



# MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING



**An Autonomous Institution**

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Recognized by UGC 12(B) & 2(f) Act | An ISO: 9001-2015 Certified Institution | Accredited by NBA, NAAC with "A" Grade

## **AUTONOMOUS REGULATIONS 2024 B.E./B.TECH. Programme**

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## **VISION**

“To be an eminent institute for higher education and research through innovative teaching-learning and sustainable practices to meet the industrial and societal needs”.

## **MISSION**

To impart quality technical education by transforming students into professionally competent technocrats.

To nurture the students in all-round sustainable development, for career and self employability.

To inculcate critical thinking, professional ethics with civic responsibilities by instilling values.

## **Quality Policy**

MSAJCE committed to create quality professionals through innovative teaching, research, industrial relations and nurturing human values & ethics to meet the industrial and societal needs on continual improvement basis.



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**REGULATIONS 2024****CHOICE BASED CREDIT SYSTEM**

Common to all

**B. E. / B. Tech.**

Full-Time Programmes

This Regulation is applicable to all the students admitted in B.E / B.Tech. Programmes at Mohamed Sathak A.J. College of Engineering affiliated to Anna University and approved by AICTE and UGC.

**1. PRELIMINARY DEFINITIONS AND NOMENCLATURE**

In these Regulations, unless the context otherwise requires:

- i) **Programme:** means Degree Programme, that is B.E. / B.Tech. Degree Programme.
- ii) **Discipline:** means specialization or branch of B.E. / B.Tech. Degree Programme, like Civil Engineering, Information Technology, etc
- iii) **Course:** means a theory or practical subject that is normally studied in a semester, like Mathematics, Physics, etc.
- iv) **Head – Academics:** means the authority of the autonomous institute who is responsible for all academic activities of the Academic Programmes for implementation of relevant rules of this Regulations pertaining to the Academic Programmes.
- v) **Chairperson:** means the Head of the Faculty.
- vi) **Head of the Institution:** means the Principal of the College.
- vii) **Head of the Department (HoD):** means the Head of the Department concerned.
- viii) **Controller of Examinations (CoE):** means the authority of the Autonomous Institute who is responsible for all Examinations related activities. By default the Principal of the institute is the Controller of Examination.
- ix) **University:** means ANNA UNIVERSITY, Chennai.

**2. ADMISSION**

Candidates seeking admission to the first semester of the eight semester B.E./ B.Tech. degree programme, should have passed the Higher Secondary Examinations of (10+2) Curriculum (Academic stream) prescribed by the Government of Tamil Nadu with Mathematics, Physics and Chemistry as three of the four subjects of study under Part-III or any examination of any other University 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.

## 2.1 Lateral Entry Admission

- (i) The candidates who possess the Diploma in Engineering / Technology awarded by the State Board of Technical Education, Tamil Nadu or its equivalent are eligible to apply for Lateral entry admission to the third semester of B.E. / B.Tech., as per the norms of Government of Tamil Nadu, AICTE and UGC

(OR)

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

## 3. PROGRAMMES OFFERED

The Programmes offered under various faculty are as follows

- Faculty of Civil Engineering
  - ❖ B.E – Civil Engineering
  - ❖ M.E – Structural Engineering
- Faculty of Mechanical Engineering
  - ❖ B.E – Mechanical Engineering
  - ❖ B.E – Mechanical Engineering (Working Professional)
  - ❖ Ph.D – Mechanical Engineering
- Faculty of Electrical and Electronics Engineering
  - ❖ B.E – Electrical and Electronics Engineering
- Faculty of Electronics and Communication Engineering
  - ❖ B.E – Electronics and Communication Engineering
  - ❖ B.Tech. – Electronics Engineering w / s in VLSI Design & Technology
  - ❖ B.Tech. – ECE w / s in Advance Communication Technology
- Faculty of Computer Science & Information Technology
  - ❖ B.E – Computer Science and Engineering
  - ❖ B.E – CSE w/s in Artificial Intelligence and Machine Learning
  - ❖ B.E – CSE w/s in Cyber Security
  - ❖ B.E – Computer Science and Engineering (Working Professional)
  - ❖ B.Tech – Information Technolog
  - ❖ B.Tech – Artificial Intelligence and Data Science
  - ❖ B.Tech – Computer Science and Business System
  - ❖ M.E - Computer Science and Engineering

#### 4. STRUCTURE OF PROGRAMMES

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

##### 4.1 Categorization of Courses

**Humanities, Social Sciences and Management Courses (HSMC)** include courses like Professional English, Communication skills etc.

**Basic Sciences Courses (BSC)** include courses like Mathematics, Physics, Chemistry, Biology, Environmental Science etc.

**Engineering Sciences Courses (ESC)** include courses like Engineering Practices, Engineering Graphics, Basics of Civil / Mechanical / Electrical Engineering etc.

**Professional Core Courses (PCC)** include core courses relevant to the chosen specialization / branch.

**Professional Elective Courses (PEC)** include elective courses relevant to the chosen specialization / branch. Professional Elective courses are offered under verticals (Specialisation groups)

**Open Elective Courses (OEC)** include courses offered by a branch to other branches, from the list specified in the respective curriculum of the B.E. / B. Tech Programmes.

**Employability Enhancement Courses (EEC)** include Project Work, Internship, Seminars, Personality Development Courses, Placement training Industrial / Practical Training etc.

**Mandatory courses (MC)** include courses such as Languages, Wellbeing, etc.,

##### 4.2 Personality and Character Development (PCD)

It is offered in I & II semester as noncredit course as per the norms of AICTE and Anna University.

###### 4.2.1 Induction Programme - Universal Human Value - I & Universal Human Value - II

- Induction Programme is mandatory for the students pursuing the Undergraduate Programme.
- The students who have successfully completed the Induction Programme shall be certified by the Head of the Institution.
- The completion of the Induction Programme shall be printed in the Grade Sheet as “COMPLETED”.
- In the case of students who have got admitted later and those who have not attended the Induction Programme at the time of joining the degree programme, it shall be conducted later and on completion, it shall be recorded in the grade sheet.
- No fee will be charged towards the conduct of the Induction Programme and for including in the STATEMENT OF GRADES for the successful completion of the Induction Programme.

### 4.3 Number of courses per semester

The curriculum in each semester shall normally have a blend of theory courses, theory with lab components. The maximum credits not to exceed 25 per semester. Each Employability Enhancement Course may have credits assigned as per clause 4.4

### 4.4 Credit Assignment

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

Contact period per week	Credits
1 Lecture Period	1
1 Tutorial Period	1
2 Laboratory Periods (also, for EEC courses like Seminar, Project Work, Case study etc.)	1

### 4.5 Industrial Training / Industrial Internship

All the students must undergo Internship in summer vacation of fourth and sixth semester (Two semesters). The training has to be undergone continuously for a period of at least two weeks minimum in an organization. The students have to submit the internship report to the Head of the department and the evaluation will be conducted in the upcoming end-semester examination.

The students may undergo an Internship at a Research Organization / University / Industry (after due approval from the Head of the Institution) for the period prescribed in the curriculum during the summer vacation, in lieu of Industrial training. Attendance Certificate mentioning the period of Industrial Training / Internship must be signed by the competent authority of the industry, as per the format provided by the Head-Academics and shall be submitted to the Head of the Institution. The attendance certificate shall be forwarded to the COE, by the Head of the department for processing results.

The following framework is proposed to give academic credit for the internship undergone by the students as part of the programme.

- ❖ A mandatory 2 credits of Internship will be included in the CGPA calculation.
- ❖ One credit is equivalent to a minimum of two weeks of internship / training.
- ❖ Any student who attends more than two credits of internship excess credit may be included in the grade sheet but it will not be considered for CGPA calculation
- ❖ 1 Week (40 Hours) of Internship = 0.5 credit.
- ❖ All the students have to undergo six months industrial training in semester VIII as a mandatory requirement as per the norms of affiliating University and AICTE to receive the degree.

#### 4.6 Industrial Visit

Every student is required to go for at least one Industrial Visit per semester starting from the second year of the programme. The Training and Placement department & HoD of the concern department shall ensure that necessary arrangements are made in this regard. All the students have to submit the industrial visit report to the Head of the department.

#### 4.7 Self-Learning Courses

Students can register for online learning Courses offered by premier institutions like IITs, IISc, Central / State funded Universities which are in the top 20 positions in the latest NIRF ranking, Universities abroad in top 500 in QS ranking, National/State funded research institutions/laboratories, Reputed companies (manufacturing or software) related to the programme, and Reputed companies involved in transfer of knowledge provided the knowledge transferring company is a spinoff from an Engineering/Technology practicing Industry and sharing the work experience of the respective industry, etc. through online / Hybrid platform (NPTEL / GIAN / CCNA / ORACLE / ANSYS / LABVIEW / MOOCS / COURSERA / ALTAIR / RPA / CODE TANTRA, etc.) suggested by the concerned Board of Studies (BoS). The Head of the Institution shall form a three-member committee comprising of the HoD of the concern department, a faculty member from the department of the students and HoD of any other branch of the Institution to ensure that the student has not studied such courses and would not repeat it again as Professional Core / Professional Elective / Open Elective courses. The marks/credits earned by the student shall be transferred based on the decision of a committee constituted by the head of institution.

**Note: The student can replace professional / open elective courses subject for their self-learning courses to a maximum of 6 credits for CGPA calculation for the entire duration of degree programme and additional credits earned if any which will be included in their grade sheet but it will not be considered for CGPA calculation.**

#### 4.8 Audit Courses

The student may optionally study Audit Courses prescribed by the BoS and it will be mentioned in the Grade Sheet. However, it will not be considered for the computation of CGPA. It is mandatory for all the students to complete the course to get the Degree certificate as per the norms of UGC / AICTE / Anna University.

#### 4.9 B.E. / B. Tech. (Hons) and B.E. / B. Tech. minor with specialisation in another discipline.

##### (i) B.E / B.Tech. (Hons.)

- a. The students should have taken additional courses from a specified group of Professional Electives (vertical) or from any of the verticals of the same programme and earned a minimum of 18 credits.

- b. Should have passed all the courses prescribed in the curriculum and additional courses in the first attempt.
- c. Should have earned a minimum of 7.50 CGPA taking into account of all the courses prescribed in the curriculum and additional courses.

**(ii) B.E./B.Tech. Minor with specialisation in another discipline**

The student should have earned additionally a minimum of 18 credits in any one of the verticals offered from Engineering Disciplines / Science and Humanities / Management.

- a. For these 18 credits students can optionally enroll and study a maximum of 6 credits in online mode from SWAYAM-NPTEL platform (in addition to the two online courses permitted for courses of curriculum), as approved by the Head of the Institution.
- b. **B.E/ B.Tech. (Hons.) and B.E./B.Tech. (Minor) with specialisation in another discipline will be optional for students and shall be permitted to select any one of them only.**

**4.9.1** For the categories 4.9 (i) the students, including Lateral Entry, shall be permitted to register for the courses from Semester V onwards provided the students have earned a minimum CGPA of 7.50 until Semester III and have cleared all the courses in the first attempt.

**4.9.2** For the category 4.9 (ii) , the students, including Lateral Entry, 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.

**4.9.3** B.E/B.Tech. (Hons.) or B.E./ B.Tech. (Minor) shall be offered by the Department irrespective of the number of students enrolled.

**4.9.4** If a student decides not to opt for Honours, after completing certain number of additional courses, such additional courses studied shall be considered instead of the Professional Elective courses which are part of the curriculum.

**4.9.5** 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 grade sheet however, they will not be considered for calculation of CGPA and the same shall be indicated in a foot note appropriately.

**4.9.6** If the student has failed in the additional courses or faced shortage of attendance, it will not be printed in the grade sheet and will not be considered for CGPA calculation and classification of degree.

**4.9.7** If a student decides not to opt for Minor, after completing certain number of courses, the additional courses studied shall be considered instead of Open Elective courses which are part of the curriculum.



**4.9.8** 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 grade sheet, however, it will not be considered for calculation of CGPA and the same shall be indicated in a foot note appropriately.

**4.9.9** If the student has failed in the additional courses or faced shortage of attendance, he/she will not be printed in the grade sheet and will not be considered for CGPA calculation and classification of degree.

**4.9.10** The student has to enroll for these additional courses separately and pay a tuition fee for studying these six additional courses and pay additional exam fee.

#### **4.10 Medium of Instruction**

The medium of instruction is English for all courses, examinations, Seminar presentations and Project Work.

#### **4.11 Employability Enhancement Courses**

Employability Enhancement Course (EEC) are offered to the candidates to promote and enhance their technical and **skill-based knowledge to increase their employability**. The students must undergo Employability Enhancement Course from the third semester to the seventh semester. The Employability Enhancement Course a choice-based course to obtain practical and industrial-specific knowledge. it will be included in their grade sheet and not considered for CGPA calculation.

<b>Category</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
Laboratory Course	0	0	4	2
	0	0	2	1
Theory integrated Laboratory Course	1	0	2	2

These courses may be offered with the support of the identified firms / companies / trained person of the institute and with one course coordinator per course and a mentor from the firm.

**4.12 Mandatory Courses:** The following courses are offered as mandatory noncredit courses.

##### **i. Industry Oriented Professional Development Courses / Technology Center Courses / Value Added Courses:**

The courses designed in collaboration with the industry / research organizations / higher learning institutions shall be offered by the department to the students from III to VII semester. It is choice based mandatory noncredit course. If the student qualifies in the certification exam conducted by the industry / firm then the course will be listed in the grade sheet. If the student fails in the course, it will not

be listed in the grade sheet. Separate course fee need to be paid to the institute to offer this course. It will not be considered for CGPA calculation.

### ii. Language Elective

The students may learn any one of the languages provided by the institution (Hindi / German / Japanese / French) in III & IV semester. Successful completion of the end-semester examination / Passing in National (NPTEL / UDEMY) or International level examination conducted by competent authority will be listed in the grade sheet and not considered for CGPA calculations.

### iii. Life Skills and Personality Development, Employability and Skill Enhancement I & II

This courses are offered from IV to VI semester to cater to the needs of students and to improve the soft skills, aptitude, reasoning and quantitative abilities. It carries 100 marks, evaluated through internal assessments 40 marks and external assessment 60 marks. The internal evaluation is based on two tests and activity conducted by Placement and Training Cell (PTC) of the institute. The end semester examination is conducted for 60 marks. The Head of the Institution shall form a three-member committee with members as Head – Training and Placement, a senior faculty member and industry representative will evaluate the end semester examination and recommend the qualified students to the controller of the examination, which will be listed in the grade sheet or the student should qualify in the certification exam conducted by the competent authority (AMCAT / Hacker rank / Geotag), then the course will be listed in the grade sheet. If the student fails to secure pass mark, he / she has to reappear for the certification exam.

### iv. NSS / NCC / NSO / YRC / Club Activity / YOGA / Social Activity / Fine Arts

All the students shall enroll, on admission, in any one of the activity (NCC / NSS / NSO / YRC / Club activities / YOGA / Social Activity / Fine Arts etc.,) and undergo training from semester II to Semester VI. Activity Programme in line with the AICTE / UGC / Anna University guidelines are provided. The following activities are included for the students and they need to fulfil the requirements for getting their degree.

**Club Activities:** Every student who is admitted to the UG programme shall join in the club activities as per their choice. It is mandatory for the student to enroll themselves in at least one / two clubs.

Technical Related Clubs	Service Oriented Clubs	Skill Building Clubs	Hobbies Related Clubs
Coding Club	ECO and Swatch Bharat Club	English Language & Literature Club	Fine Arts Clubv
Robotics Club	Health & Yoga Club	Foreign Language Club	Campus Radio
Cyber Club	Disaster Management & Safety Club	Tamil Ilakkiya Mandram	Agriculture & Farming Club
App development Club		Science Club	Photography Club
Automobile Club	YRC / Red Ribbon Club	Standard Code Club	
Energy Club		Standard Code Club	Maths Club

**Green Campus:** This institute is committed to contributing towards the implementation of Green Campus as part of Sustainable Development Goals (SDG). Under this scheme, any two of the major activities have to be adhered to by the students. Interested student who is admitted to this institute will volunteer himself / herself in these activities (i) Waste management (ii) Rainwater harvesting (iii) Tree Plantation.

**NCC/NSS/YRC/NSO/Social service activities**

All students should enroll, on admission, in any one of the activity which are listed below.

S. No.	Activity Head	Minimum Duration		Maximum Points / Activity
		Weeks	Hours	
1	Helping local schools to achieve good results and enhance their enrolment in Higher / Technical / Vocational education in adopted village (NSS, UBA & YRC)	2	80	20
2	Preparing an actionable business proposal for enhancing the village income.	2	80	20
3	Developing Sustainable Water Management System.	2	80	20
4	Tourism promotion through Innovative approaches.	2	80	20
5	Promotion of appropriate technologies / Rural Development Projects.	2	80	20
6	Reduction in energy consumption.	2	80	20
7	To upskill rural population.	2	80	20
8	Facilitating 100% digitized money transactions.	2	80	20
9	Setting of the information imparting club for women leading to contribution in social and economic issues.	2	80	20
10	Automation of local activities.	2	80	20
11	Spreading public awareness under rural outreach programme.	2	80	20
12	Contribution to any national level initiative of the Government of India. for e.g. Digital India. Skill India, Swachh Bharat Internship etc.	2	80	20
13	National Sports Organization (NSO) Will have sports, Games, Drills and Physical exercises.	2	80	20
14	National Cadet Corps (NCC) - 20 parades.	-	-	20

The students shall undergo training for the specified number of hours as specified in the relevant

programmes as per the SDG defined by the AICTE.

1. Any time during the weekends, semester holidays, based on the interest and convenience of the students from semester II to semester VI with prior approval of Head of the Institution.
2. Activity Points (non-credit) have no effect on CGPA and shall not be considered for the classification of the degree.
3. The Activity points earned shall be reflected on the student's Grade Sheet.
4. Students who enroll and take active participation in any one of the listed activities for 80 hours and participate in at least one event / programme will be given a certificate by the Head of the Institution and a copy of the same shall be forwarded to the Controller of Examinations for the purpose of record and scrutiny.
5. No fee shall be charged for all these activities.

**In case students fail to earn the prescribed activity points, the Eighth Semester Grade Sheet shall be issued only after earning the required activity points. Students shall be admitted for the award of a degree only after the release of the Eighth Semester Grade Sheet.**

**Apart from the above activities / courses, the students can choose any of the following activities (i to iii) also.**

- i. Innovative Project:** An innovative project that can be taken up by a group of students (Maximum of three). It shall be for National / International level project design and development contests conducted by reputed institutions / organizations (NIRF Ranking within 200) or projects related to entrepreneurship / start-ups. The students can take up this with the prior approval of the Head of the Institution through the HoDs. If the student won the prize it will be listed in the grade sheet but not considered for CGPA calculation.
- ii Comprehensive Engineering Aptitude:** The students can gain a comprehensive understanding of their field of study in Engineering and Science. If the student qualified in the Graduate Aptitude Test in Engineering (GATE) examination then it will be listed in the grade sheet but not considered for CGPA calculation.
- iii Skill development course:** The student will gain hands-on experience in skill development courses such as PMKVY / KARMA / List of spoken tutorial courses approved by Head-Academics to equip themselves to meet the industry / societal needs. If the student qualified in the certification exam conducted by the skill development organization, then the course will be listed in the grade sheet. If the student fails in the course, it will not be listed in the grade sheet.

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

- 5.1** A student is normally expected to complete the B.E. / B.Tech. Programme in 8 semesters (four academic years) but in any case, not more than 14 semesters (Seven academic years) for HSC (or equivalent) students and not more than 12 semesters (Six academic years) for Lateral Entry students.

**5.2** Each semester shall normally consist of 85 working days (75 days for academics + 10 days for Mandatory courses / Training) or 540 periods of 50 minutes each (excluding assessment periods). The Head of the Institution shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus and they teach the full content of the specified syllabus for the course being taught.

**5.3** The Head of the Department may conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. Every student should maintain the 75% of attendance in each subject. The following method shall be used to calculate the percentage of attendance.

$$\% \text{ of Attendance} = \frac{\text{Total periods attended in all the courses}}{\text{No. Periods handled by the faculty}} \times 100$$

The End Semester Examination will normally follow immediately after the last working day of the semester as per the academic schedule prescribed from time to time.

**5.4** 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 (i) irrespective of the period of break of study (vide clause 18) or prevention in order that the candidate may be eligible for the award of the degree (vide clause 16). Extension beyond the prescribed period shall not be permitted.

## **6.0 COURSE REGISTRATION**

**6.1** Each student has to register for all courses to be undergone in the curriculum of a particular semester. (With the facility to drop courses to a maximum of 6 credits (vide clause 6.2). The courses dropped in earlier semesters can be registered in the subsequent semesters when offered. The registration details of the student shall be approved by the Head of the Institution and forwarded to the Controller of Examinations. This registration is for undergoing the course as well as for writing the End Semester Examinations.

The courses that a student registers in a semester includes

- i) Courses of the current semester (including Mandatory courses)
- ii) Courses dropped in the lower semesters
- iii) Course(s) in which he / she has not been permitted to appear for the end semester examinations for want of the minimum required attendance, if such courses are offered in that semester (vide clause 7)
- iv) Course(s) in which he / she has failed and required to reappear for the end semester examinations, carrying forward the internal assessment marks earned in the last attempt.

**6.1.1 Course Registration Confirmation:** Every student shall enroll for the course of the succeeding semester before the end of the current semester. However, the student shall confirm the enrolment by registering for the courses within the first five working days after the commencement of the concerned semester

**6.1.2 Elective Course Minimum Strength:** Elective courses shall be offered by the department, a minimum of 10 students register for that course, subject to the approval of the Head of the Department.

**6.1.3** After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Internal Assessment marks to appear for the End Semester examination.

**6.1.4** The maximum number of credits that can be registered in a semester is 36. However, this does not include the number of Re-appearance (RA) and Withdrawal (W) courses registered by the student for the appearance end semester examination.

## **6.2 Flexibility to drop courses**

**6.2.1** A student has to earn the total number of credits specified in the curriculum of the respective Programme of study in order to be eligible to obtain the degree.

**6.2.2** From the second to final semesters, the student has the option of dropping existing courses in a semester during their registration. Total number of credits of such courses shall not exceed 6 per semester. The student is permitted to drop the course(s) within 30 days of the commencement of the academic schedule.

**6.2.3** From the V to VIII semesters, the student has the option of registering for additional courses in a semester. With regard to enrolling for B.E. / B. Tech. (Hons) or B.E. / B. Tech. Minor. The total number of credits that a student can add in a semester is limited to 6, subject to a maximum of 2 courses. Maximum number of credits enrolled in a semester (Honours and Minor) shall not exceed 36. The online courses registered for B.E. / B. Tech. (Hons.) and B.E. / B. Tech. minor shall be over and above this 36 credits.

**6.2.4** Students can pursue the courses in any of the reputed institute such as IIT / Anna University / NIT / Foreign University with QS ranking with in 100, under students exchange program during their 5<sup>th</sup> semester up to maximum of 18 credits. These credits can be exchanged with their professional elective courses offered in the 5<sup>th</sup> and 6<sup>th</sup> semester. The core courses of the 5<sup>th</sup> semester may be permitted to study as a Directed study under the faculty coordinator assigned by the HoD. The students have to appear for the examination along with their 6<sup>th</sup> semester regular course, but the 5<sup>th</sup> semester subject will not be treated as arrear subject.



### 6.3 Choice of Professional Elective Courses

The professional Elective Courses are listed in the Curriculum in Table format as verticals (Specialisation groups). A student can choose all the Professional Elective Courses either from one of the verticals or a combination of courses from all verticals in a semester. However, students irrespective of enrolling for additional courses for B.E. / B. Tech. (Hons.) are not permitted to choose more than one course from a row. Students are permitted to enroll more than one elective course from the same vertical in a semester. For a professional elective course and open elective course, minimum number of students enrolment permitted shall be 10. However, the minimum number is not applicable for students enrolling B.E. / B.Tech. (Hons) and B.E. / B. Tech. Minor. For the offer of each professional elective at least two choices shall be offered.

### 7.0 Attendance Requirements for Completion of the Semester

- 7.1 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 end semester examinations. Ideally, every student is expected to attend all classes of all the courses and secure 100% attendance. However, in order to give provision for certain unavoidable reasons such as medical / participation in sports, the student is expected to attend at least 75% of the classes. Therefore, he/she shall secure not less than 75% in every subject (after rounding off to the nearest integer) of overall attendance as calculated as per clause 5.3.
- 7.2 A candidate who could not satisfy the attendance requirements as per clause 7.1 due to his / her entrepreneurships / startups activities / sports activities, but has secured not less than 70% in the current semester and follow the clause 7.4
- 7.3 A candidate who could not satisfy the attendance requirements due to medical reasons (due to accident / specific illness - hospitalized as in-patient / demise of own family member) but has secured not less than 65 % in the current semester and follow the clause 7.4
- 7.4 For clause 7.2 & 7.3 the student should appear in front of a review committee with necessary documents, with the recommendation of review committee and approval from the Head of the Institution, he / she may be permitted to appear for the end semester examination.
- 7.5 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 7.1) and has registered for examination by paying the prescribed fee.

**7.6** The candidates who do not satisfy the attendance requirement as per clauses from 7.2 to 7.4 shall not be permitted to appear for the end semester and they are declared as debarred for that semester. Such a student has to redo their courses in the next academic year to gain the attendance and internal assessment marks.

**7.7** If a student is not permitted to write an examination for a subject due to lack of attendance, he / she should attend special coaching classes to fulfill the attendance requirement and internal assessment marks, conducted before the supplementary examination with the approval of Head of the institution by paying the recommended course fee.

## **8.0 FACULTY MENTOR**

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department will attach a certain number of students to a teacher of the department who shall function as Faculty Mentor for those students throughout their period of study. Every mentor has minimum of 15 to 20 students (maximum 5 member from each year in the same department) under them. The mentor shall counsel the students periodically in personal as well as academic related matters such as monitor their attendance, academic performance, participation in various activity and their career development. The mentor also keep in touch with the parents about the progress and performance of the students concerned.

### **8.1 Assistant Head of the Department**

There shall be a AHoD for each department. He / She will be appointed by the HoD of the department concerned. The AHoD is the ex-officio member and the Convener of the class committee.

The responsibilities of the AHoD shall be:

- To act as the channel of communication between the HoD and the students of the respective class.
- To collect and maintain various statistical details of students.
- To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- To monitor the academic performance of the students including attendance and to inform the class committee and faulty mentor.
- To arrange various students welfare, co-curricular & extra-curricular activities
- To monitor course registration, attendance and Internal marks in CoE portal periodically in coordination with concern subject teachers.

## **9.0 CLASS COMMITTEE**

**9.1** Every class shall have a class committee consisting of teachers of the class concerned, student

representatives and a chairperson, who is not teaching the class. It is like the 'Quality Circle' with the overall goal of improving the teaching- learning process.

The functions of the class committee include:

- Solving problems experienced by students in the class room and laboratories.
- Clarifying the regulations of the degree programme and the details of rules therein particularly (clause 5 and 7).
- Informing the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- Informing the student representatives, the details of regulations regarding weightage of marks used for various academic activities. In the case of practical courses (laboratory / drawing / project work / seminar etc.) the breakup of marks for each experiment / exercise / module of work, should be clearly discussed in the class committee meeting and informed to the students.
- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems if any.
- Identifying the slow-learners, if any, and requesting the teachers concerned to provide some additional help / guidance / coaching to such students.

**9.2** The class committee for a class under a particular branch is normally constituted by the Head of the Department. However, if the students of different branches are mixed in a class (like the first semester which is generally common to all branches subjects), the class committee is to be constituted by the Head of the Institution.

**9.3** The class committee shall be constituted within the first week of each semester.

**9.4** At least 4 student representatives (a combination of boys, girls, hostellers, day scholar, academic toper and slow learners) shall be included in the class committee.

**9.5** The chairperson of the class committee may invite the AHoD and the Head of the Department to the class committee meeting.

**9.6** The Head of the Institution may participate in any class committee meeting of the institution.

**9.7** The Chairperson is required to prepare the minutes of every meeting, submit the same to the Head of the Institution within two days of the meeting and the same to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the Management through the Head of the Institution.

**9.8** The first meeting of the class committee shall be held within one week from the date of commencement of the semester, in order to inform the students about the nature and weightage of assessments within the framework of the Regulations. Two to three subsequent meetings may be held in a semester at suitable intervals. **The class Committee Chairperson shall display the cumulative attendance particulars of each student on the Notice Board at the end of every such meeting to enable the students to know their attendance details to satisfy the clause 7 of this Regulation.** During these meetings the student members representing the entire class, shall meaningfully interact and express the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.

#### **10.0 COURSE COMMITTEE FOR COMMON COURSES**

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

#### **11.0 SYSTEM OF EXAMINATION AND EVALUATION.**

**11.1** Performance in each course of study shall be evaluated based on (i) Internal assessment test (ii) End semester examination.

**11.2** Each course (theory, practical, integrated courses and project work examinations) shall be evaluated for a maximum of 100 marks.

**11.2.1** For all theory courses, the internal assessment will carry **40 marks** while the End Semester University examination will carry **60 marks**.

**11.2.2** For all theory courses with laboratory component, the internal assessment will carry **50 marks** while the End Semester University examination will carry **50 marks**.

**11.2.3** For all laboratory courses, the internal assessment will carry **60 marks** while the End Semester University examination will carry **40 marks**.

**11.2.4** The internal assessment for the project work will carry **60 marks** while the End Semester University examination will carry **40 marks**.

### 11.3 Evaluation Procedure for Employability Enhancement Courses (EEC)

The evaluation of EEC are fully internal and shall be jointly done by the course coordinator from the institution and the mentor from the firm / industry.

- a) If the course involves certification from an identified firm / company, then 25% of the total marks will be awarded for the certification.  
25% of the total marks for completion of the course provided by the firm / industry  
50% of the total marks shall be evaluated by the respective Course Coordinators of the college by conducting appropriate theory and / or laboratory tests.
- b) If there is no certification from the firm / company, then 50% will be included from the marks provided by the firm and 50% shall be evaluated by the respective Course Coordinators of the college by conducting appropriate theory and / or laboratory tests.

11.4 The end semester examination (Theory & Practical) of 3 hours duration shall ordinarily be conducted in November / December for the odd semesters and in May / June for the even semesters.

11.5 The End semester examination for project work shall consist of evaluation of the final report submitted by the student or students of the project group (not exceeding 3 students) by an external examiner and an internal examiner, followed by a viva-voce examination.

11.6 For all the End semester examinations, wherever necessary, the internal and external examiners shall be appointed by the Controller of Examinations.

11.7 Double evaluation procedure is adopted (two examiner will be involved) to evaluate the answer scripts of theory courses in end semester examination.

11.8 After double valuation of each answer script, the higher value of two Valuation marks (i.e., V1 – 1<sup>st</sup> valuation mark; V2 – 2<sup>nd</sup> valuation mark of the same QP code) is taken as the final mark for the subject.

11.9 The variation in grand total marks obtained in two valuations is more than 10% of the total marks, then the answer script (of the same QP code) shall undergo a third valuation (i.e., V3 – 3<sup>rd</sup> valuation).

11.10 If the answer script has undergone for Challenging Valuation (CV), two experts will jointly evaluate the answer script by thoroughly analyzing answers written by the candidate and provide the mark. If the challenging valuation mark is less than the previous marks then it is declared as no change in marks. If the mark is higher than the previous mark highest mark is awarded for that subject.

**11.11 The Supplementary examination** (conducted within a month after the announcement of even semester results) will be conducted in the even semesters to facilitate the students to reduce the backlog, active participation in industrial internship, training & placement activity. Students are permitted to register for the supplementary examination by paying additional fee and carrying forward internal assessment marks of the last attempt, for fulfilling the requirements.

## 12.0 PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT TESTS

The weightage for internal assessment for the theory subject 40 %, for the practical 60%, for the integrated course (theory and practical) 50% for each and for the project 60 % marks. The marks for these internal assessments shall be awarded as per the procedure given below

### 12.1 Theory Courses

IAT will be conducted for 60 marks and learning pedagogy is conducted for 40 marks.

IAT marks = 60 marks from test + 40 marks from learning pedagogy.

Three IAT will be conducted, from which best of two IAT will be considered for internal marks calculations.

Internal mark = Best of two IATs (40 mark + 40 mark) + 20 marks for the other activity and rounded to nearest integer (The total 100 marks is converted into 40 Marks).

#### Other activity

Distinct assignment / Tutorial / Case study (Part C Questions) / Group Task / Self learning / Competitive learning / Lesson plan activity

S.No.	IAT	Learning Pedagogy		Total
1	I to III	Class test	10	
		MCQ / Quiz	10	
		Hand Written class notes as assignment *	10	
		Attendance of the subject for the respective IAT	10	
Max. Marks	60 Marks	40 Marks		100

Separate note book should be maintained for every subject, If the student is absent for any class he / she should copy down the notes before coming to the next class and the notebook should submitted to the subject faculty after completing of every unit for evaluation.



## Rubrics for theory courses (IAT, Activity, End semester exam)

S. No.	Exam	Pattern	Marks	Max. Marks	Portion	Duration
1	IAT I to III	Part A - 6 Questions	2 marks	12 marks	2 Units	2 Hours
		Part B - Answer 4 question out of 6 (3 from each unit, 2 questions need to answer from each unit)	12 marks	48 marks		
2	End Semester Exam	Part A - 10 Questions	2 marks	20 marks	5 Units	3 Hours
		Part B - 5 Questions (Either or pattern)	13 marks	65 marks		
		Part C - 1 Question (Either or pattern)	15 marks	15 marks		
3	Class Test	2-part B questions out of 3	-	10 marks	One Unit	One Period
4	Tutorial / Distinct Assignment/ Case study	5 Part B problems in a sheet	-	20 marks	One unit	Assessment period
5	Tutorial / Distinct Assignment/ Case study	Seminar, Flipped class room, Poster presentation. Z to A, Bean bag, Role Play, Think-pair-share, Brain storming, etc.,	-	20 marks	-	
6	Group Task / Self learning / Competitive learning	Student should make the presentation about the activity / Participation in the technical events	-	20 marks	-	
7	MCQ / Quiz	40 Question	-	10 marks	2 unit	
8	Hand written class note as assignment	Separate note book should be maintained for every subject. If the student is absent for any class he / she should copy down the notes before coming to the next class and the notebook should be submitted to the subject faculty after completing of every unit for evaluation		10 marks	All 5 units	

**Attendance marks**

S. No.	Attendance in %	Mark Awarded
1	91 - 100 %	10 mark
2	81 - 90 %	9 mark
1	71 - 80 %	8 mark
1	65 - 70 %	7 mark
1	Less than 65 %	0 mark (Zero marks)

**12.2 Laboratory Courses**

Every practical exercise / experiment shall be evaluated based on conduct of experiment and records work. There shall be at least one assessment test. The criteria for arriving the Internal Assessment marks are as follows:

Average of Day-to-day Activity for lab courses*	Ave. marks**	Model Exam	Total marks
Performing the experiment as per the schedule (10 marks)	30	30	60
Completion of Record Work on time (10 marks)			
Technical Knowledge (10 marks)			
Average of Day-to-day Activity for Theory oriented lab courses*	Ave. marks**	Model Exam	Total marks
Performing the experiment as per the schedule (10 marks)	25	25	50
Completion of Record Work on time (10 marks)			
Technical Knowledge (5 marks)			

\* Mark allocation for every experiment.

\*\* Average of marks awarded for all the experiments

**12.3 Theory with Laboratory Integrated Course.**

The weightage of internal assessment and end semester examination marks will be 50% of each. The distribution of the marks for the theory and laboratory components in the internal assessments and end semester examination for the courses with different credit distributions are given below.

L	T	P	C	IAT-I & II	IAT-III	End Semester Examination
1	0	2	2	Best one IAT	IAT-III	Laboratory only (50%)
1	0	4	3	Lab 25%	Theory 25%	Laboratory only (50%)
2	0	2	3	Best one IAT Theory 25%	IAT-III Lab 25%	Theory (25%) & Laboratory (25%)
2	1	2	4			Theory (35%) & Laboratory (15%)
3	0	2	4			Theory (15%) & Laboratory (35%)
2	0	4	4			Theory (15%) & Laboratory (35%)

**Note:** If a student fails in Theory with Laboratory integrated course, he / she has to reappear for the both theory and laboratory end semester examination. As per the credit the weightage of the marks for theory and lab components will vary

## 12.4 Project Work

The student shall register for Project in final semester. The Project work may be allotted to a single student or to a group of students not exceeding 3 per group. Project Work shall be carried out under the supervision of a “qualified teacher” in the Department concerned. In this context “qualified teacher” means the faculty member possessing (i) PG degree or (ii) Ph.D. degree.

**12.4.1** The industrial project shall be jointly supervised by the Internal guide of the department and an expert as a joint supervisor from the industry and the student shall be instructed to meet the Internal guide periodically to update the progress of the project and its outcomes and should attend the review committee meetings for evaluating the progress. The review meetings, if necessary, may also be arranged in online mode with prior approval from the HoI and suitable record of the meetings shall be maintained.

**12.4.2** The Head of the Institution shall constitute a review committee for Project Work for each programme. The review committee consists of Internal guide, an expert from the department and a project coordinator from the Department. If the project coordinator / expert member happens to be an internal guide, then an alternate member shall be nominated. For industrial Project, the review committee shall have the internal guide, the coordinator from industry and the project coordinator from the department as the members. There shall be three reviews conducted during the semester VII or VIII by the review committee. The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be **reduced for 60 marks** and rounded to the nearest integer (as per the scheme given in 12.4.(iv)).

**12.4.3** The project report shall carry a maximum of 10 marks. The project report shall be submitted as

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

Internal Assessment 60 Marks			End Semester Examinations 40 Marks			
Review			Conference Presentation	Thesis 10 Marks	Viva-Voce 20 Marks	
I	II	III		Examiner		
				Int.	Int.	Ext.
20	20	20	10	10	10	10

#### Internal mark Rubrics for Project work

S.No.	Description	Review I	Review II	Review III
1	Power Point Presentation	5	5	5
2	Technical Knowledge	5	5	5
3	Literature Review	5	--	--
4	Hand Out	5	5	--
5	Novelty of he Project	--	5	--
6	Demo if any	--	--	5
7	Project Report	--	--	5
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>20</b>

**12.4.4** The last date for submission of the project report is on the last working day of the semester. If a student fails to submit the project report on or before the specified deadline or the student has submitted the project report but did not appear for the viva-voce examination, it will be considered as fail in the Project work and the student shall re-register for the same in the subsequent semester.

**12.4.5** Students shall also undertake a start-up activity for the development of products as part of project work. If the outcome of a start-up is a fully developed product and whose concept is tested and validated, then it shall be considered in lieu of the project work. Such students shall submit a startup report, which includes the concepts and process flow of the developed product, publications and patents, if any. The evaluation of the start-up report is as per the clause 12.4.3

#### 12.5 (a) Design project

Creative, Innovative and Core skill design project shall carry 100 marks and shall be evaluated through internal assessment only. Every student is expected to present a minimum of 2 presentation per semester before the evaluation committee. The three-member committee appointed by Head of the Institution will evaluate the presentation and at the end of the semester the marks will be consolidated and credit will be assigned. The allocation of marks shall be computed as follows.

**Rubrics for evaluation of Design Project**

S.No.	Description	Review I	Review II	End Semester Exam
1	Power Point Presentation	5	5	5
2	Technical Knowledge	5	5	5
3	Literature Review	5	--	--
4	Novelty of the Project	5	5	--
5	Viva-Voce	--	5	--
6	Demo of the Project	--	--	5
7	Project Report	--	--	5
	<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>

**(b) Industrial Training / Internship / Survey camp**

The Industrial / Practical Training, Summer Project, Internship or survey camp which is a part of the curriculum, shall carry 100 marks and shall be evaluated through internal assessment conducted by the supervisor in the organization together with a faculty member from the concerned department. Further, at the end of Industrial / Practical training / internship / Summer Project / survey camp, the student shall submit a certificate from the organization where he / she has undergone training and a brief report. An evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three-member departmental committee constituted by the HoI / HoD. The copy of certificates (issued by the organization) submitted by the students shall be attached along with evaluation report through the HoD to the Controller of Examinations for entering the credit in the grade sheet and the credit is consider for CGPA calculation. If the student fail in the evaluation he / she should redo the course to earn the required credit.

**Rubrics for evaluation of Industrial Training / Internship**

Training Certificate	Industry Expert marks	Presentation	Viva-voce	Report	Total marks
20 marks	20 marks	20 marks	20 marks	20 marks	100 marks

**Rubrics for evaluation of Survey Camp**

Survey Camp Drawing	Tabulation & marks	Presentation	Viva-voce	Report	Total marks
20 marks	20 marks	20 marks	20 marks	20 marks	100 marks

**12.6 Industry Oriented Professional Development Courses / Technology Center Courses (TCC) / Value Added Courses (VAC)**

Students may be permitted to register for the above mandatory noncredit courses with approval of the committee, consisting of the Head of the Department, staff handling the course and a senior faculty member nominated by Head of the institution. Students should attend two internal assessment test conducted by the department or submit certification issued by the competent authority (reputed institution / industry). The total marks earned shall be computed as follows.

**Rubrics for valuation of Industry Oriented Professional Development Courses /TCC/VAC**

Completion of Course	Assignment/Task/ Project	Record/ Report	Viva-voce	End Semester Exam/ Certification Exam	Total marks
10 marks	20 marks	20 marks	10 marks	40 marks	100 marks

The list of students and their certification if any along with the marks and the grades earned may be forwarded to the Controller of Examinations to process the results.

**12.7 Mandatory Course****Rubrics for evaluation of Mandatory Courses**

S.No.	Evaluation	Description	Marks
1	Internal evaluation	Activity / Case study / Assessment I	20
2		Activity / Case study / Assessment II	20
3	End Semester Exam	Written exam / Online exam / Activity / Certification from reputed organization	60
		<b>Total</b>	<b>100</b>

**12.8 Self-Learning Courses (NPTEL / MOOCS / SWAYAM / LABVIEW / ALTAIR / CODE TANTRA/CCNA)**

Students may be permitted to undergo online courses (which are provided with a certificate by the competent authority) with the approval of internal committee headed by HoI. The credits earned in online course(s) which can be considered for CGPA calculation as follows.

**Duration of course and number of credits**

S.No	No. of Weeks	No. of Credits
1	4	1
2	8	2
3	12	3
4	16	4

**Duration of course and number of credits**

Letter Grade	Marks
O	90-100
A+	80-89
A	70-79
B+	60-69
B	50-59
C	40-49



### 12.9 Display of Internal Marks

Internal marks approved by the Head of the Institution shall be displayed by the respective HODs within 5 days from the last working day.

### 12.10 Attendance Record

Every teacher is required to enter the 'Attendance & Assessment marks' which consists of attendance entered in each lecture or practical or project work class, the test marks and the record of class work (topic covered), separately for each course. This should be monitored by the HoI / HoD / AHoD periodically for checking the syllabus coverage and the records of test marks and attendance. The Head of the department should maintain the document in safe custody for five years.

### 12.11 Academic Audit

In order to ensure the better performance, Academic Audit is to be done for every course taught during the semester. For the internal assessments conducted for each course as per details provided in Clause 12, the academic records shall be maintained in the form of documentation for the individual assignments / case study report / report of mini project submitted by each student, assessment test question paper with answers script. Report of industrial training / internship has to be maintained. For laboratory courses students record shall be maintained. Further, the attendance of all students shall be maintained as a record. The Head Academic shall arrange to conduct the Academic Audit for every course in a semester by forming the respective committees with an external course expert as one of the members drawn from a technical institution of repute near the institute / trust college.

## 13.0 REQUIREMENTS FOR APPEARING END SEMESTER EXAMINATIONS

- A student shall normally be permitted to appear for the End Semester Examinations for all the courses registered in the current semester (vide clause 6) if he / she has satisfied the semester completion requirements (as per clause 7).
- Further, examination registration by a student is mandatory for all the courses in the current semester and all arrear(s) course(s) for the End semester examinations failing which, the student will not be permitted to move to the higher semester.
- A student who has already appeared for any course in a semester and passed the examination is not entitled to reappear in the same subject for improvement of grades.

## 14.0 PASSING REQUIREMENTS

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

- 14.2** If a student fails to secure a pass in a theory course / laboratory course (except electives), the student shall register and appear only for the end semester examination in the subsequent semester. In such case, the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the student secures a pass.
- 14.3** The Internal Assessment marks obtained by the candidate in the current semester (n) shall be retained and carried forward up to the next three consecutive End Semester Exam (n+3) till the candidate secures a pass. However from the (n+4)th End Semester exam onwards, the candidate shall be declared to have passed the examination if he/she secures a minimum of 50% marks prescribed for the End Semester Examinations alone.
- 14.4** If the course, in which the student has failed, is a Professional Elective or an Open Elective course, the student may be permitted to complete the same course. In such case the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secures a pass.
- 14.5** If the student is willing to take any other Professional Elective or Open Elective course the previous registration is cancelled and henceforth it is to be considered as a new Professional Elective or Open Elective course. The student has to register and attend the classes, earn the internal assessment marks, fulfil the attendance requirements as per clause 7 to appear for the end semester examination.
- 14.6** If a student has submitted the project report but absent in the end semester examination of project work, the student is deemed to be failed. In this case and also if a student attends and fails in the End semester examination of Project work of B.E. / B.Tech, he/she shall attend end semester examination again within 60 days from the date of declaration of the results. The subsequent viva-voce examination will be considered as reappearance with payment of exam fee. In case, the student fails in the subsequent viva-voce examination also, the student shall redo the course again, when offered next.
- 14.7** The passing requirement for EEC and Mandatory courses (Internal assessment + End semester exam) should be 50 % of the total marks.
- 14.8** A student can apply for review of the student's semester examination answer paper in a theory course, as per the guidelines of the CoE on payment of a prescribed fee along with prescribed application to the CoE through the Hods. The CoE will arrange for the review and the results will

be intimated to the student concerned through the Head of the Institution. Review is not permitted for laboratory course, Mandatory and EEC courses.

## 15 AWARD OF LETTER GRADES

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

Letter Grade	Grade Points	Range of Marks
O (Outstanding)	10	91-100
A+ (Excellent)	9	81-90
A (Very Good)	8	71-80
B+ (Good)	7	61-70
B (Average)	6	56-60
C (Satisfactory)	5	50-55
U (Reappearance)	--	< 50
UA (Un Appeared)	--	--
SA (Shortage of Attendance)	--	--
WD (Withdrawal)	--	--

- 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 (as per clause 7) 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 reappear for the End Semester Examinations as per the Regulations.
- If the grade U is given to **EEC course (except Project Work), which are evaluated only through internal assessment**, the student shall register for the course again in the subsequent semester, fulfil the norms as specified in clause 14 to earn pass in the course.

### 15.1.1 Relative Grading

For those students who have passed the course (theory course / laboratory integrated courses / theory integrated courses / all other EEC except laboratory course / Project Work Courses), 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. The evolved relative grading method normalizes the results data using the BOX-COX transformation method and computes the grade range for each course separately and awards the grade to each student. (Theory course / Laboratory integrated courses / Theory integrated courses and all other EEC Courses). If the students' strength is greater than 30, the relative grading method shall be adopted.

### 15.1.2 Absolute Grading

- In all the courses, if the number of students who have passed the course is less than or equal to 30 then absolute grading shall be followed with the grade range as specified in the Table.
- For the Project Work / Internship and Laboratory Courses, absolute grading procedure shall be followed as given in the Table below irrespective of the number of students who have passed the course.

**Table – Grade range for absolute grading**

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

**15.2** For the Co-curricular activities such as NCC / NSS / UBA / NSO / YRC / Science club / Literary Club / Fine Arts Club will appear in the Grade Sheet on successful completion of the same. Every student shall put in a minimum of 80% attendance in the training and attend the camp or events of the clubs compulsorily. The training and camp or club events shall be completed during semester II to semester VI of the programme. However, for valid reasons, the Head of the Institution may permit a student to complete this requirement in the subsequent years.

**Note: Successful completion of any one of the co-curricular activities listed in the clause 4.12 (iv) is compulsory for the award of degree.**

**15.3** The grades O, A+, A, B+, B, C obtained for the one credit course shall figure in the Grade Sheet under the title Employability Enhancement Courses.

### 15.4 Grade Sheet

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

- The college in which the student has studied
- The list of courses registered during the semester and the grade scored. List of courses studied for Hons., minor and any other additional courses in which the student has passed with the grades under the title additional courses.

- The Grade Point Average (GPA) for the semester considering all the courses of curriculum
- The Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards, considering all the courses of curriculum. However, for the students who have successfully completed the requirements of B.E. / B. Tech. (Hons) and B.E. / B.Tech. (Minor) vide Clause 4.9, grades scored in the six additional courses shall be taken into account for the computation of CGPA.

GPA for a semester is the ratio of the sum of the products of the number of credits acquired for courses and the corresponding points to the sum of the number of credits acquired for the courses in the semester. CGPA will be calculated in a similar manner, considering all the courses registered from first semester. U grades will be excluded for calculating GPA and CGPA.

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

where  $C_i$  is the number of credits assigned to the course

$G_{P_i}$  is the point corresponding to the grade obtained for each course

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

**15.4.1** If a student studies more number of professional and open electives than required as per the student's programme curriculum, it will be listed in the grade sheet but not considered for the CGPA calculation.

**15.4.2** If a student successfully completes all the requirements of the programme and also meets the requirements of B.E. / B. Tech. (Hons) or B.E. / B. Tech. Minor but desires not to opt for the additional qualification, then he/she has to submit a declaration with regard to the same 30 days before the completion of VIII semester.

**15.4.3** In the consolidated grade sheet the CGPA earned shall be converted into percentage of marks as follows:

$$\text{Percentage of Marks} = \text{CGPA} \times 10$$

## 16.0 ELIGIBILITY FOR THE AWARD OF THE DEGREE

**16.1** 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 End - Semester examinations and passed all the subjects within the period as prescribed in clause 5.0 (i)

- iii. Successfully passed in all the courses prescribed by the Head-Academics whenever the student is readmitted under Regulations R-2024 from the earlier Regulations.
- iv. Successfully completed the personality and character development activities.
- v. No disciplinary action pending against the student.

## 16.2 Classification of the Degree Awarded

A student who satisfies the following conditions shall be declared to have passed the examination in the following categories

### 16.2.1 Degree: B.E / B.Tech (Regular) First Class with Distinction

Duration of the Program	:	3 / 4 years for LE / Regular students respectively.
Duration Permitted	:	4 / 5 years for LE / Regular students respectively
CGPA Required	:	8.5 and above
Number of Attempt permitted	:	One
Authorized Break of study	:	One Year Permitted
Prevention due to lack of attendance	:	Not Permitted
Additional credits above the requirement of Curriculum	:	Nil
Approved withdrawal from the end semester examination	:	Not considered as an attempt

### 16.2.2 Degree: B.E./ B.Tech (Regular) - First class

Duration of the Program	:	3 / 4 years for LE / Regular students respectively.
Duration Permitted	:	4 / 5 years for LE / Regular students respectively
CGPA Required	:	6.5 and above
Number of Attempt permitted	:	-
Authorized Break of study	:	One Year Permitted
Prevention due to lack of attendance	:	Included in the Duration permitted
Additional credits above the requirement of Curriculum	:	Nil
Approved withdrawal from the end semester examination	:	Not considered as an attempt



**16.2.3 Degree: B.E./ B.Tech ( Honors)**

Duration of the Program	:	3 / 4 years for LE / Regular students respectively.
Duration Permitted	:	4 / 5 years for LE / Regular students respectively
CGPA Required	:	8.5 and above
Number of Attempt permitted	:	One
Authorized Break of study	:	One Year Permitted
Prevention due to lack of attendance	:	Not Permitted
Additional credits above the requirement of Curriculum	:	18 credits from any one vertical of the same program
Approved withdrawal from the end semester examination	:	Not considered as an attempt

**16.2.4 Degree: B.E / B.Tech with Minor Specialization**

Duration of the Program	:	3 / 4 years for LE / Regular students respectively.
Duration Permitted	:	4 / 5 years for LE / Regular students respectively
CGPA Required	:	8.5 and above
Number of Attempt permitted	:	One
Authorized Break of study	:	One Year Permitted
Prevention due to lack of attendance	:	Not Permitted
Additional credits above the requirement of Curriculum	:	18 credits from any one vertical of the same program
Approved withdrawal from the end semester examination	:	Not considered as an attempt

If a student earned 18 credits for his/her Honor /Minor degree and scored less than 8.5 CGPA in the regular degree course, then he/she will not be awarded Honor /Minor degree certification. But the credit earned will be entered in the grade sheet as additional course.

**16.2.5 Degree: B.E / B.Tech - Second Class**

For all the B.E./ B.Tech. courses (regular and lateral entry), B.E./ B.Tech. Minor in other specialization degree students (not covered in clauses 16.1.1 and 16.1.2) who qualify for the award of the degree (vide Clause 16.0) shall be declared to have passed the examination in **Second Class**.

**16.2.6** A student who is absent in the End Semester Examination in a course / project work after having registered for the same shall be considered to have appeared in that examination (except approved withdrawal from end semester examinations as per clause 17) for the purpose of classification.

**16.2.7** Student who earns additional 18 credits as per Clause 4.8 (i) and (ii) but does not satisfy the conditions mentioned in 16.1.1 or 16.1.2 shall not be awarded B.E./B.Tech. (Hons.) In such case if the student becomes eligible for First Class, while computing CGPA with the Professional Elective / Open Elective courses with higher grades the student shall be awarded B.E. / B.Tech. in First Class only.

### **16.3 Photocopy / Review**

- A student can apply for photocopy of his / her semester examination answer paper in a theory course alone, as per the guidelines of the CoE, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Department.
- The student can register for the review only if he / she has applied for the photo copy of answer script ~~only~~ is eligible to apply through proper application to the Controller of Examinations.
- The Controller of Examinations will arrange for the review and the results will be intimated to the student concerned through the Head of the department / Institution.
- Review is not permitted for practical courses and EEC courses.

## **17. PROVISION FOR WITHDRAWAL FROM END SEMESTER EXAMINATION**

**17.1** A student may be (for valid reasons like medically unfit / unexpected family situations / sports approved by the PED and HOI) granted permission to withdraw from appearing from the end semester examination in any course or courses in ANY ONE of the semester examinations during the entire duration of the degree programme. The application shall be sent to the COE through the Head of the Institutions with required documents.

**17.2** Withdrawal application is valid if the student is eligible to write the examination (as per vide Clause 7) and if it is made within TEN days after the date of the examination(s) in that course or courses and recommended by the Head of the Institution and approved by the Controller of Examinations. For a student to withdraw from a course / courses, he / she should have registered for the course, fulfilled the attendance requirements (vide clause 7) and earned internal assessment marks.

**17.3** The requirement of mandatory 10 days for withdrawal from the end semester examination for special cases under extraordinary conditions will be considered on the merit of the case.

**17.4** In case of withdrawal from a course / courses, the courses will figure both in the Grade Sheet as well as in the Result Sheet. However, withdrawal shall not be considered as an appearance for the eligibility of a student for First Class with Distinction.

- 17.5** If a student withdraws from writing end semester examinations for a course or courses, he / she shall register for the same in the subsequent semester and write the end semester examination(s).
- 17.6** If a student applies for withdrawal from Project Work, he / she will be permitted for the withdrawal only after the submission of project report before the deadline. However, the student may appear for the viva voce examination within 30 / 60 days after the declaration of results for Project work and the same shall not be considered as reappearance.
- 17.7** Withdrawal is permitted for the end semester examinations in the final semester.

## **18.0 PROVISION FOR AUTHORISED 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 student may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study.
- 18.3** If a student intends to temporarily discontinue the programme in the middle of the semester for valid reasons (such as accident or hospitalization due to prolonged ill health, international travel) and to re-join the programme in a subsequent year, permission may be granted based on the merits of the case provided, he / she applies to the HoI with valid reasons, but not later than the last date for registering the end semester examination through the Head of the Institution / Hod
- 18.4** The student is permitted to re-join the programme after break of study / prevention due to lack of attendance, shall be governed by the Curriculum and Regulations in force at the time of re-joining. The students rejoining in new Regulations shall apply to the Controller of Examinations in the prescribed format through the 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. In such cases, the total number of credits to be earned by the student may be more than or equal to the total number of credits prescribed in the curriculum in force. If the credit assigned for L T P of the courses are not same in two Regulations under consideration, then equivalence shall be arrived as per the credit assignment followed in the Regulations in force.
- 18.5** The authorized break of study is included in the duration specified for passing all the courses for the purpose of classification of degree (vide Clause 16.1).
- 18.6** 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 5.1 irrespective of the period of break of study in order that he / she may be eligible for the award of the degree.

- 18.7** If any student is prevented for want of required attendance, the period of prevention shall not be considered as authorized 'Break of Study' (clause 18.1).
- 18.8** If a student in full time mode wants to take up a job / start-up / entrepreneurship during the period of study he / she may apply for authorised break of study for one year. The student shall join the job / start-up / entrepreneurship only after getting approval form HOI with due proof to that effect.
- 18.9** No fee is applicable to the students during the break of study period up to maximum one year. (First point ask for fee clarity)
- 18.10** If the candidate has not reported back to the department, even after the extended Break of Study, the name of the candidate shall be deleted permanently from the college enrolment. Such candidates are not entitled to seek readmission under any circumstances.

**19.0 DISCIPLINE.**

- 19.1** Every student is required to observe discipline and decorum both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the Institute.
- 19.2** The Head of Institution shall constitute a disciplinary committee consisting two HoDs of which one should be from the faculty of the student, to enquire into acts of indiscipline and notify the University about the disciplinary action recommended for approval.
- 19.3** If a student indulges in malpractice in any of the end semester / internal examination he / she shall be liable for punitive action as prescribed by the institute as listed below.

**20.0 REVISION OF REGULATIONS, CURRICULUM AND SYLLABI:**

- The autonomous institute may revise, amend or change the Regulations, Curriculum, Syllabus and scheme of examinations through the Academic Council with the approval of Governing council from time to time.
- A Standing Committee which shall be formed by HoI on-need basis for any special case, which falls beyond the above rules and regulations to provide suitable interpretations / clarification / amendments required.

## Programme Outcomes (PO)

Program Outcome describe the knowledge, skills and attitudes the students should acquires at the end of a four years of engineering program

### **PO-1. Engineering Knowledge:**

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

### **PO-2. Problem Analysis:**

Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

### **PO-3. Design / Development of Solutions:**

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

### **PO-4. Conduct Investigations of Complex Problems:**

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

### **PO-5. Modern Tool Usage:**

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

### **PO-6. The Engineer and Society:**

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

### **PO-7. Environment and Sustainability:**

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

### **PO-8. Ethics:**

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

### **PO-9. Individual and Team Work:**

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

### **PO-10. Communication:**

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

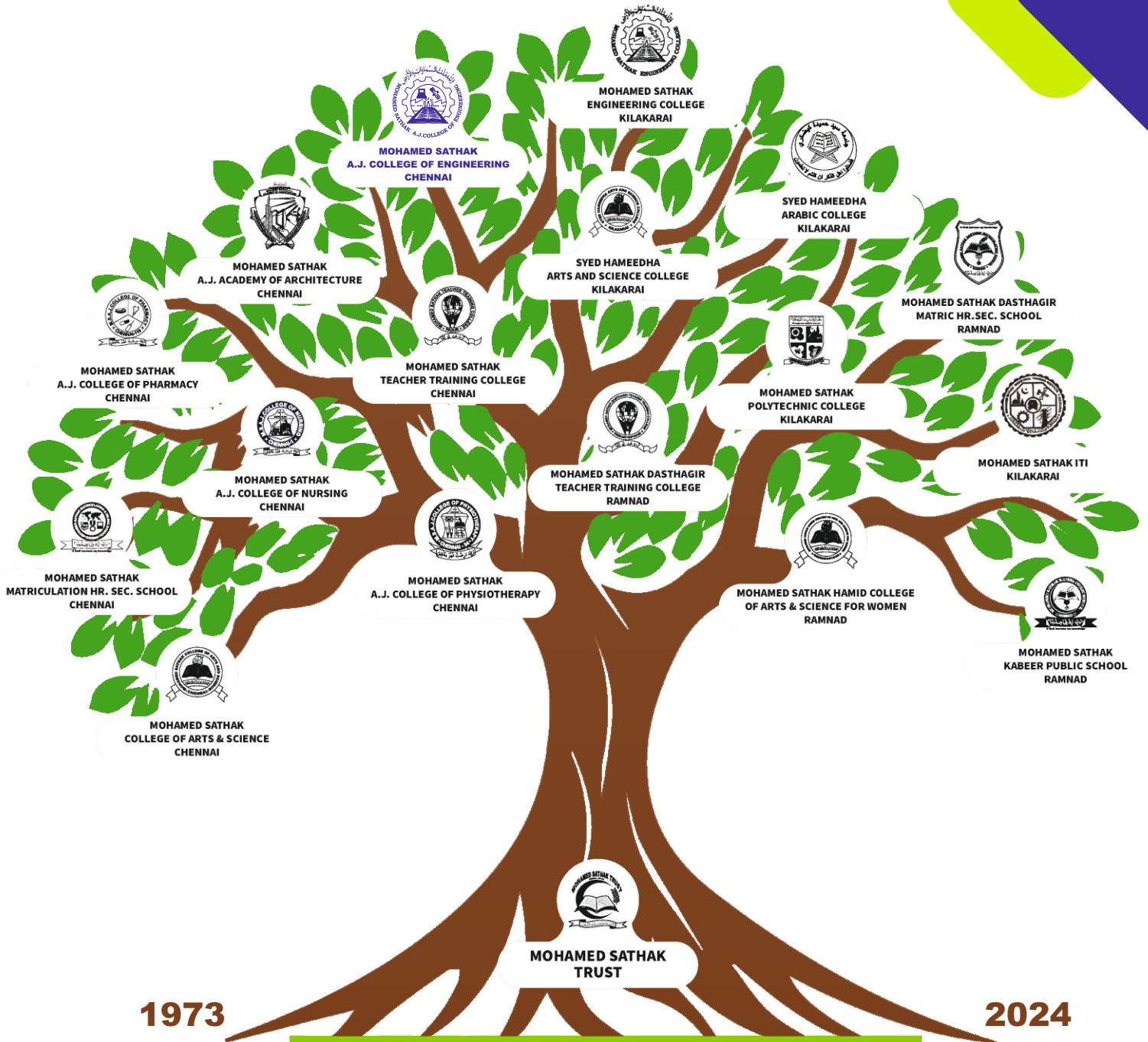
### **PO-11. Project Management and Finance:**

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

### **PO-12. Life-Long Learning:**

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.





**MOHAMED SATHAK  
GROUP OF INSTITUTIONS  
CHENNAI, KILAKARAI & RAMNAD**