the declaration of results, on payment of a prescribed fee by submitting the proper application to the Controller of Examinations. The answer script shall be pursued and justified jointly by a faculty member who has handled the course and the course coordinator and recommended for revaluation. Based on the recommendation, the candidate can register for revaluation through proper application to the Controller of Examinations. The Controller of Examinations will arrange for revaluation and the results will be intimated to the candidate concerned. Revaluation is permitted only for Theory courses and Theory cum Practical courses where end semester examination is involved.

### 14. AWARD OF LETTER GRADES:

**14.1** For all the passed candidates, the relative grading principle is applied to assign the letter grades for the theory courses and only theory portion of theory cum practical courses in the regular curriculum. If the students' strength is greater than 30, the relative grading method shall be adopted.

Marks / Examination Status	Letter Grade	Grade Point
Based on the relative grading	O (Outstanding)	10
	A+ (Excellent)	9
	A (Very Good)	8
	B+ (Good)	7
	B (Average)	6
	C (Satisfactory)	5
Less than 50	U (Reappearance)	0
Successfully Completed	SC	0
Withdrawal of Course	W	-
Absent	AB	-
Shortage of Attendance in a course	SA	-

The Grade Point Average (GPA) is calculated using the formula:

$$\text{GPA} = \frac{\sum[(\text{course credits}) \times (\text{grade points})] \text{ for all courses in the specific semester}}{\sum(\text{course credits}) \text{ for all courses in the specific semester}}$$

The Cumulative Grade Point Average (CGPA) is calculated from first semester (third semester for lateral entry candidates) to final semester using the formula

$$\text{CGPA} = \frac{\sum[(\text{course credits}) \times (\text{grade points})] \text{ for all courses in all the semesters so far}}{\sum(\text{course credits}) \text{ for all courses in all the semesters so far}}$$

The GPA and CGPA are computed only for the candidates with a pass in all the courses.

The GPA and CGPA indicate the academic performance of a candidate at the end of a semester and at the end of successive semesters respectively.

A grade sheet for each semester shall be issued containing Grade obtained in each course, GPA and CGPA.

A duplicate copy, if required can be obtained on payment of a prescribed fee and satisfying other procedure requirements.

**Withholding of Grades:** The grades of a candidate may be withheld if there is a disciplinary case pending against him/her or for any other reason.

- 14.2** For all the theory courses, if the number of students who have passed the course is less than 30, then absolute grading shall be followed with the grade range as specified in the Table.

For the Project Work / Internship, Laboratory courses, courses specified under clause 4.4 and the courses which are evaluated by continuous assessment methods without end semester examination, absolute grading procedure shall be followed as given in the Table below irrespective of the number of students who have passed the course.

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

**14.3 NPTEL COURSES**

The marks obtained by a student in online course through NPTEL/ SWAYAM courses shall be converted to an equivalent grade. The corresponding range of marks for each grade shall be followed for these courses is tabulated as given above.

Grade	O	A+	A	B+	B	C	U
Range of marks	90-100	80-89	70-79	60-69	50-59	40-49	<40

- 14.4** Customized grading system shall be followed all category of courses with the recommendation by the concerned Board of Studies and prior approval from Principal and Academic Council.

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

A candidate shall be declared to be eligible for the award of the BE / BTech Degree provided the candidate has

- i. Successfully completed all the courses under the different categories, as specified in the regulations.
- ii. Successfully gained the required number of total credits as specified in the curriculum corresponding to the candidate's programme within the stipulated time (vide clause 5).
- iii. Successfully passed any additional courses prescribed by the respective Board of Studies whenever readmitted under regulations other than Regulations 2024 (vide clause 11.3)
- iv. No disciplinary action pending against him / her.

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

### **16.1 First Class with Distinction:**

A candidate who qualifies for the award of the degree (vide clause 15) and 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 for lateral entry candidates) in the **First Appearance** within eight consecutive semesters (six consecutive semesters for lateral entry candidates) excluding the authorized break of study (vide clause 11) after the commencement of his / her study.
- Withdrawal from examination (vide clause 10) shall not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50

### **16.2 First Class:**

A candidate who qualifies for the award of the degree (vide clause 15) and 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 (six semesters for lateral entry candidates) within six consecutive semesters (eight consecutive semesters for lateral entry candidates) excluding authorized break of study (vide clause 11) after the commencement of his / her study.
- Withdrawal from the examination (vide clause 10) shall not be considered as an appearance.
- Should have secured a CGPA of not less than 6.50

**16.3 Second Class:**

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

**16.4** A candidate who is absent for end semester examination in a course / project work after having registered for the same shall be considered to have appeared for that examination for the purpose of classification.

**16.5 Honours Degree**

**16.5.1 Eligibility:** A candidate who qualifies for the award of the degree (vide clause 15) and who satisfies the following conditions shall be declared to have earned the BE/BTech degree with Honours (vide clause 15 and clause 4.2.2):

- Should have passed the examination in all the courses of all the eight semesters (six semesters for lateral entry candidates) in the **First Appearance** within eight consecutive semesters (six consecutive semesters for lateral entry candidates) excluding the authorized break of study (vide clause 11) after the commencement of his / her study.
- Withdrawal from examination (vide clause 10) shall not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50 from third semester onwards.

**16.5.2 First Class with Distinction:**

A candidate who qualifies for the award of the degree (vide clause 15) and 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 for lateral entry candidates) in the **First Appearance** within eight consecutive semesters (six consecutive semesters for lateral entry candidates) excluding the authorized break of study (vide clause 11) after the commencement of his / her study.
- Withdrawal from examination (vide clause 10) shall not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50

**16.6 Minor Degree**

A student who fulfils the criteria as prescribed in 'Minor Degree' as per Clause 4.2.3, shall be declared to **have** successfully completed the degree programme with 'Minor' and shall be classified appropriately as per Clause 16.5.2.



**17. MALPRACTICES IN TESTS AND EXAMINATIONS**

If a candidate indulges in malpractice in any of the tests or end semester examinations, he/she shall be liable for punitive action as per the examination rules prescribed by the college from time to time.

**18. AMENDMENTS**

Notwithstanding anything contained in this manual, the Kongu Engineering College through the Academic council of the College, reserves the right to modify/amend without notice, the Regulations, Curricula, Syllabi, Scheme of Examinations, procedures, requirements, and rules pertaining to its BE / BTech programme.

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