



# **KIT - Kalaighnarkarunanidhi Institute of Technology**

**An Autonomous Institution**

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
Accredited by NAAC with 'A' GRADE & NBA (AERO, CSE, ECE, EEE, MECH & MBA)

An ISO 9001 : 2015 Certified Institution, Coimbatore - 641 402.

**Regulations, Curriculum & Syllabus - 2023**  
(For Students admitted from the Academic Year 2023-24 and onwards)

**BACHELOR OF ENGINEERING DEGREE  
IN  
MECHANICAL ENGINEERING**



**Department of Mechanical Engineering**



## Vision and Mission of the Department

### Vision

ⓐ	To enrich the students into a knowledgeable professionals and take a leading edge as a proficient Mechanical Engineers and Entrepreneurs to create a paradigm shift in their technical fields.
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### Mission

ⓐ	To provide quality education in the domain of Mechanical Engineering in a conducive environment for enabling the students to face challenging career in ethical manner.
ⓑ	To inculcate technical knowledge to create a strong foundation for generating full-fledged professionals in the field of Mechanical Engineering.
ⓒ	To foster the students with Entrepreneurship training through EDC, leadership qualities and communication skills to meet the global demands

### Program Educational Objectives (PEO's)

<b>PEO 1</b>	Graduates will have successful professional career in Mechanical Engineering or related disciplines.
<b>PEO 2</b>	Graduates will formulate, analyze and solve real – world problems in Mechanical engineering to meet global challenges.
<b>PEO 3</b>	Graduates will have awareness and commitment to lifelong learning and professional ethics in their professional practice.

### Programme Outcomes (PO's)

**Students graduating from Mechanical Engineering should be able to:**

<b>PO 1</b>	<b>Engineering knowledge</b> : Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
<b>PO 2</b>	<b>Problem analysis</b> : Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
<b>PO 3</b>	<b>Design / development of solutions</b> : 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.

<b>PO 4</b>	<b>Conduct investigations of complex problems</b> : 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.
<b>PO 5</b>	<b>Modern tool usage</b> : Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
<b>PO 6</b>	<b>The engineer and society</b> : 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.
<b>PO 7</b>	<b>Environment and sustainability</b> : Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
<b>PO 8</b>	<b>Ethics</b> : Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
<b>PO 9</b>	<b>Individual and team work</b> : Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
<b>PO 10</b>	<b>Communication</b> : 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.
<b>PO 11</b>	<b>Project management and finance</b> : 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.
<b>PO 12</b>	<b>Life-long learning</b> : 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.

### Program Specific Outcome (PSO's)

#### Graduates of a Mechanical Engineering Programme should be able to

<b>PSO 1</b>	Apply the mechanical engineering principles to solve engineering problems utilizing advanced technology in the domain of design, thermal, fluid sciences and robotics.
<b>PSO 2</b>	Take part as an entrepreneur or professional in industries by applying manufacturing and management practices for the advancement of society and self.

  
BoS Chairman

# **UG Regulations**



**1. SHORT TITLE AND COMMENCEMENT**

- ⊙ These Regulations shall be called the “KIT-Kalaigarkarunanidhi Institute of Technology, Coimbatore, Regulations for the Award of B.E. / B.Tech., Degree”.
- ⊙ They have been evolved, drafted and implemented after deliberations in and approvals from UGC, Anna University and Academic Council of the Institute, and are subject to changes/modifications from time to time; (major modifications at a frequency of FOUR years in synchronization with the curriculum structure revision and minor changes as and when applicable).
- ⊙ The latest / first version shall be applicable for the students enrolling for B.E. / B.Tech degree programme at this Institution from the Academic year 2023-24 and onwards.
- ⊙ The regulations hereunder are subject to amendments as may be made by the Academic Council of the College from time to time. Any or all such amendments will be effective from such date and to such batches of students (including those already undergoing the programme) as may be decided by the Academic Council.

**2. PREAMBLE**

The regulations prescribed herein have been made by KIT, an autonomous institution, approved by AICTE, New Delhi and affiliated to the Anna University, Chennai, to facilitate the smooth and orderly conduct of its academic programmes and activities at the B.E/B.Tech., level. It is expected that the regulations will enable the students to take advantage of the various academic opportunities at the Institute and prepare themselves to face the challenges in their professional careers ahead. It may be noted that :

- a. The provision made herein shall be applicable to all the B.E/ B.Tech. programmes offered at the institution, at present.
- b. They shall also be applicable to all the new B.E /B.Tech. programmes which may be started in the future.
- c. Academic and non-academic requirements prescribed by the Academic Council have to be fulfilled by a student for eligibility towards award of B.E. / B.Tech. Degree.

**3. PRELIMINARY DEFINITIONS AND NOMENCLATURE**

In this Regulations, unless the context otherwise requires :

**Table - 1 : Preliminary Definitions and Nomenclature**

SI.No.	Name	Definition
1.	<b>Programme</b>	Refers to Degree Programme that is B.E. / B.Tech.
2.	<b>Branch</b>	Refers to branch or specialization of B.E. / B.Tech. Programme, like Computer Science and Engineering, Mechanical Engineering, etc.,
3.	<b>Course</b>	Refers to a theory or practical subject that is normally studied in a semester, like Mathematics, Physics, etc.,

4.	<b>Principal / Head of the Institution</b>	Refers to the authority of the institution who is responsible for all academic activities, for the implementation of relevant rules and regulations.
5.	<b>Controller of Examinations (CoE)</b>	Refers to the authority of the college who is responsible for all activities of the Examinations.
6.	<b>Head of the Department (HoD)</b>	Refers to the Head of the Department concerned.
7.	<b>University</b>	Refers to Anna University, Chennai
8.	<b>KIT</b>	Refers to KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore.
9.	<b>Curriculum</b>	Refers to the various components / courses studied in each programme that provide appropriate outcomes (knowledge, skill and behavior / attitude) in the chosen branch of study.
10.	<b>L - T - P - C</b>	Refers to <b>L</b> ecture, <b>T</b> utorial, <b>P</b> ractical and <b>C</b> redits respectively
11.	<b>Programme Coordinator</b>	Refers to the coordinator of the programme concerned. He / she acts as interface between programme and key stakeholders, students, faculty and employer. He/She is responsible for planning the academic activities of the programme along with the course coordinator(s) and the HoD. He/She also prepares, evaluates and analyses the attainment of the programme outcomes along with Programme Advisory Committee.
12.	<b>Faculty Advisor</b>	The Faculty Advisor is responsible for providing general advice on the Academic matters, monitor the attendance and academic performance of the students and counsel them periodically. If necessary, the Faculty Advisor may also inform the parents about the progress/ performance of the students concerned through HoD.
13.	<b>Course Coordinator</b>	Course Coordinator is responsible for teaching the course, evaluating and analysing the performance of the students. The students is also responsible for the assessment of the Course Outcomes / Program Outcomes / Program Specific Outcomes. They can also recommend to organize workshops / seminars/guest lectures / industrial visits to meet the Course Outcomes and Program Outcomes.



14.	<b>Class committee</b>	Class committee for each semester of a programme comprises of HoD, Programme Coordinator, Faculty Advisor, Course Coordinators (as applicable) and Student Representatives.
15.	<b>Academic Evaluation Committee (AEC)</b>	The committee includes Principal, CoE, HoD concerned (For details refer <b>Appendix V</b> )
16.	<b>Department Evaluation Committee (DEC)</b>	The committee included HoD (need basis), senior faculty member(s) of department from various levels, class advisor, Mentor of the students. (For details refer <b>Appendix V</b> )
17.	<b>CIA</b>	Refers to Continuous Internal Assessment.
18.	<b>ESE</b>	Refers to End Semester Examination
19.	<b>CBCS</b>	Choice Based Credit System (CBCS) is a versatile and flexible option for each student to achieve their target number of credits by using their choice both in terms of pace and sequence of courses. The students are given the privilege to choose any course as an elective which they have not studied before.
20.	<b>GPA</b>	Refers to Grade Point Average
21.	<b>CGPA</b>	Refers to Cumulative Grade Point Average
22.	<b>CEC</b>	Refers to Career Enhancement Courses
23.	<b>PCC</b>	Refers to Professional Certificate Courses
24.	<b>VAC</b>	Refers to Value Added Courses

#### 4. ADMISSION

##### 4.1 B.E. / B.Tech. Degree Programme (I Semester)

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

(OR)

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

##### 4.2 Lateral Entry Admission

The candidates who possessed the Diploma in Engineering / Technology awarded by the State Board of Technical Education, TamilNadu or its equivalent are eligible to apply for Lateral

entry admission to the third semester of B.E. / B.Tech., as per the rules fixed by Government of TamilNadu.

(OR)

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 may be two additional Engineering subject(s) in the third and fourth semesters as prescribed by the AEC, if necessary.

#### 4.3 Re - admission

Students, who have discontinued for reasons other than disciplinary action, may be readmitted as per guidelines given by DoTE, Government of Tamil Nadu and Anna University. DEC shall study and recommend on the exception and addition of courses to be registered for, by the student concerned during re-admission. The details shall be forward to AEC for approval and the committee's decision shall be final.

The eligibility criteria shall be as prescribed by Anna University, Chennai and Government of Tamil Nadu from time to time.

### 5. PROGRAMMES OFFERED

5.1 A student may be offered admission to any one of the branches of study approved by the Authorities. Degree programme affiliated to Anna University, under CBCS for students admitted from 2023 onwards in the following branches of Engineering and Technology as in Table 1.

**Table 1. List of B.E. / B.Tech. programmes offered**

B.E.	B.Tech
Aeronautical Engineering	Agricultural Engineering
Biomedical Engineering	Artificial Intelligence and Data Science
Computer Science and Engineering	Bio Technology
Electronics and Communication Engineering	Computer Science and Business Systems
Electrical and Electronics Engineering	
Mechanical Engineering	
Computer Science and Engineering (Artificial Intelligence and Machine Learning)	

5.2 In addition to the regular four years B.E./B.Tech programmes, the following are offered by the Institution :

#### 5.2.1 B.E. / B.Tech with Honors

Students can earn, BE/BTech degree with honors in the chosen discipline of Engineering by opting for six additional courses across the list of professional electives / verticals offered by their parent department.

### 5.2.2 B.E. / B.Tech Honors (with specialization)

Students can earn, B.E. / B.Tech degree, honors (with specialization) in the chosen discipline of Engineering by opting for six additional courses from one of the verticals offered by their parent department.

### 5.2.3 B.E. / B.Tech with minor degree

Students who are desirous of pursuing their special interest areas other than the chosen discipline of Engineering can earn, B.E. / B.Tech with minor degree by opting for six additional courses from one of the verticals offered by the department other than their parent Department.

## 6. ACADEMIC STRUCTURE OF PROGRAMMES

### 6.1 Medium of Instruction

The medium of instruction for the entire programme will be English.

### 6.2 Categorization of Courses

The B.E / B.Tech programmes shall have a curriculum with syllabi comprising of theory, theory cum practical, practical courses in each semester, professional skills training/industrial training, project work, soft skills, 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 and Social Sciences including Management (HSMC)** Courses include Technical English, Communication skills, Humanities and Management.
- ii. **Basic Sciences (BS)** Courses include Mathematics, Physics, Chemistry, etc.
- iii. **Engineering Sciences (ES)** Courses include Engineering Practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer, etc.
- iv. **Professional Core (PC)** Courses include the core courses relevant to the chosen specialization/branch of study.
- v. **Professional Elective (PE)** Courses include the elective courses relevant to the chosen specialization/ branch of study.
- vi. **Open Elective (OE)** Electives from other technical and/or emerging courses are given as a separate list of Elective Courses offered by the Engineering / Science Departments and a student can choose a Course as Open Elective from the above list of Courses.
- vii. **Career Enhancement Courses (CEC)** include Project, Industrial Training / Practical Training/ Internship/ Summer Projects / Seminars /Professional Practices /Case Study, Value added courses.
- viii. **Mandatory Courses (MC)** include Environmental Science and Engineering, Induction Programme, Constitution of India, Essence of Indian traditional language.

\*Minor variations are allowed as per the need of the respective discipline.

### 6.3 Curriculum

The curriculum will comprise courses of study as given in respective department in accordance with the prescribed syllabi. The hours / week listed in syllabus for each of the course refer to periods/week. The curriculum consists of (a) Basic Sciences, (b) Humanities and Social sciences (c) Engineering Sciences (d) Professional cores (e) Professional electives (f) Open electives (g) Employability Enhancement courses (h) Mandatory courses and (i) Induction programme and as per AICTE guidelines.

### 6.4 Electives

Every student shall opt for electives from the list of electives of the respective degree programme in consultation with the Tutor, Programme Co-ordinator and the HoD. A student shall undergo two open elective courses and six professional elective courses. Professional electives will be offered from 5<sup>th</sup> semester to 8<sup>th</sup> semester. Minimum number of credits to be earned for open elective courses is 6. Minimum number of credits to be earned for professional elective courses is 18. Open electives are the elective courses offered by a department for students of other branches and professional electives are courses offered by a department to the students of their own branches only.

### 6.5 Project Work

Every student shall be required to undertake a suitable project in industry / research organization / department in consultation with the Head of the Department and the faculty guide and submit the project report thereon at the end of the semester in which the student registered, on date announced by the College / Department. A student shall register for the Project Work I in the 7<sup>th</sup> semester and for Project Work II in the 8<sup>th</sup> semester.

### 6.6 Induction Programme

All students shall undergo induction programme in the first semester for a duration of three weeks as per the guidelines of All India Council for Technical Education (AICTE). A student completing the induction programme will be awarded completed grade and only the students who complete the induction programme shall be considered as eligible for award of degree subject to satisfying other conditions. A student who does not complete the induction programme in the first semester shall Redo the same in the subsequent semesters.

### 6.7 Number of credits per semester

Curriculum of a semester shall normally have a blend of theory Courses and practical Courses. In addition, Career Enhancement Course(s) may also be included. Each course may have credits assigned as per clause 5.8. However, the total number of credits per semester shall not exceed 36 (including CEC, credit transfer from SWAYAM/NPTEL courses, re-registration courses, courses registered for honors/honors with specialization/minor degree, and excluding Value Added courses, reappearance courses).

### 6.8 Credit Assignment

Each course offered is given a L-T-P-C structure, depending on the number of Lecture (L), number of periods for Tutorial periods (T), number of periods for practical (P), C- credits required for an efficient teaching – learning process. A student is expected to put-in his / her

own efforts in proportion with periods spent in classroom, as defined in L-T-P-C structure. On successful completion of the course a student is said to have earned a specified number of credits defined for each course. Each course is assigned certain number of credits based on the following table :

**Table 2 : Credit Assigned**

Contact period per week	Credits
1 Lecture (L)	1
1 Tutorial Period (T)	1
1 Practical Period (P) (Laboratory Periods / CEC / Projects)	1 / 2

## 6.9 CAREER ENHANCEMENT COURSES (CEC)

### 6.9.1 Industrial Training / Practical Training/ Internship/ Summer Projects / Seminars / Professional Practices / Case Study.

The students may undergo industrial training/Internship if mandated in the curriculum for periods as specified in the curriculum during the summer/winter vacation, the training being taken on a continuous basis for the periods mentioned. The industry / organization is to be selected with the approval of the Department Evaluation Committee (DEC). The students may undergo Internship at a Research organization / University/ Industry (after due approval from the Head of the Institution) for the period prescribed in the curriculum during the summer / winter vacation, in lieu of Industrial training

The Industrial training/ Practical Training/ Internship/ Summer Projects / Seminars / Professional Practices / Case Study which is successfully completed by the student in a particular semester during the course of study is eligible for including in the grade sheet in the immediate next semester by registering it. The final year project period at industry / research organization will not be considered as industrial Training/internship.

### 6.9.2 Industrial Visit

Every student is required to go for at least one Industrial visit every year starting from the second year of the Programme subject to the approval of the Head of the Department and Principal. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

### 6.9.3 Professional Certificate Courses

Students have to undergo one credit courses offered by experts from industry / research organizations and approved by academic council. Students can register such courses from his/her second year of study as and when these courses are conducted by the Departments. A student can also permitted to register for these courses of other Departments.

If a student does not successfully complete the registered industry supported one credit courses in a semester, the registration of that course will be considered as withdrawn. Further, it will not be treated as arrear and if he / she wishes, he/she can re-register for the same course in the ensuing semesters and successfully complete it as and when it is offered subsequently.

#### 6.9.4 Online Courses offered through SWAYAM / NPTEL

Students may be permitted to register maximum of two online courses, subject to a maximum of six credits, registered through SWAYAM instead of Professional/Open Elective Courses ( For Honors / Honors with Specialization / Minor degree, additional two SWAYAM / NPTEL online courses with 3 credits each, are permitted for credit transfer) of regular B.E/B. Tech Programme with the approval of BOS through DEC. The online course of minimum 3 credits can be considered instead of one Professional / Open elective course.

DEC finalizes the courses to be permitted for credit transfer through SWAYAM / NPTEL prior to the commencement of the semester. The courses selected through the SWAYAM/ NPTEL may not be necessarily the courses which are offered in the list of Professional/Open Elective courses, as part of the curriculum.

The Committee also intimates the students about the selected courses prior to the commencement of the semester, identify and designate a Course Coordinator for the online course(s) offered. The Course Coordinator guides the students throughout the course, submits the certificates and marks earned by the students to the office of the CoE during credit transfer request by the student.

The student has to register for the credit transfer of the online course during the course registration. The online course(s) which is/are successfully completed by the student in a particular semester during the course of study is eligible for credit transfer in the immediate next semester by registering it (i.e. an online course is eligible for credit transfer in the immediate next semester only)

#### 6.9.5 Soft Skills

Every Student is required to go for soft skill courses during first year of study. The soft skill course includes the communication skill, interpersonal skill and career development courses, etc. (Non Credit).

#### 6.9.6 Value added courses

Value added courses shall be offered by the Department with the prior approval from BoS. The credits earned through value added course shall be over and above the total credit requirement prescribed in the curriculum for the award of degree. Students can earn maximum of six credits from a value added courses subject to maximum of one value added course per semester. The permitted credit structure for a value added course is 3. Industry offered and skill development courses shall be considered under this category. These value added courses can also be undergone through online platform approved by the Board of Studies through DEC. The course(s) (if pursued through online mode) which is/are successfully completed by the student in a particular semester during the course of study is eligible for including in the grade sheet in the immediate next semester by registering it.

Students may be permitted to register maximum of one value added course, subject to the maximum of three credits registered through, value added course.



Instead of one professional /open elective courses of regular B.E/B.Tech. programme with the approval of Bos through DEC. The value added course of minimum 3 credits can be considered instead of one professional /open elective course.

### 6.9.7 Course Numbering Scheme

Each course is denoted by a unique code consisting of 9 alphanumeric characters. The details of the numbering scheme are in APPENDIX A.

### 6.9.8 Credit Requirement for Programmes

The total number of credits that a student earns during the period of study is called the total credits. For the successful completion of the B.E/B.Tech Programme, a regular student must earn 169 credits (varies with the programme) in minimum of eight semesters, while a lateral-entry student must earn 127 credits in a minimum of six semesters.

## 7. DURATION OF THE PROGRAMMES

A student is normally expected to complete the B.E / B.Tech. Programme in 4 years i.e 8 semesters, but in any case (including authorized break of study on one year) not more than 7 years i.e. 14 Semesters (vide clause 18).

A Lateral entry student is normally expected to complete the B.E. / B.Tech programme in 3 years (6 semesters), but in any case (including authorized break of study of one year) not more than 6 years i.e. 12 semesters. The duration of B.E. / B.Tech programme for a lateral entry student shall be three academic years with semester pattern. The courses of study for the lateral entry Diploma candidates shall be in accordance with the prescribed syllabus of third to eighth semesters of the full time four year B.E. / B.Tech. Degree Programme of the respective branches. The courses of study for the lateral entry science graduates shall be in accordance with the prescribed syllabi of the full time four year B.E. / B.Tech. Degree programme of the respective branches. The additional courses offered will be decided by the respective Chairman, Board of Studies.

Each semester normally consists of 90 working days, including test or 450 hours or 540 periods of each 50 minutes duration. The HOD shall ensure that every course coordinator imparts instruction as per the number of contact periods specified in the syllabus covering the full content of the syllabus for the course being taught.

The total duration for completion of the programme reckoned from the commencement of the first semester to which the student was admitted shall not exceed the maximum duration specified

Due to Pandemic / Abnormal situations the Scheme of Examinations and Evaluation will be followed as per the guidelines issued by the Government of Tamil Nadu and Anna University, Chennai.

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 this clause irrespective of the period of break of study in order that he/she may be eligible for the award of the degree

For the purpose of regulations, the academic year will be divided into two semesters, the odd semester normally spanning from June to November and the even semester from December to May.

## 8. COURSE REGISTRATION

Each student, on admission shall be assigned to a Faculty Advisor, who shall advise and counsel the student about the details of the academic programme and the choice of courses considering the student's academic background and career objectives.

In the first semester of study, each student on admission shall register for all the courses prescribed for the first semester in the curriculum.

From the first semester onwards, every student shall enroll for all the courses of the next Semester in the current Semester itself. The enrollment for all the courses of the next semester will commence 10 working days prior to the last working day of the current Semester.

From second semester onwards, the student shall confirm the enrollment by registering for the courses within the first ten working days after the publication of results including revaluation results of the previous semester examinations. However, the student has to register for the courses for which the student has not enrolled, if these are the courses in which the student has failed.

The registration process for the courses offered in the online registration mode in the forthcoming semester, will commence preferably 10 working days prior to the last working day of the current semester.

A department shall offer a course only if a minimum of 10 students register for that course. This minimum number may vary from course to course and shall be specified by the department from time to time.

Students who rejoined the programme after availing permitted Break of Study or Readmitted by DOTE / University need not submit new Enrollment Form, but they have to submit the course registration form. The Transfer and Lateral Entry Students who joined the programme in a particular semester have to submit the course registration form within the first 10 working days after the date of joining.

After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Continuous Internal Assessment Marks and appear for the End Semester Examination (ESE) or as specified in the curriculum.

### 8.1 Credit details for Course Registration

A student has to earn the total credits specified in the curriculum of the respective programme of study, in order to be eligible to obtain the degree. However, if the student wishes, then he/she is permitted to earn more than the total number of credits prescribed in the curriculum.

The number of credits, most students are expected to register for, in a semester, will be about 20 - 30 credits (excluding arrears). so that they complete the programme within the specified duration of the programme. The minimum credits a student can register for, in a regular semester shall be 12 and the maximum credit a student can register is 36 (excluding arrears). Students shall register for project work in the 7<sup>th</sup> and 8<sup>th</sup> semester or 8<sup>th</sup> semester only.



Table 4 : Credit Range

PROGRAMME	PRESCRIBED CREDIT RANGE
B.E. / B.Tech. (Regular)	169
B.E. / B.Tech. (Lateral Entry)	127
B.E. / B.TECH (Honours)	(169 / 127) + 18 Credits

## 8.2 Flexibility to Add / Drop courses

**8.2.1** 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. However, if a student wishes, he / she is permitted to earn more than the total number of credits prescribed in the curriculum of the Programme.

**8.2.2** The students shall undergo the eighth semester courses other than the Project Work in the sixth and seventh semesters, provided they do not have current arrears and have a CGPA of 7.50 and above at the end of Semester IV. The Faculty Advisor, HoD, in consultation with the faculty handling the said courses shall forward the proposal to the CoE for approval at least 4 weeks before the commencement of the sixth semester of the programme. Total numbers of credits of such courses shall not exceed 3.

**8.2.3** The students should not have standing arrears and have a CGPA of 7.50 and above for registering additional courses. However, the maximum number of credits the student can register in a particular semester cannot exceed 36 credits (Including the CEC, credit transfer from SWAYAM/ NPTEL courses, Re-registration courses, course registered for Honors/Honors with Specialization/ Minor degree and Excluding the courses for which the student has done reappearance registration, value added courses).

**8.2.4** From the second to final semesters, the student has the option of dropping existing theory courses in a semester during registration. The 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.

## 8.3 Reappearance Registration / Re-enrollment Registration

**8.3.1** If a student fails in a Theory (except electives) / Theory with Practical component/ Practical course(s), the student shall do reappearance registration for that course in the subsequent semester and attend end semester examination.

**8.3.2** If the theory course, in which the student has failed, is a Professional Elective or an Open Elective course, the student may register for the same or any other Professional Elective or Open Elective Course respectively in the subsequent semesters. Such changes can be done only with due approval by the HoD.

**8.3.3** The student who fails in Project work shall register for the same in the subsequent semester, satisfy attendance requirement, earn continuous assessment marks and appear for the ESE.

**8.3.4** If a student is prevented from writing ESE due to lack of attendance (overall attendance is below 65%), the student has to rejoin the programme in the next academic year after getting readmission order from DOTE/University. The student shall attend the classes and fulfil the attendance requirements as per clause 8, earn continuous assessment marks and appear for the ESE.

**8.3.5** B.E. / B. Tech. (Honours) Specialisation in the same discipline, B.E. / B. Tech. (Hons) and B.E. / B. Tech. minor in other specialization

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

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

**ii. B.E / B.Tech. Honours**

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

**iii. B.E. / B.Tech. (Minor in other specialisation)**

The student should have earned additionally a minimum of 18 credits in any one of the verticals of other B.E/B.Tech programmes.

Students can earn maximum of 6 credits in online mode (SWAYAM platform), out of these 18 credits as approved by Board of Studies

B.E. / B. Tech. (Hons) Specialization in the same discipline, B.E / B.Tech. Honors and B.E. / B.Tech. minor in other specialization degree will be optional for students.

For the categories 6.10.1 (i) to 6.10.1(ii), the students will be permitted to register the courses from V Semester onwards provided the marks earned by the students until III semester should be of CGPA 7.50 and above and cleared all the courses in the first attempt.

For the category 6.10.1 (iii), the students will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above

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

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. 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, they will not be considered for calculation of CGPA.

## 9. REQUIREMENTS FOR APPEARING FOR CIA, ESE

9.1 A student who has fulfilled the following conditions shall be deemed to be eligible to appear for the CIA - I, CIA - II, CIA - III and ESE. Ideally, every student is expected to attend all the classes and earn 100% attendance. Students who have earned not less than 75% attendance course wise taking into account the number of periods required for that course as specified in the curriculum. Table 5 illustrates the mandatory attendance requirement for CIA - I, CIA - II, CIA - III and ESE.

**Table 4 : Mandatory Attendance Requirement for CIA - I, CIA - II, CIA - III and ESE**

Test / Examination Type	Period of Calculation	Minimum % of attendance required
CIA - I	<b>First Semester</b> From the date of joining of course to three working days before the start of CIA – I	60%
	<b>Second to Eighth semester</b> From the date of commencement of the class to one week before the start of CIA - I	75%
CIA - II	From the date of joining (1 <sup>st</sup> semester) / date of commencement of class (2 <sup>nd</sup> to 8 <sup>th</sup> Semester) to one week before the start of CIA - II	75% (for students maintaining 80% or more attendance between CIA - I and CIA - II, but falls short of the 75% cumulative requirement, the requirement may be relaxed if recommended by the AEC)
CIA - III	From the date of joining (1 <sup>st</sup> semester) / date of commencement of class (2 <sup>nd</sup> to 8 <sup>th</sup> Semester) to one week before the start of CIA - III	75% (for students maintaining 80% or more attendance between CIA - II and CIA - III, but falls short of the 75% cumulative requirement, the requirement may be relaxed if recommended by the AEC)

ESE	From the date of joining (1 <sup>st</sup> semester) / date of commencement of class (2 <sup>nd</sup> to 8 <sup>th</sup> Semester) to the last day of instruction	75%
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Every course coordinator is required to maintain an ATTENDANCE AND ASSESSMENT RECORD' for every semester which consists of attendance marked in each Theory / practical/ EEC class etc, the assessment marks and the record of class work (topics covered), separately for each course handled by the course coordinator. This should be submitted to the HoD periodically (at least two times in a semester) for checking the syllabus coverage and the records of assessment marks and attendance. The HoD will affix his/her signature and date after due verification. At the end of the semester, the record should be verified by the HoD who shall keep this document after the approval from the Principal for five years. The records of attendance and assessment of both current and previous semesters should be available for inspection whenever required.

- 9.1.1** A student shall normally be permitted to appear for ESE of the course if he / she has satisfied the attendance requirements (vide Clause 8). He /she is eligible to register for ESE in that semester by paying the prescribed fee.
- 9.1.2** A Candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester. Ideally every student is expected to attend all classes 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 atleast 75% of the classes. Therefore, he/she shall secure not less than 75%.
- 9.1.3** However, a candidate who secures overall attendance between 65% and 75% in the current semester due to medical reasons (prolonged hospitalization / accident / specific illness)/Participation in Sports events may be permitted to appear for the current semester examinations subject to the condition that the candidate shall submit the medical certificate/ sports participation certificate attested by the Head of the Institution. The same shall be forwarded to the Controller of Examinations for record purposes.
- 9.1.4** Candidates who secure less than 65% overall attendance and candidates who do not satisfy the clause 8 shall not be permitted to write the ESE and not permitted to move to the next semester. They are required to repeat the incomplete semester in the next academic year, as per the norms prescribed.
- 9.1.5** The students who are consistently good in academics ONLY be considered for the grant of ODL under Co-curricular activities by the competent authorities. The following activities shall be considered for the sanction of ODL ;
- ⦿ **Sports and Games** : TIES, Inter Collegiate, Inter Zonal, Inter University, State Level, National Level and Open Tournaments.
  - ⦿ **NCC** : Camps and expeditions, NSS camps

- ⊗ Cultural Programme at State, National and International Level
- ⊗ **Seminar / Symposia** : Paper presentation/Quiz
- ⊗ Leadership courses organized by other organizations & Alumni Association activities, Association activities, Placement activities.
- ⊗ Training programs / Internship at industries and Higher learning Institutions
- ⊗ Personal damage incurred during the extracurricular activities
- ⊗ The ODL requisition letter shall be forwarded to the Principal through the HoD of the student by the staff-in-charge of the respective activities before completion of every activity.
- ⊗ The ODL sanctioned letters shall be submitted to the Department Office. The faculty-in-charge of the department office will check the eligibility for the award of attendance at the end of semester and the same may be submitted to DEC for approval.

**9.1.6** The student should register all the courses of current semester and all the arrear courses in the previous semesters. If any student fails to register and pay the examination fees within the due date, he/she shall not be permitted to attend the ESE. However, he/she will be permitted to continue their studies in the next higher semester, provided that the student satisfies the requirements as stipulated in this clause of this regulation.

**9.1.7** Those students who are not deemed to have completed the semester with references to the conditions specified above shall undergo the semester again in all the courses in the respective semester during next academic year. He/she shall seek re-admission as per the norms of the affiliating University/DOTE (Directorate of Technical Education).

The days of suspension for a student on disciplinary grounds will be considered as days of absence for calculating the percentage of attendance for each individual course.

## **10. TEMPORARY BREAK OF STUDY FROM A PROGRAMME**

**10.1** Break of study is normally not permitted. However, if a student intends to temporarily discontinue the programme in the middle of a semester / year for valid reasons (such as Internships, accident or hospitalization due to prolonged ill health) and wishes to re-join the programme in the next academic year, he / she shall apply in advance to the Principal through the HoD, stating the reasons. The application shall be submitted not later than the last date for registering for the ESE. Break of study is permitted only once during the entire period of the degree programme.

**10.2** The student permitted to re-join the programme after the break shall be governed by the rules and regulations in force, at the time of re-joining.

**10.3** The duration specified for passing all the courses for the purpose of classification of degree(vide clause 17) shall be increased by the period of such break of study permitted

**10.4** If a student is detained for want of requisite attendance, academic progress and good conduct, the period spent in that semester shall not be considered as permitted Break of Study and Clause 10 is not applicable for such cases.

**11. ASSESSMENT PROCEDURES FOR AWARDING MARKS**

All B.E. / B.Tech. Programmes consists of different categories of courses as mentioned in table 5. Appearance in ESE is mandatory for all courses excluding the courses for which only continuous assessment is recommended as mentioned in table 5.

Performance in each course of study shall be evaluated based on (i) Continuous assessments throughout the semester and (ii) ESE at the end of the semester. (i.e.) Each course shall be evaluated for a maximum of 100 marks as shown below :

**Table 5 : Categories of Courses**

S. No.	Category of course	CIA	ESE
1.	Theory	40	60
2.	Theory cum Practical	50	50
3.	Practical	60	40
4.	Project Work	40	60
5.	Online SWAYAM/NPTEL Courses (Optional)	Marks offered by SWAYAM / NPTEL shall be directly considered	
6.	All CEC Courses (Except Practical Courses and Project Work)	100	-
7.	Mandatory Courses (Except Induction Program #)		
8.	Professional Certificate Courses * (Optional)		

Students can earn maximum of 6 credits in online mode (SWAYAM platform), out of these 18 credits as approved by Board of Studies.

B.E. / B. Tech. (Hons) Specialization in the same discipline, B.E. / B.Tech. Honors and B.E. / B.Tech. minor in other specialization degree will be optional for students.

For the categories 6.10.1 (i) to 6.10.1 (ii), the students will be permitted to register the courses from V Semester onwards provided the marks earned by the students until III semester should be of CGPA 7.50 and above and cleared all the courses in the first attempt.

For the category 6.10.1 (iii), the students will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above

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



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. 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, they will not be considered for calculation of CGPA.

### 11.1 Assessment for Theory Courses Including Mandatory Courses

Theory Courses including mandatory courses are to be assessed out of 100 marks, the maximum marks for CIA is fixed as 40 and the ESE carries 60 marks.

The ESE for theory courses including mandatory courses will be of 3 hours duration and shall normally be conducted for a maximum of 100 marks during the Odd and Even Semesters. Every student should appear for the ESE for all the courses excluding the courses for which only continuous assessment is recommended.

A minimum of two tests would be conducted in a day (in the case of tests and they would be of two hours duration each) students will have two hours of coaching session followed by the CIA. In case a student misses the assessment due to medical reasons (hospitalization / accident / specific illness) or due to participation in the College / University / State / National / International level academic and sports events with prior permission from the HOD, a Reassessment may be given at the end of the semester after getting approval from the HOD through the Course Coordinator concerned.

To arrive the Continuous Assessment Marks, the following guidelines should be followed.

**Table 6 : Theory Courses : Continuous Assessment Marks**

CIA I (100 Marks)		CIA II (100 Marks)		CIA III (100 Marks)		Total
Individual Assignment / Case Study / Seminar / Mini project	Written Test	Individual Assignment / Case Study / Seminar / Mini project	Written Test	Individual Assignment / Case Study / Seminar / Mini project	Written Test	Continuous Assessment Marks
40	60	40	60	40	60	300*

\*The weighted average shall be converted into 40 marks for Internals

A minimum of three CIA will be conducted as a part of continuous assessment during the semester by the respective department. Each Continuous assessment is to be conducted for 100 marks and will have to be distributed in two parts viz., Individual Assignment/Case study/ Seminar/Mini project and Test with each having a weightage of 40% and 60% respectively. The tests shall be in written mode. The total Continuous assessment marks of 300 shall be converted into a maximum of 40 marks and rounded to the next integer.

### 11.2 Assessment for Practical Courses

For practical including virtual practical Courses, out of 100 marks, the maximum marks for CIA is fixed as 60 and the ESE carries 40 marks.

Every practical exercise / experiment shall be evaluated (as per the rubrics approved by the class committee) based on conduct of experiment / exercise and records. There shall be at least one model test. The criteria for arriving at the CIA marks of 60 is as follows

**Table 7 : Practical Courses : Continuous Internal Assessment Marks :**

Continuous Assessment (100 Marks)*	
Evaluation of Laboratory experiment, results & Record	Test
75	25

\*Continuous Assessment marks shall be converted into 60 marks

The ESE for practical courses shall be of 3 hours duration and normally be conducted for a maximum of 100 marks during the odd and Even Semesters.

### 11.3 Assessment for Theory with Practical Courses

Weightage of Continuous Assessment and end semester examination marks will be 50% each. The distribution of marks for the theory and laboratory components in the Continuous Assessment and end semester examination for different types of courses are provided in the table 8.

**Table 8 : Theory Courses with Practical Component: Continuous Assessment Marks**

L	T	P	C	Continuous Internal Assessment			ESE
				I	II	III	
1	0	4	3	Laboratory (15%)	Laboratory (15%)	Theory (20%)	Laboratory only (50%)
1	0	2	2	Laboratory (15%)	Laboratory (15%)	Theory (20%)	Laboratory only (50%)
2	0	2	3	Theory (15%)	Theory (15%)	Laboratory (20%)	Theory (25%) Laboratory (25%)
3	0	2	4	Theory (15%)	Theory (15%)	Laboratory (20%)	Theory (35%) Laboratory (15%)
2	0	4	4	Theory (15%)	Theory (15%)	Laboratory (20%)	Theory (15%) Laboratory (35%)

The procedure for the conduct of Continuous Assessment for theory and laboratory components shall be as per the clause 10.1 and 10.2 respectively. The weighted average shall be converted into 50 marks for Continuous Internal Assessment.



#### 11.4 Assessment for Project Work

The Project work such as mini project and final year project shall be carried out under the supervision of a faculty in the department concerned.

The students who completed their final semester courses (except project work) in advance, shall be permitted to carry out their final semester Project Work for six months in an industry/research organization on the recommendations of the HoD. In such cases the approval should be obtained from the industry concerned, the project work shall be jointly guided by a supervisor of the department and an expert as joint supervisor from the respective organization. The student shall be instructed to meet the supervisor periodically and to attend the review committee meetings and shall submit attendance particulars from the joint supervisor for evaluating the progress

For Project Work, out of 100 marks, the maximum marks for CIA is fixed as 40 and the ESE (Project Report evaluation and Viva-Voce examination) carries 60 marks. Project work may be carried out by a single student or a group of students (not exceeding 4).

There shall be three reviews during the semester. The student shall make presentation on the progress made by him / her before the "Project Review Committee". The total marks obtained in the three reviews shall be reduced for 40 marks and rounded to the next integer. The HoD shall constitute a "Project Review Committee" for each Programme. There shall be a minimum of three members in the Review Committee. The Project Guide will be one of the members of the Review Committee.

The student(s) is expected to submit the Project Report on or before the notified date. The ESE for Project Work shall consist of evaluation of the final Project Report submitted by the student(s) of the Project group and viva-voce examination by an external examiner and internal examiner.

The project report shall carry a maximum of 20 marks. The project report shall be submitted as per the approved guidelines as given by the CoE. Same marks shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 40 marks. Marks are awarded to each student of the project group is based on the individual performance in the viva- voce examination.

The CIA and ESE marks for Project Work and the Viva-Voce Examination will be distributed as indicated below.

**Table 9 : Project Work : CIA and ESE**

Continuous Internal Assessment Marks (40)			End Semester Examinations Marks (60)			
Review I	Review II	Review III	Project Report		Viva-Voce Examination	
10	15	15	Internal	External	Internal	External
			10	10	20	20

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.

### 11.5 Interdisciplinary Project

For the final year Mini/ main project, students may be allowed to do interdisciplinary projects. The interdisciplinary project team consists of 4 members in a Team, consisting 3 students from 3 different branches or 4 students from same branch. First Project Guide shall be allotted from parent department and the second members shall be allotted from the respective domain (other department). The CIA of the project will be carried out by the Interdisciplinary Project Review committee by the respective departments. The Project Reviews, CIA Marks and ESE marks will be same as the Regular Project. Interdisciplinary Project Review Committee will be constituted by the CFRD Head and approved by the principal.

**Table 10 : Interdisciplinary Project : Review Committee Constitution**

Department X	Project Guide nominated by the HoD
Department Y	One faculty nominated by the respective HoD

The weightage for the project guides and project review committee members to award Continuous Assessment marks is indicated below.

**Table 11: Interdisciplinary Project : CIA Marks**

Project Guide	Member(s)
50%	50%

The ESE marks will be distributed as indicated below.

**Table 12: Interdisciplinary Project : ESE Marks**

Report Evaluation (20 Marks)	Viva - Voce (40 Marks)	
External Examiner : 1	External Examiner : 1	External Examiner : 1
20 Marks	20 Marks	10 Marks

Internal and External Examiners are from the two different departments (X & Y) of the students.

### 11.6 Assessment for Industrial Training / Practical Training / Internship

The Industrial training / Practical Training / Internship shall carry 100 marks and shall be evaluated through CIA only. At the end of Industrial training / Practical Training / Internship, the student shall submit a detailed report including attendance on the training undergone and a certificate from the organization concerned. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three-member Departmental

Evaluation Committee constituted by the HoD consisting of Programme Coordinator, Faculty Advisor concerned and Senior Faculty. The evaluation report duly signed by the departmental evaluation committee and HoD shall be submitted to the office of the CoE.

#### **11.7 Assessment for Professional Certificate Courses**

The Seminar / Case Study shall carry 100 marks and shall be evaluated through CIA only. Every student is expected to present a minimum of 2 seminars per semester before the evaluation committee and for each seminar, marks can be equally apportioned. A three member committee appointed by the Head of the Department, consisting of the course coordinator and two experts from the Department, will evaluate the seminar and at the end of the semester, the marks shall be consolidated and taken as the final mark. The evaluation shall be based on the seminar paper (40%), presentation (40%) and response to the questions asked during presentation (20%).

#### **11.8 Assessment for Value Added Courses**

The Value Added Courses shall carry 100 marks and shall be evaluated through Continuous Assessments only. Two assessments shall be conducted during the Semester by the department concerned. The total marks obtained in the tests shall be reduced to 100 marks and rounded off to the nearest integer. The HOD may identify a faculty member as Coordinator for the Course. The Departmental Consultative committee consisting of the HOD, staff handling the course, Programme Coordinator and a Senior Faculty member nominated by the HOD shall monitor the evaluation process.

The Value Added Courses shall carry 100 marks and shall be evaluated through Continuous Assessments only. Two assessments shall be conducted during the Semester by the department concerned. The total marks obtained in the tests shall be reduced to 100 marks and rounded off to the nearest integer. The HOD may identify a faculty member as Coordinator for the Course. The Departmental Consultative committee consisting of the HOD, staff handling the course, Programme Coordinator and a Senior Faculty member nominated by the HOD shall monitor the evaluation process. The B.E. /B.Tech. Candidates who enrolled for value added courses have to earn minimum of 75% attendance, failing which the registration for courses will be cancelled.

#### **11.9 Assessment for SWAYAM/NPTEL Courses**

The students may be permitted to credit online courses which are offered through SWAYAM/NPTEL platform with the approval of BoS concerned (vide Clause 5.9.4) The course shall carry 100 marks and the marks awarded by the SWAYAM/NPTEL shall be directly considered for grading of the course. No grades shall be awarded for the attendance in the grade sheet for the online course. The attendance requirement as mentioned in Clauses 8 of Regulations 2023 is not applicable for the SWAYAM/NPTEL courses.

#### **11.10 Research Publication**

The student can register for the Research Publication as a value added course of respective credits with the approval of BoS concerned. Maximum of two students can form a team under the guidance of a faculty member and complete the publication in SCI / SCI

expanded / SCOPUS indexed / UGC Care list. Credits for the publication will be awarded as mentioned in Table 13. The students are not allowed for credit transfer for the research publication. The research publication completed in a semester during the course of study is eligible for including in the grade sheet in the immediate next EVEN / ODD by registering it.

**Table 13 : Research Publication : Award of Grade**

SI.No	Category of Journal	Credits
1.	One Research Publication in SCI/SCI-Expanded Journal	3
2.	One Research Publication in SCOPUS indexed Journal	2
3.	One Research Publication in UGC Care list Journal	1

## 12. MARKS DISTRIBUTION

### 12.1 Question paper pattern

**Table 14 : End Semester Examinations**

1 Mark (Objective or any type)	2 Marks	13 Marks	Total Marks
15	10	5 (Either or Type)	100
<b>For Mathematics paper only</b>			
2 Marks	16 Marks		Total Marks
10	5 ( Either or Type )		100
<b>For Engineering Graphics only</b>			
20 Marks			Total Marks
5 (Either or Type)			100

## 13. PASSING REQUIREMENTS

**13.1** A student who secures not less than 50% of total marks prescribed for the course [CIA + ESE] with a minimum of 45% of the marks prescribed for the ESE, shall be declared to have passed the course and acquired the relevant number of credits. This is applicable for theory, theory with practical component and practical courses (including project work).

**13.2** If a student fails to secure a pass in a theory course / theory with practical component / practical course (except electives), the student shall register and appear only for the end semester examination in the subsequent semester. In such case, the CIA 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. However, from the third attempt onwards if a student fails to obtain pass marks (CIA + ESE), then the student shall be declared to have passed the examination if he/she secures a minimum of 50% marks prescribed for the end semester examinations alone.

**13.3** If the course, in which the student has failed, is a Professional Elective or Open Elective course, the student may be permitted to register for the same or any other elective course in the subsequent semesters.

If any other Professional Elective or Open Elective course is opted by the student, 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 continuous assessment marks, fulfill the attendance requirements as per clause 7 and appear for the ESE.

**13.4** If a student fails to secure a pass in project work, the student shall register for the course in the subsequent semester/when offered next and repeat the course (vide clause 7.3.3).

**13.5** The passing requirement for the courses which are assessed only through purely internal assessments (CEC courses except Project Work and practical), is 50% of the internal assessment (continuous assessment) marks only

**13.6 Valued Answer Script review by the students**

All the students are allowed to review their valued answer scripts with the faculty in-charge of the course on the specified date (usually the reopening day). Any discrepancies in the valuation can immediately be brought to the notice of the CoE through concerned HoD.

**13.7 Revaluation**

A student can apply for revaluation in a theory course within 2 working days from the date of review of valued answer scripts by the students on payment of a prescribed fee along with prescribed application to the CoE through the HoD. The CoE will arrange for the revaluation and the following procedure is followed in awarding Grade Points after revaluation:

- i. If there is a change from fail to pass for a Candidate in a Course, Grade Point is awarded as per the applicable (relative/absolute) grading.
- ii. If a passed candidate in a course obtains more marks after revaluation, Revised Grading is used only when the candidate gets Higher Grade, otherwise no change in the grade awarded before the revaluation.

The results will be intimated to the student concerned through the HoD within 5 working days from the last date of application of revaluation. Revaluation is not permitted for practical course, practical component of theory with practical component courses and project work.

**13.8 Photocopy**

Photo Copies of answer script for theory subjects can be obtained from the office of the Controller of Examinations on payment of a prescribed fee specified for this purpose through proper application.

**13.9 Challenge revaluation**

Challenging the revaluation is permitted for those students who have applied for photocopy of answer script. The copy of the answer script is to be valued by a competent authority and the valued script should be submitted to the office of the COE along with prescribed fee for challenging the revaluation within 2 working days after the declaration of the Re-valuation results.

**14. AWARD OF LETTER GRADES**

**14.1** The award of grades will be decided based on relative grading principle. The relative grading is applicable to ONLY those students who have passed the examination as per the passing requirements enumerated above (vide clause 12). For those students who have not passed the examination, Reappearance (U) shall be awarded as shown in the below Table 15.

For those students who have passed the course, the relative grading shall be done. The marks of those students who have passed only shall be considered 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. For a given course, if the students' strength is greater than 30, the relative grading method shall be adopted. However, if the students' strength is less than 30 then the absolute grading shall be followed with the grade range as specified below.

**Table 15 : Grades and Range of Marks**

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

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

**Table 16 : Grades and Grade Points**

LETTER GRADE	GRADE POINTS	RESULT
O (Outstanding)	10	PASS
A+ (Excellent)	9	
A (Very Good)	8	
B+ (Good)	7	
B (Average)	6	
C (Satisfactory)	5	
U (Re-appearance)	0	RA (Re-appearance)
SA (Shortage of Attendance)	0	RC (Repeat Course)
WD (Withdrawal)	0	EA (Extended Appearance)
AB (Absent)	0	RA (Re-appearance)
WH (Withheld)	0	RA (Re-appearance)

A student is deemed to have passed and acquired the corresponding credits in a particular course if he/she obtains any one of the following grades: "O", "A+", "A", "B+", "B", "C". 'SA' denotes shortage of attendance and hence prevented from writing the ESE. 'SA' will figure both in the Grade Sheet as well as 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. WH denotes the result withheld for the particular course. The grades U,WD and WH will figure both in the Grade Sheet as well as in the Result Sheet. In both cases, the student has to appear for the ESE.

If the grade U/AB is given to the courses which are evaluated through CIA and ESE, is not required to satisfy the attendance requirements, but has to appear for the end semester examination and fulfill the passing requirements to earn a pass in the respective courses.

If the grade U/AB is given to the courses which are evaluated only through Continuous assessment, the student shall register for the course again in the subsequent semester, fulfill the passing requirements to earn pass in the course. However, attendance requirement need not be satisfied.

## 15. METHODS FOR REDRESSAL OF GRIEVANCES IN EVALUATION

Students who are not satisfied with the grades awarded in the ESE of Theory for regular and arrear exams can seek redressal as illustrated in Table 17

**Table 17 : Grievance Redressal Mechanism**

Sl. No.	Redressal Sought	Methodology	
		Regular Exam	Arrear Exam
1.	Revaluation	⊗ Apply for viewing of answer booklet and then apply for revaluation after course expert recommendation	
2.	Challenge of Evaluation	⊗ Apply for viewing of answer booklet and then apply for revaluation after course expert recommendation. ⊗ Next apply for challenge of evaluation	

Note : All applications to be made to COE along with the payment of the prescribed fee.

### Challenge of Evaluation – Flow Process

**Table 18 : Challenge of Evaluation – Flow Process**

<b>Step 1</b>	A student can make an appeal to the CoE for the review of answer scripts after paying the prescribed fee
<b>Step 2</b>	CoE will issue the viewing of answer scripts to the student
<b>Step 3</b>	The faculty who had handled the subject will evaluate the script and HoD will recommend.
<b>Step 4</b>	A committee consisting of 2 evaluators appointed by CoE will review and declare the result.
<b>Step 5</b>	If the result is in favour of the student, the fee collected will be refunded to the student.
<b>Step 6</b>	The final mark will be announced by CoE.

## 16. Grading System for Mandatory Courses

Mandatory Courses are courses that are required to be completed to fulfill the degree requirements (e.g. Life skills, Environmental science, etc.). They are normally non – credit based. These courses will not be taken in to consideration for the GPA / CGPA calculations. Each of these courses is assessed continuously and internally for a total mark of 100. The pass mark is 50%. Students, who fail to pass this course, are required to repeat the course, when offered next.

**16.1** For mandatory non-credit courses the student must satisfy the minimum attendance requirement & passing criteria as specified for the course. These courses do not carry credits but needs to be completed to fulfill the degree requirements.

**16.2** For the mandatory non-credit courses student completing the course will be awarded Pass grade (P) grade and those who fail to satisfy the attendance requirement or fail to satisfy the minimum passing requirement of 50% marks, will be awarded Fail (F) grade and the student must re-register for the course when it is offered next.

### 16.3 Grade Sheet

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

- ⊙ The College Name and Affiliating University.
- ⊙ The list of courses registered during the semester and the grades scored.
- ⊙ The Grade Point Average (GPA) for the semester.
- ⊙ The Cumulative Grade Point Average (CGPA) of all courses registered from first semester onwards.
- ⊙ On completion of a semester, each student is assigned a GPA which is computed as below for all courses registered for, by the student during that semester.
- ⊙ 
$$\text{GPA} = \frac{\sum(C_i \times GP_i)}{\sum C_i}$$

where  $C_i$  is the credit for a course in that semester and  $GP_i$  is the Grade Point earned by the student for that course. The **SGPA** is rounded off to two decimals.

The overall performance of a student at any stage of the Degree programme is evaluated by the **CGPA** up to that point of time.

$$\text{CGPA} = \frac{\sum(C_i \times GP_i)}{\sum C_i}$$

where  $C_i$  is the credit for each course in each of the completed semesters at that stage and  $GP_i$  is the grade point earned by the student for that course. The **CGPA** is rounded off to two decimals.

### 16.4 Formula for Calculating Percentage

$$\text{CGPA} \times 9.5 = \% \text{ of Marks}$$



**17. ELIGIBILITY FOR THE AWARD OF DEGREE**

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

- i. Successfully gained the required number of total credits as specified in the curriculum corresponding to the particular programme within the stipulated time.
- ii. Successfully completed the course requirements, appeared for the ESE and passed all the subjects prescribed in all the 8 semesters within a maximum period of 7 years and 6 years in the case of Lateral Entry reckoned from the commencement of the first (third in the case of Lateral Entry) semester to which the candidate was admitted.
- iii. Successfully passed any additional courses prescribed by the Academic council
- iv. Successfully completed the NCC / NSS / NSO / YRC requirements if any.
- v. Successfully passed any additional courses prescribed by the Department & concerned whenever readmitted under regulations 2023 (R23) (vide Clause 3.3)
- vi. No disciplinary action pending against the student.
- vii. The award of Degree must have been approved by the Academic Council.

**17.1 Classification of the Degree Awarded****17.1.1 First Class with Distinction**

Degree (i)	Duration of programme (ii)	Duration permitted (iii)	Additional credits above the requirement of curriculum (iv)	CGPA (v)	Pass in (vi)	Break of study (vii)	Prevention due to lack of attendance	Withdrawal from writing ESE (viii)
B.E. / B.Tech. (Regular)	4 years	5 years	-	8.50	First attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E. / B.Tech. (Lateral Entry)	3 years	4 years	-	8.50	First attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E. / B.Tech. (Honours) Specialisation in the same discipline	3 / 4 years (Lateral entry, Regular, respectively)	4 / 5 years (Lateral entry, Regular, respectively)	18 credits from any one vertical of the same programme	8.50	First attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E. / B.Tech. (Honours)	3/4 years (Lateral entry, Regular, respectively)	4/5 years (Lateral entry, Regular, respectively)	18 credits from more than one verticals of the same programme	8.50	First attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E. / B.Tech. minor in other specialisation	3/4 years (Lateral entry, Regular, respectively)	4/5 years (Lateral entry, Regular, respectively)	18 credits from any one vertical of the other programme	8.50	First attempt	One year authorized break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt

## 17.1.2 First Class

Degree (i)	Duration (ii)	Duration permitted (iii)	Additional credits (iv)	CGPA (v)	Pass in (vi)	Break of study (vii)	Prevention due to lack of attendance	Withdrawal from writing examination (viii)
B.E. / B.Tech. (Regular)	4 years	5 years	-	6.50	-	One year authorised break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-
B.E. / B.Tech. Lateral Entry	4 years	5 years	-	6.50	-	One year authorised break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-
B.E. / B.Tech. (Honours) Specialisation in the same discipline	3 / 4 years (Lateral entry, Regular, respectively)	4 / 5 years (Lateral entry, Regular, respectively)	18 credits from any one vertical of the same programme	7.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E. / B.Tech. (Honours)	3/4 years (Lateral entry, Regular, respectively)	4/5 years (Lateral entry, Regular, respectively)	18 credits from more than one verticals of the same programme	7.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E. / B.Tech. minor in other specialisation	3/4 years (Lateral entry, Regular, respectively)	4/5 years (Lateral entry, Regular, respectively)	18 credits from more than one verticals of the other programme	6.50	-	One year authorised break of study Included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-

## 18. PROVISION FOR WITHDRAWAL FROM EXAMINATION

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

**18.2** Withdrawal application is valid if the student is otherwise eligible to write the examination (Clause 10) 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 10) and earned continuous assessment marks.

**18.3** Notwithstanding the requirement of mandatory TEN working days notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

- 18.4** 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).
- 18.5** 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.
- 18.6** Withdrawal shall not be considered as an appearance for deciding the eligibility of a student for First Class with Distinction.
- 18.7** Withdrawal is permitted for the ESE in the final semester as per Clause 7.1.

## **19. BREAK OF STUDY FROM A PROGRAMME**

- 19.1** A student is permitted to go on break of study for a single break of one year only.
- 19.2** The student can apply for break of study in advance, in any case, not later than the last date of the first assessment period. The application duly filled by the student shall be submitted through the HoD with the approval of the Principal.
- 19.3** The students permitted to rejoin the Programme after break of study / readmission due to lack of attendance, shall be governed by the curriculum and Regulations in force at the time of rejoining. The students rejoining in new regulations shall apply in the prescribed format through HoD 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.
- 19.4** The total period for completion of the programme reckoned from, the commencement of the first semester to which the student was admitted shall not exceed the maximum period specified in Clause 6 irrespective of the period of break of study in order that the student may be eligible for the award of the Degree (vide Clause 16).
- 19.5** In case there is any period of break of study more than the permitted duration of break of study, the student shall be permitted to continue the Programme only if the approval is obtained from the Director of Technical Education / University through the concerned HoD / Principal before the end of the Semester in which the student has taken break of study.
- 19.6** If a student has not reported to the department for a period of two consecutive Semesters without any intimation, the name of the student shall be deleted permanently from the college enrollment.
- 19.7** During the break of study period, the students shall pay the prescribed tuition fees failing which the name of the student shall be deleted permanently from the enrollment. Such students are not entitled to seek readmission under any circumstances.

**20. RANKING OF A STUDENT**

A candidate who qualifies for the degree by passing the examination in all courses of the entire Programme in first attempt within a period of Four or Five consecutive academic years applicable for the students joined after permitted Break of Study from the date of admission to the Programme can be given his/her position in the class as rank. The Rank is determined from IIIrd semester to VIIIth semester end semester examination CGPA. Students transferred from other institutions to KIT in IIIrd Semester and Lateral entry students are eligible for rank. Students transferred from other institutions beyond IIIrd Semester and students with history of arrears during the entire programme are not eligible for rank.

**21. PROCEDURE FOR USING SCRIBE**

If a candidate is physically handicapped (in case of accidents / ill health) at the time of examination, he/she may be permitted to use a scribe to write the examination. The compensatory (additional) time should be half hour for three hour duration of examination. The Scribe shall be a non-engineering student / graduate.

**22. FACULTY MENTOR**

To help the students in planning their courses of study and for general advice on the academic matters, the HoD will attach a certain number of students (maximum 25) to a faculty member of the department. He / She shall function as Faculty Mentor for these students throughout their period of study. The faculty mentor shall,

- ⊗ Advise the students in registering and reappearances of courses
- ⊗ Monitor their attendance, academic progress and discipline of the students
- ⊗ Counsel periodically or during the faculty mentor meeting scheduled in the class time table.
- ⊗ Inform the students about the various facilities and activities available to enhance the student's curricular and co-curricular activities
- ⊗ If necessary, the faculty mentor may also discuss with or inform the parents about the progress of the students through HoD or in Parent-Teacher meeting.

**23. CLASS COMMITTEE**

The objective of the Class Committee is to improve the teaching-learning process.

The functions of the class committee include :

- ⊗ Resolving difficulties experienced by students in the classroom and in the laboratories.
- ⊗ Clarifying the regulations of the degree programme and the details of rules therein.
- ⊗ Discussing the progress of academic schedule and deviations if any.
- ⊗ Evaluating the performance of the students of the class after each test and finding the ways and means of improvement.
- ⊗ Every class in first year of study shall have a class committee consisting of faculty members who are teaching in that class, student representatives

- ① Cross section of students from boys and girls and a chairperson who is a faculty not handling the course for the class.

From III semester onwards, Class committee comprises of all the faculty members who are handling courses in that particular semester and two student representatives from each course. A chairperson who is a faculty not handling course for that particular semester, nominated by the HoD shall coordinate the activities of this committee.

- ① The class committee shall be constituted by the HoD/Chief mentor on the first week of commencement of the semester.
- ① The class committee shall meet three times in a semester as specified in the academic calendar.
- ① The Principal may participate in any class committee meeting of the institution
- ① During these meetings, the representative of the class shall meaningfully interact and express the opinions and suggestions of the other students of the class to improve the effectiveness of the teaching-learning process.
- ① The Chairperson is required to prepare the minutes of the meeting, signed by the members and submit the same to HoD within five working days of the meeting. HoD will in turn consolidate and forward the same to the Principal, within five working days of the meeting.
- ① In each meeting, the action taken report of the previous meeting is to be presented by the Chairperson of the class committee.

#### 24. COMMON COURSE COMMITTEE

- ① A theory course handled by more than one teacher shall have a "Common Course Committee" comprising of all teachers teaching that course and few students who have registered for that course. There shall be two student representatives from each batch of that course. One of the teachers shall be nominated as Course Coordinator by the HOD concerned and duly approved by the Principal
- ① The first meeting of the Common Course Committee shall be held within fifteen days from the date of commencement of the semester. The nature and weightage of the continuous assessments shall be decided in the first meeting, within the framework of the Regulations. Two or three subsequent meetings in a semester may be held at suitable intervals. During these meetings, the student members shall meaningfully interact and express their opinions and suggestions of all the students to improve the effectiveness of the teaching-learning process. It is the responsibility of the student representatives to convey the proceedings of these meetings to the whole batch.
- ① In addition, the "Common Course Committee" (without the student representatives) shall meet to ensure uniform evaluation of continuous assessments after arriving at a common scheme of evaluation for the assessments.

Wherever feasible, the common course committee (without the student representatives) shall also prepare a common question paper for the CIA tests. The question paper for the ESE is common and shall be set by the Course Coordinator in consultation with all the teachers or the external member as appointed by the CoE.

**25. DETAILS OF FACULTY PEDAGOGICAL AND STUDENT ASSESSMENT RECORD**

Every teacher is required to maintain a Faculty Record Book/ course file consisting of the following details as shown below ;

- ⓧ Time-table, course syllabus, program outcomes, course outcomes.
- ⓧ Details of attendance of each student marked in each theory/practical/project work class.
- ⓧ CIA marks, Details of Assignment/ seminar given, course delivery details, corrective and preventive actions on test performance of students and any other additional details.

The record book should be submitted to the HoD periodically (at least three times in a semester) for checking the syllabus covered, the test marks and attendance. The HoD shall put his/her signature and date in the record book after due verification. At the end of the semester, the record book shall be verified by the Principal who will also ensure safe custody of the document for at least four years. The university or any inspection team appointed by the University/UGC/AICTE may verify the records of attendance.

**26. DISCIPLINE**

Every student is required to maintain discipline and decorum both inside and outside the institution campus. They shall follow all the rules and regulations and should not indulge in any activity which can tarnish the reputation of the Institution. The Principal shall refer any act of indiscipline by students to the Discipline and Welfare Committee and other appropriate committees for action.

**27. SPECIAL CASES**

In the event of any clarification in the interpretation of the above rules and relations, they shall be referred to the Standing Committee. The standing committee will offer suitable interpretations/clarifications/amendments required for special case on such references and get them ratified in the next meeting of the Academic Council. The decision of the Academic Council is final.

**ANNEXURE - I****COURSE NUMBERING SCHEME**

B	2	3	M	E	T	7	0	9
Programme	Regulation	Department Code		Course Type		Semester	Sequence Number	



<p><b>Programme :</b>          Bachelor Degree (B.E. / B.Tech) - B          Masters Degree (M.E. / M.Tech) - M</p> <p><b>Regulation :</b>          R – 23</p> <p><b>Department Code</b>          AE - Aeronautical Engineering          AG - Agricultural Engineering          BT - Bio Technology          BM - Bio Medical Engineering          CS - Computer Science and Engineering          EC - Electronics and Communication Engineering          EE - Electrical and Electronics Engineering          ME - Mechanical Engineering          AD - Artificial Engineering &amp; Data Science          CB - Computer Science &amp; Business System          AM - Computer Science &amp; Engineering (AIML)          CA - Masters in Computer Application          MB - Masters in Business Administration          CH - Chemistry          EN - English          PH - Physics          MA - Mathematics          MC - Mandatory Course          CE - Career Enhancement course</p>	<p><b>Course Type</b>          T - Theory          P - Practical / Project / Internship          E - Elective          O - Open Elective          C - Credit          N - Online courses          S - Special Electives</p> <p><b>Semester</b>          1 - First Semester          2 - Second Semester          3 - Third Semester          4 - Fourth Semester          5 - Fifth Semester          6 - Sixth Semester          7 - Seventh Semester          8 - Eighth Semester</p> <p><b>Sequence Number</b>          00-99</p>
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**ANNEXURE - II**

**POLICY ON MALPRACTICES**

**GENERAL**

- ⊙ It shall be the endeavour of all concerned to prevent, control and take remedial action to bring about the occurrences of malpractices to “Zero” in Examinations (both Internal and External), Assignments and in all Academic class works.
- ⊙ Therefore, a comprehensive approach to the malady of malpractices has to be adopted to create a mindset of integrity and honesty, and at the same time take sufficiently stern action to make it clear that such attempts are fraught with comparably very high risk.
- ⊙ In keeping with this stance, the following measures are to be taken by all concerned from class room level to the Examination Halls :

**A. PREVENTION****a. Class room level :**

All faculty members are to involve themselves in a psychological growth of students by personal example and self-respect and strive towards it.

- ⊗ Developing a sense of honour in the minds of students so that they look down upon earning undeserved marks.
- ⊗ Imbibing a sense of self-respect and internal dignity that prevents him/her from succumbing to the temptation of easy marks by cheating.
- ⊗ Generating an awareness of the risks to their character and career if convicted, while also explaining the process and strict rules and regulations adopted by the educational system to prevent malpractices.
- ⊗ Taking stern view of copied assignments and attempts at malpractices in internal examinations also merits equal seriousness as semester examinations.
- ⊗ Setting sufficiently strong deterrent rules in place and regulations like intimation to parents and warning to students in the presence of parents etc. even in case of efforts at malpractices in internal tests and/or repeated acts despite warnings in case of assignments also.

**Examination Halls**

- ⊗ Detailed instructions on Invigilation, question paper setting and evaluation and such other instructions will be issued for Invigilation, vigilance, which are to be brought to the notice of all students prior to the examinations.

**B. PENAL ACTION FOR MALPRACTICES**

All instances of malpractices will be forwarded to the Principal / Chief Superintendents. The offences will be investigated by a Standing Enquiry Committee constituted by Principal, The committee is to summon and give the student an opportunity to present / plead his/her case. The Committee may also summon anybody else, if it so deems necessary for the conduct of enquiry, in the interest of proper investigation and dispensation of the case. The tenure of the committee would be a complete Academic year.

The Committee is to be guided by the following :

- ⊗ The seriousness of the malpractice, in terms of deviousness, and culpability / criminality of motive.
- ⊗ The seriousness in terms of effort and degree of deviousness and culpability / criminality of effort.
- ⊗ Any FIR / Police case that has been registered in the first instance by the Principal/ Chief Superintendent.
- ⊗ Any other special consideration either mitigating or to the contrary.

**C. PENALTY FOR OFFENSES**

The penalties awarded will depend on the seriousness of the offence. A list of offences and penalties are placed at **Annexure III**.



The enquiry report with findings and recommendations of the committee are to be forwarded to the Controller who will undertake necessary follow up action. Based on the recommendations of the CoE, the Principal is empowered to award penalties for offences classified as belonging to categories 1 to 7 of the offence table. The cases falling in categories from S.No. 8 onwards are to be put up to the Principal for consideration and award of suitable penalty.

## ANNEXURE - III

Sl.No.	Nature of Malpractice	Maximum Punishment
1.	Appeal by the candidate in the answer script to show mercy by way of awarding more than deserving marks.	
2.	The candidate writing his/her name in the answer script.	
3.	The candidate writing his / her registration number / college name in places other than specified in the answer script	
4.	Any special marking in the answer script by the candidate.	Fine of Rs. 1000/- per subject.
5.	The candidate communicating with neighbouring candidate orally or non-verbally; the candidate causing suspicious movement of his/her body.	
6.	Irrelevant writing by the candidate in the answer script.	
7.	The candidate writing answer on his/her question paper or making use of his/her question paper for rough work.	
8.	The candidate possessing cell phones / programmable calculator(s)/any other electronic storage device(s) <b>gadgets</b>	Invalidating the examination of the particular subject written by the candidate
9.	The candidate possessing any incriminating material(s) (whether used or not). For example : Written or printed materials, bits of papers containing written information, writings on scale, calculator, handkerchief, dress, part of the body, Hall Ticket, etc.	Invalidating the examination of the particular subject written by the candidate.

10.	The candidate possessing cell phone(s)/ programmable calculator(s)/any other electronic storage device(s) gadgets and containing incriminating materials (whether used or not).	<p>Invalidating the examination of the subject concerned and all the theory and the practical subjects of the current semester registered by the candidate.</p> <p>Further the candidate is not considered for revaluation of answer scripts of the arrears-subjects.</p> <p>If the candidate has registered for arrears – subjects only, invalidating the examinations of all the arrears – subjects registered by the candidate.</p>
11.	The Candidate possessing the question paper of another candidate with additional writing on it.	
12.	The candidate passing his/her question paper to another candidate with additional writing on it.	
13.	The candidate passing incriminating materials brought into the examination hall in any medium (hard/soft) to other candidate(s).	
14.	The candidate copying from neighbouring candidate.	
15.	The candidate taking out of the examination hall answer booklet(s), used or unused.	
16.	Appeal by the candidate in the answer script coupled with a promise of any form of consideration.	
17.	Candidate destroying evidence relating to an alleged irregularity.	<p>Invalidating the examinations of the subject concerned and all the theory and the practical subjects of the current semester registered by the candidate.</p> <p>Further the candidate is not considered for revaluation of answer scripts of the arrears-subjects.</p> <p>If the candidate has registered for arrears – subjects only, invalidating the examinations of all the arrears – subjects registered by the candidate.</p> <p><b>Additional Punishment :</b></p> <p>i. If the candidate has not completed the programme, he/she is debarred from continuing his/her studies for one year i.e., for two subsequent semesters. However the student is permitted to appear for the examination in all the arrears-subjects during the debarred period.</p> <p>ii. If the candidate has completed the programme, he/she is prevented from writing the examinations of the arrears - subjects for two subsequent semesters.</p>

18.	Vulgar / offensive writings by the candidate in the answer script.	Invalidating the examinations of all the theory and practical subjects of the current semester and all the arrears – subjects registered by the candidate.
19.	The candidate possessing the answer script of another candidate.	
20.	The candidate passing his /her answer script to another candidate.	
21.	Involved in any one or more of the malpractices of serial no. 8 to 21 for the second or subsequent times.	Invalidating the examinations of all the theory and practical courses of the current semester and all the arrears- courses registered by the candidate.
22.	The candidate substituting an answer sheets prepared outside the examination hall for the one already distributed to the candidate.	<p><b>Additional Punishment :</b></p> <p>i. If the candidate has not completed the programme, he/she is debarred from continuing his/her studies for one year i.e., for two subsequent semesters. However the student is permitted to appear for the examination in all the arrears-subjects during the debarred period.</p> <p>ii. If the candidate has completed the programme, he/she is prevented from writing the examinations of the arrears - subjects for two subsequent semesters.</p>
23.	The candidate indulge in any disruptive conduct including, but not limited to, shouting, assault of invigilator, officials or students using abusive and / or threatening language, destruction of property.	Invalidating the examinations of all the theory and practical courses of the current semester and all the arrears- courses registered by the candidate.
24.	The candidate harass or engage others to harass on his/her behalf an invigilator, official, witnesses or any other person in relation to an irregularity by making telephone calls, visits, mails or by any other means.	<p><b>Additional Punishment :</b></p> <p>i. If the candidate has not completed the programme, he/she is debarred from continuing his/her studies for two years i.e., for four subsequent semesters. However the student is permitted to appear for the examination in all the arrears-subjects during the debarred period.</p> <p>ii. If the candidate has completed the programme, he/she is prevented from writing the examinations of the arrears - courses for four subsequent semesters.</p>
25.	Candidate possessing any firearm/weapon inside the examination hall.	

26.	Cases of Impersonation	<p>i. Handing over the impersonator to the police with a complaint to take appropriate action against the person involved in the impersonation by the Chief Supt.</p> <p>If a student is found to impersonate a 'bonafide student', the impersonating student is debarred from continuing his / her studies and writing the examinations permanently. He/she is not eligible for any further admission to any programme.</p> <p>Debarring the 'bonafide student' for whom the impersonation was done from continuing his / her studies and writing the examinations permanently. He/she is not eligible for any further admission to any programme.</p>
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#### APPENDIX - IV

#### Process to Consider the Application for Revocation of Detainment

The process to consider the application for revocation of detainment on account of lack of attendance in 3 or more courses, due to genuine reasons (viz. sports participation, NCC, Medical Grounds etc.) is as follows :

The student submits an application for consideration via a request letter to the CoE, not later than 3 days from the last working day, along with the HoD's recommendation, Class Advisor's report and Mentor's recommendation. A committee consisting of the Principal, CoE, HoD (Respective Department) and HoD's-2 from departments other than the student's own. The committee shall meet within 4 working days, to consider the case. Stakeholders may be called to be present in the meeting as may be required, and Decision arrived at. The decision approved by Principal shall be final.

#### APPENDIX - V

#### Academic Evaluation Committee (AEC)

The committee includes the Principal, CoE, HoD concerned. The committee meets to carry out business related to academic matters which require central decision making and approval viz. retest approval of missed CIA, addressing the feedback collected from the various departments' class committee meetings

#### Department Evaluation Committee (DEC)

The committee includes HoD (need basis), and a few faculty members of the department from various levels. The committee meets to carry out business related to academic matters that can be addressed within the department viz. course equivalence of common courses for readmitted students; approval of new courses to be offered by the department; consider and approve the credit equivalence of courses offered by industry, review the course offerings; consider the merit of applications involving lack of attendance in PE/OE courses to take up another PE or OE; approve CIAM only courses every semester; approve scheme of assessment for each course; Approval for and Mapping credits of certification courses; approval of list of nationally or internationally recognized professional certification courses with prometric testing.

# Curriculum

<b>Curriculum and Scheme of Assessment</b> (For Students admitted from the Academic Year 2023-24 and onwards)	
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Semester - I										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23IPT101	Induction Programme	HS	-	-	-	-	0	-	-	-
<b>Theory / Theory with Practical</b>										
B23ENT101	Professional English	HS	3	3	0	0	2	40	60	100
B23MAT101	Matrices and Differential Calculus	BS	4	3	1	0	4	40	60	100
B23MET101	Engineering Graphics	ES	5	3	2	0	4	40	60	100
B23HST101	தமிழர்மரபு / Heritage of Tamils	HS	1	1	0	0	1	40	60	100
B23CHI101	Engineering Chemistry	BS	4	2	0	2	4	50	50	100
B23CSI102	Problem Solving and Python Programming	ES	4	2	0	2	4	50	50	100
<b>Practical</b>										
B23MEP101	Engineering Practices Laboratory	ES	4	0	0	4	2	60	40	100
<b>Total credits to be earned</b>							<b>21</b>			

Semester - II										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
B23MAT201	Integral Calculus and Complex Analysis	BS	4	3	1	0	4	40	60	100
B23HST201	தமிழரும் தொழில் நுட்பமும் / Tamils and Technology	HS	1	1	0	0	1	40	60	100
B23MET201	Engineering Mechanics	ES	4	3	1	0	4	40	60	100
B19CET201	Soft Skills	CEC	2	2	0	0	NC	100	-	100
B23ENI201	Professional Communication	HS	4	2	0	2	4	50	50	100
B23PHI101	Engineering Physics	BS	4	2	0	2	4	50	50	100
B23EEI202	Basics of Electrical and Electronics Engineering	ES	4	2	0	2	4	50	50	100
<b>Total credits to be earned</b>							<b>21</b>			

Approved by BoS Chairman
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Semester - III										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
B23MAT301	Transforms and Partial Differential Equation	BS	4	3	1	0	4	40	60	100
B23MET301	Engineering Thermodynamics	PC	4	3	1	0	4	40	60	100
B23MET302	Manufacturing Processes	PC	3	3	0	0	3	40	60	100
B23MET303	Engineering Materials and Metallurgy	PC	3	3	0	0	3	40	60	100
B23MEI301	Fluid Mechanics & Machinery	PC	4	2	0	2	4	50	50	100
<b>Practical</b>										
B23MEP301	Manufacturing Technology Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP302	Design Studio	PC	4	0	0	4	2	60	40	100
<b>Total credits to be earned</b>							<b>22</b>			
Semester - IV										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
B23MAT403	Numerical Methods	BS	4	3	1	0	4	40	60	100
B23MET401	Kinematics of Machinery	PC	3	2	1	0	3	40	60	100
B23MET402	Mechanics of Solids	PC	3	2	1	0	3	40	60	100
B23MET403	Thermal Engineering	PC	3	2	1	0	3	40	60	100
B23MET404	Metal Cutting and Computer Aided Manufacturing	PC	3	3	0	0	3	40	60	100
B23MEI401	Mechanical Measurements and Metrology	PC	4	2	0	2	4	50	50	100
<b>Practical</b>										
B23MEP401	Strength of Materials Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP402	Thermal Engineering Laboratory - I	PC	4	0	0	4	2	60	40	100
B23CEP401	Professional Certificate Course	CEC	-	-	-	-	1	-	-	-
<b>Total credits to be earned</b>							<b>25</b>			
<b>Summer Internship – THREE WEEKS (Review will be conducted in first week of Semester V and its credit will be included in Semester V)</b>										

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Semester - V										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
B23MET501	Heat and Mass Transfer	PC	4	3	1	0	4	40	60	100
B23MET502	Design of Machine Elements	PC	4	3	1	0	4	40	60	100
B23MET503	Dynamics of Machines	PC	4	3	1	0	4	40	60	100
	Professional Elective - I	PE	3	3	0	0	3	40	60	100
	Open Elective - I	OE	3	3	0	0	3	40	60	100
B23MCT501	Environmental Sciences	MC	3	3	0	0	NC	100	-	100
<b>Practical</b>										
B23MEP501	Kinematics and Dynamics Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP502	Thermal Engineering Laboratory - II	PC	4	0	0	4	2	60	40	100
B23CEP501	Summer Internship	CEC	-	-	-	-	1	-	-	-
<b>Total credits to be earned</b>							<b>22</b>			
Semester - VI										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
B23MET601	Design of Transmission Systems	PC	4	3	1	0	4	40	60	100
B23MET602	Automation in Manufacturing	PC	3	3	0	0	3	40	60	100
B23MET603	Finite Element Analysis	PC	4	3	1	0	4	40	60	100
	Professional Elective - II	PE	3	3	0	0	3	40	60	100
	Professional Elective - III	PE	3	3	0	0	3	40	60	100
	Open Elective - II	OE	3	3	0	0	3	40	60	100
B23MCT601	Indian Constitution	MC	3	3	0	0	NC	100	-	100
<b>Practical</b>										
B23MEP601	Simulation and Analysis Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP602	Design Thinking and Innovations	PW	4	0	0	4	2	60	40	100
<b>Total credits to be earned</b>							<b>24</b>			

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Semester - VII										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
<b>B23MGT701</b>	Universal Human Values	<b>HS</b>	3	3	0	0	<b>2</b>	40	60	100
<b>B23MET701</b>	Total Quality Management	<b>PC</b>	3	3	0	0	<b>3</b>	40	60	100
	Professional Elective – IV	<b>PE</b>	3	3	0	0	<b>3</b>	40	60	100
	Professional Elective – V	<b>PE</b>	3	3	0	0	<b>3</b>	40	60	100
	Open Elective - III	<b>OE</b>	3	3	0	0	<b>3</b>	40	60	100
<b>B23MEI701</b>	Mechatronics and IoT	<b>PC</b>	4	2	0	2	<b>4</b>	40	60	100
<b>Practical</b>										
<b>B23MEP701</b>	Project work Phase – I	<b>PW</b>	6	0	0	6	<b>2</b>	60	40	100
<b>Total credits to be earned</b>							<b>20</b>			

Semester VIII										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
<b>Theory / Theory with Practical</b>										
	Professional Elective - VI	<b>PE</b>	3	3	0	0	<b>3</b>	40	60	100
	Open Elective - IV	<b>OE</b>	3	3	0	0	<b>3</b>	40	60	100
<b>Practical</b>										
<b>B23MEP801</b>	Project Work Phase - II	<b>PW</b>	16	0	0	16	<b>8</b>	60	40	100
<b>Total credits to be earned</b>							<b>14</b>			

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HUMANITIES AND SOCIAL SCIENCES (HS)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23IPT101	Induction Programme	HS	-	-	-	-	0	-	-	-
B23ENT101	Professional English	HS	3	3	0	0	2	40	60	100
B23HST101	தமிழர் மரபு / Heritage of Tamils	HS	1	1	0	0	1	40	60	100
B23HST201	தமிழரும் தொழில்நுட்பமும் / Tamils and Technology	HS	1	1	0	0	1	40	60	100
B23ENI201	Professional Communication	HS	4	2	0	2	4	50	50	100
B23MGT701	Universal Human Values	HS	3	3	0	0	2	40	60	100

BASIC SCIENCES (BS)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23MAT101	Matrices and Differential Calculus	BS	4	3	1	0	4	40	60	100
B23CHI101	Engineering Chemistry	BS	4	2	0	2	4	50	50	100
B23MAT201	Integral Calculus and Complex Analysis	BS	4	3	1	0	4	40	60	100
B23PHI101	Engineering Physics	BS	4	2	0	2	4	50	50	100
B23MAT301	Transforms And Partial Differential Equation	BS	4	3	1	0	4	40	60	100
B23MAT403	Numerical Methods	BS	4	3	1	0	4	40	60	100

ENGINEERING SCIENCES (ES)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23MET101	Engineering Graphics	ES	5	3	2	0	4	40	60	100
B23CSI102	Problem Solving and Python Programming	ES	4	2	0	2	4	50	50	100
B23MEP101	Engineering Practices Laboratory	ES	4	0	0	4	2	40	60	100
B23MET201	Engineering Mechanics	ES	4	3	1	0	4	40	60	100
B23EEI202	Basics of Electrical and Electronics Engineering	ES	4	2	0	2	4	50	50	100

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PROFESSIONAL CORE (PC)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23MET301	Engineering Thermodynamics	PC	3	2	1	0	3	40	60	100
B23MET302	Manufacturing Processes	PC	3	3	0	0	3	40	60	100
B23MET303	Engineering Materials and Metallurgy	PC	3	3	0	0	3	40	60	100
B23MEI301	Fluid Mechanics & Machinery	PC	4	2	0	2	4	50	50	100
B23MEP301	Manufacturing Technology and CNC Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP302	Design Studio	PC	4	0	0	4	2	60	40	100
B23MET401	Kinematics of Machinery	PC	4	3	1	0	4	40	60	100
B23MET402	Mechanics of Solids	PC	3	2	1	0	3	40	60	100
B23MET403	Thermal Engineering	PC	3	2	1	0	3	40	60	100
B23MET404	Metal Cutting and Computer Aided Manufacturing	PC	3	3	0	0	3	60	40	100
B23MEI401	Mechanical Measurements and Metrology	PC	4	2	0	2	4	50	50	100
B23MEP401	Strength of Materials Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP402	Thermal Engineering Laboratory - I	PC	4	0	0	4	2	60	40	100
B23MET501	Heat and Mass Transfer	PC	4	3	1	0	4	40	60	100
B23MET502	Design of Machine Elements	PC	3	2	1	0	3	40	60	100
B23MET503	Dynamics of Machines	PC	3	2	1	0	3	40	60	100
B23MEP501	Kinematics and Dynamics Laboratory	PC	4	0	0	4	2	60	40	100
B23MEP502	Thermal Engineering Laboratory - II	PC	4	0	0	4	2	60	40	100
B23MET601	Design of Transmission Systems	PC	4	3	1	0	4	40	60	100
B23MET602	Automation in Manufacturing	PC	3	3	0	0	3	40	60	100
B23MET603	Finite Element Analysis	PC	3	2	1	0	3	40	60	100
B23MEP601	Simulation and Analysis Laboratory	PC	4	0	0	4	2	60	40	100
B23MET701	Total Quality Management	PC	3	3	0	0	3	40	60	100
B23MEI701	Mechatronics and IoT	PC	4	2	0	2	4	50	50	100

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PROFESSIONAL ELECTIVES (PE)						
Vertical 1	Vertical 2	Vertical 3	Vertical 4	Vertical 5	Vertical 6	Vertical 7
Modern Mobility Systems	Product and Process Development	Robotics and Automation	Digital and Green	Computational Engineering	Diversified Courses Group 1	Diversified Courses Group 2
Automotive Materials, Components, Design & Testing	Value Engineering	Sensors and Instrumentation	Manufacturing Digital Manufacturing and IoT	Computational Solid Mechanics	Automobile Engineering	Turbo Machines
Conventional and Futuristic Vehicle Technology	Additive Manufacturing	Electrical Drives and Actuators	Lean Manufacturing	Computational Fluid Dynamics and Heat transfer	Advanced Internal Combustion Engineering	Non-traditional Machining Processes
Advanced Vehicle Engineering	CAD/CAM	Embedded Systems and Programming	Modern Robotics	Theory on Computation and Visualization	Design Concepts in Engineering	Industrial safety
Vehicle Health Monitoring, Maintenance and Safety	Design For X	Robotics	Green Manufacturing Design and Practices	Computational Bio Mechanics	Composite Materials and Mechanics	Gas Dynamics and Jet Propulsion
CAE and CFD Approach in Future Mobility	Ergonomics in Design	Smart Mobility and Intelligent Vehicles	Environment Sustainability and Impact Assessment	Advanced Statistics and Data Analytics	Electrical Drives and Control	Thermal Power Engineering
Hybrid and Electric Vehicle Technology	New Product Development	Haptics and Immersive Technologies	Energy Saving Machinery and Components	CAD and CAE	Power Plant Engineering	Design for Manufacturing
Thermal Management of Batteries and Fuel Cells	Product Life Cycle Management	Drone Technologies	Green Supply Chain Management	Machine Learning for Intelligent Systems	Refrigeration and Air Conditioning	Process Planning and Cost Estimation

### Registration of Professional Elective Courses from Verticals :

Professional Elective Courses will be registered in Semesters V and VI. These courses are listed in groups called verticals that represent a particular area of specialisation / diversified group. Students are permitted to choose all the Professional Electives from a particular vertical or from different verticals. Further, only one Professional Elective course shall be chosen in a semester horizontally (row wise). However, two courses are permitted from the same row, provided one course is enrolled in Semester V and another in semester VI.

The registration of courses for B.E. / B. Tech (Honours) or Minor degree shall be done from Semester V to VIII. The procedure for registration of courses explained above shall be followed for the courses.

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HUMANITIES AND SOCIAL SCIENCES (HS)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23MEP602	Design Thinking and Innovations	PW	4	0	0	4	2	60	40	100
B23MEP701	Project work Phase – I	PW	6	0	0	6	2	60	40	100
B23MEP801	Project Work Phase - II	PW	16	0	0	16	8	60	40	100

MANDATORY COURSE (MC)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B23MCT501	Environmental Sciences	MC	3	3	0	0	NC	40	60	100
B23MCT601	Indian Constitution	MC	3	3	0	0	NC	40	60	100

CAREER ENHANCEMENT COURSE (CEC)										
Course Code	Course Name	CT	Instructional Hours					Assessment		
			CP	L	T	P	C	CIA	ESE	Total
B19CET201	Soft Skills	CEC	2	2	0	0	NC	100	-	100
B23CEP401	Professional Certificate Course	CEC	-	-	-	-	1	-	-	-
B23CEP501	Summer Internship	CEC	-	-	-	-	1	-	-	-

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