JERUSALEM COLLEGE OF ENGINEERING

(An Autonomous Institution affiliated to Anna University, Chennai)

NBA and NAAC ACCREDITED INSTITUTION

VELACHERY MAIN ROAD, NARAYANAPURAM

PALLIKARANAI, CHENNAI-600 100

ACADEMIC REGULATIONS – 2021

Engineering Postgraduate Programmes

(Applicable for Batch of students admitted from the Academic Year 2021-2022)

ACADEMIC REGULATIONS – 2021

CHOICE BASED CREDIT SYSTEM

M.E. Degree Programmes

The following rules and regulations shall apply to all Engineering Postgraduate (PG) programmes offered at Jerusalem College of Engineering, for students admitted from the academic year 2021-2022.

Prepared by

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VISION OF THE INSTITITION

Jerusalem College of Engineering is committed in emerging as an international institution of excellence in imparting finest quality engineering, technology and management education rooted in ethical and societal values through various academic programmes, multi-disciplinary research, consultancy and entrepreneurship activities and hence to contribute towards social transformation and nation building.

MISSION OF THE INSTITUTION

- Generating abundant resources and making conducive policies, the management led by the Chief Executive Officer strives towards promoting globally competitive academic programmes augmented with value added courses, in-plant training activities, co-curricular activities and ambience that support intellectual growth and skill acquisition
- Promoting collaborative trans-border research programmes continuing education in synergy with academia, industries and research organizations leading to real time solutions and life-long learning
- Transforming young men and women into competent professionals and entrepreneurs motivated by a passion for professional excellence, driven by human values and proactively engage in the betterment of the society through innovative practices and academic excellence
- Facilitating effective interaction among faculty members and students and fostering network of alumni, industries, institutions and other stake-holders for successful career gain and placement

QUALITY POLICY

Qualitative Education and sense of high discipline are promises. We at the Jerusalem College of Engineering make to posterity and accordingly, we shall adopt and adhere to Quality policies, constantly monitor accountability and assure all stake holders that **"WE SHALL KEEP OUR PROMISE".**

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The following Regulations is applicable to the students admitted to M.E. Programmes at Jerusalem College of Engineering (An Autonomous institution affiliated to Anna University, Chennai) from the academic year 2021-22 onwards.

1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires:

a. "**Programme**" means Post graduate Degree Programme that is M.E. Degree Programmes.

b. **"Branch"** means specialization or discipline of M.E. / M.Tech. Degree Programme like "Construction Engineering and Management", "Computer Science and Engineering", etc.

c. **"Course"** means Theory or Practical subject that is normally studied in a semester, like Applied Mathematics, Advanced Thermodynamics, etc.

d. **"Dean - Academics"** means the authority of the Institution who is responsible for all academic activities of the Institution and for implementation of relevant Rules and Regulations.

e. **"Head of the Department"** means Head of the Department concerned.

f. **"Head of the Institution"** means the Principal of the Institution

g. **"Controller of Examinations"** means the Authority of the Institution who is responsible for all activities of the Examinations.

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

i. "**Institution**" means Jerusalem College of Engineering, Chennai – 100, Tamil Nadu, India.

2. ADMISSION PROCEDURE

2.1 Candidates for admission to the first semester of the Post-Graduate Degree Programme shall be required to have passed an appropriate Under-Graduate Degree **Examination of Anna University** or equivalent as specified under qualification for admission as per the Tamil Nadu Common Admission (TANCA) criteria.

Note: TANCA releases the updated criteria during the admissions every academic year Admission shall be offered only to the candidates who possess the qualification prescribed against each programme.

Any other relevant qualification which is not prescribed against each programme shall be considered for equivalence by the committee constituted for the purpose. Admission to such degrees shall be offered only after obtaining equivalence to such degrees.

2.2 However, the Syndicate of the University may decide to restrict admission in any particular year to candidates having a subset of qualifications prescribed at the time of admission

2.3 Notwithstanding the qualifying examination the candidate might have passed, he/she shall have a minimum level of proficiency in the appropriate programme / courses as prescribed by the Syndicate of the University from time to time.

2.4 Eligibility conditions for admission such as the class obtained, the number of attempts in qualifying examination and physical fitness will be as prescribed by the Syndicate of the University from time to time.

3. PROGRAMMES OFFERED AND MODE OF STUDY

3.1 A student may be offered admission to any one of the following programme of study approved by the Anna University

1. M.E Construction Engineering and Management
2. M.E. Power Electronics and Drives
3. M.E. Applied Electronics
4. M.E. Computer Science and Engineering
5. M.E. Software Engineering

3.2 **MODE OF STUDY**

Candidates should be available in the Institution during the entire duration of working hours for the curricular, co-curricular and extra-curricular activities assigned to them.

The candidates should not attend any other Full-Time programme(s) / course(s) or take up any Full-Time job / Part-Time job in any Institution or Company during the period of the programme. Violation of the above rules will result in cancellation of admission to the PG programme.

4. STRUCTURE OF THE PROGRAMMES

4.1 Categorization of Courses

Every Post Graduate Degree Programme will have a curriculum with syllabi consisting of theory and practical courses that shall be categorized as follows:

i. **Foundation Courses (FC)** may include Mathematics or other basic courses

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

iii. **Professional Elective (PE)** courses include the elective courses relevant to the chosen specialization/ branch.

iv. **Open Electives (OE)** courses shall provide an opportunity to study a course from any discipline that includes the courses relevant to the chosen specialization, the courses that enhance soft and managerial skills, the courses a student can choose from the curriculum of other M.E. programmes.

v. **Non-Credit Mandatory Course (NCM)** courses expose the students to any two of the following courses English Paper Writing, Disaster Management, Sanskrit for technical knowledge, Value education, Constitution of India, Pedagogy studies, Stress Management by Yoga, Personality Development Through Life Enlightenment Skills and Unnat Bharat Abhiyan. These courses are included in the curriculum and it is necessary for students to obtain a pass mark in these subjects. The study of chosen courses will be reflected in the respective Semester Grade Sheet.

vi. **Employability Enhancement Courses (EEC)** include Research Methodology and IPR, Mini Project, Technical Seminar, Term Paper Writing, Project Work and Seminar.

4.2 **Courses per Semester**

Curriculum of a semester shall normally have a blend of lecture courses and practical courses including Employability Enhancement Courses. Each course may have credits assigned as per clause 4.3.

4.3 **Credit Assignment**

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

CONTACT PERIOD PER WEEK	CREDITS
1 LECTURE PERIOD	1
2 TUTORIAL PERIODS	1
2 PRACTICAL PERIODS (Laboratory/Seminar/Project work etc)	1

The Contact Periods per week for Tutorials and Practical can only be in multiples of 2.

4.4 **Project Work**

4.4.1 The project work for M.E. Programmes consist of Phase–I and Phase–II. The Phase–I is to be undertaken during III semester and Phase–II, which is a continuation of Phase–I is to be undertaken during IV semester.

4.4.2 In case of candidates of M.E. Programmes not completing Phase-I of project work successfully, the candidates can undertake Phase-I again in the subsequent semester. In such cases the candidates can enroll for Phase-I & Phase-II together.

4.4.3 Project work shall be carried out under the supervision of a "qualified teacher" in the Department concerned. In this context "qualified teacher" means the faculty member possessing (i) PG degree with a minimum of 3 years experience in teaching or (ii) Ph.D. degree.

4.4.4 A candidate may, however, in certain cases, be permitted to work on projects in an Industrial/Research Organization, on the recommendations of the Head of the Department Concerned. In such cases, the Project work shall be jointly supervised by a supervisor of the department and an expert, as a joint supervisor from the organization and the student shall be instructed to meet the supervisor periodically and to attend the review committee meetings for evaluating the progress.

4.4.5 The Project work (Phase II in the case of M.E.) shall be pursued for a minimum of 16 weeks during the final semester.

4.4.6 The deadline for submission of final Project Report is 60 calendar days from the last working day of the semester in which project / thesis / dissertation is done. However, the Phase-I of the Project work in the case M.E. Programmes shall be submitted within a maximum period of 30 calendar days from the last working day of the semester as per the academic calendar published by the University.

4.5 **Industrial Training / Internship**

The students may undergo Industrial training for a period as specified in the curriculum during summer / winter vacation. In this case the training has to be undergone continuously for the entire period. The students may undergo Internship at Research organization / University (after due approval from the **Head of the Department** for the period prescribed in the curriculum during summer / winter vacation, in lieu of Industrial training.

4.6 **Value Added Courses**

The Students may optionally undergo Value Added Courses and the credits earned through the Value Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. One / Two credit courses shall be offered by a Department of an institution with the prior approval from the Head of the Institution. The details of the syllabus, time table and faculty may be sent to the Controller of Examinations after approval from the Head of the Institution atleast one month before the course is offered. Students can take a maximum of two one credit courses / one two credit course during the entire duration of the Programme.

4.7 **Online Courses**

4.7.1 Students may be permitted to credit only one online course of 3 credits with the approval of Head of the Institution and Dean Academics.

4.7.2 Students are encouraged to take up online MOOCs courses during their Engineering study. The following are the guidelines to pursue SWAYAM - NPTEL courses during his/her study period:

- If a student wishes to pursue a SWAYAM - NPTEL course in a latter semester, he/she must get the approval from the Head of the Institution through proper channel atleast three months before the start of the new semester as the NPTEL course list is announced 6 months ahead of the course start date and enrollments for the course are opened 2 months ahead of the course start date and closes on the start date.
- A student can opt to pursue a SWAYAM - NPTEL course as a professional elective / open elective offered in the curriculum under R2021 (during semesters II and III except semester IV) after getting proper validation about the course from his/her class advisor, HoD and Dean Academics.
- The course opted by the student should have a minimum of 3 credits [12-week course].
- The progress of the student in the course shall be periodically monitored by the respective class advisor.
- The students who wish to take up SWAYAM - NPTEL courses are given the following two options:
- The student can opt to take up the exam conducted by Swayam and obtain the certificate by separately registering for the certificate and appearing in person for a proctored exam. There shall not be any separate internal assessments in the college for students taking up SWAYAM - NPTEL courses, as assessments are a part of the respective Swayam program. The grades/credits mentioned in the certificate will be considered as it is by Jerusalem College of Engineering.

(OR)

The students can opt to write the end semester examination for the enrolled SWAYAM - NPTEL course at Jerusalem College of Engineering. The student shall declare the NPTEL login details to the class advisor and take up the assignments/assessments as defined in the Swayam program, which shall be considered for internal marks for the corresponding course in the respective semester. The class advisor shall monitor the progress of the student periodically by consolidating the hardcopies of mark statements (taken from the NPTEL portal) secured by the student in all the assessments, as defined in the program and shall calculate the marks out of 50 which shall then be forwarded to the office of COE, JCE through Dean Academics, JCE. The exam fee for the online course shall be defined by the office of COE, JCE from time to time.

- A student is not permitted to withdraw from the SWAYAM – NPTEL course once the semester begins (permitted to withdraw before the semester begins). If he/she is unable to succeed in the e-certification exam or college exam, then the result for the open elective course in the respective semester, will be declared as REAPPEAR (RA). To clear the course in both cases, the student should appear for the end semester examination conducted by the college in the subsequent semester.

4.8 **Medium of Instruction**

The medium of instruction is English for all courses, examinations, seminar presentations and project / thesis / dissertation reports.

5. DURATION OF THE PROGRAMMES:

5.1 The minimum and maximum period for completion of the P.G. Programmes are given below:

Programme	Minimum number of semesters	Maximum number of semesters
M.E.	4	8

5.2 The Curriculum and Syllabi of all the P.G. Programmes shall be approved by the Academic Council of the Institution. The number of Credits to be earned for the successful completion of the programme shall be as specified in the Curriculum of the respective specialization of the P.G. Programme.

5.3 Each semester shall normally consist of 75 working days or 540 periods of each 50 minutes duration, for full-time mode of study or 250 periods for part-time mode of study. The Head of the Institution shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course being taught. For the purpose of calculation of attendance requirement for writing the end semester examinations (as per clause 9) by students, following method shall be used.

$$\text{Percentage of attendance} = \frac{\text{Total No. of Periods attended in all the courses per semester}}{\left(\text{(No. of Periods/week a prescribed in the curriculum taken for all courses of the semester) X 15}\right)} \text{ X 100}$$

End Semester Examinations conducted by the Institution will be scheduled after the last working day of the semester.

5.4 The minimum prescribed credits required for the award of the degree shall be within the limits specified below:

Programme	Prescribed Credit Range
M.E.	70 to 75

6. COURSE REGISTRATION

6.1 The Institution is responsible for registering the courses that each student is proposing to undergo in the ensuing semester. Each student has to register for all courses to be undergone in the curriculum of a particular semester. The student can also register for courses for which the student has failed in the earlier semesters. The registration details of the candidates may be approved by the Head of the Institution and forwarded to the Controller of Examinations. This registration is for undergoing the course as well as for writing the End Semester Examinations.

The courses that a student registers in a particular semester may include

i. Courses of the current semester.
ii. The core (Theory/Lab /EEC) courses that the student has not cleared in the previous semesters.
iii. Elective courses which the student failed (either the same elective or a different elective instead)

7. ATTENDANCE REQUIREMENTS FOR COMPLETION OF A SEMESTER

7.1 A candidate who has fulfilled the following conditions shall be deemed to have satisfied the attendance requirements for completion of a semester. Ideally every student is expected to attend all classes and earn 100% attendance. However, in order to allow provision for certain unavoidable reasons such as prolonged hospitalization / accident / specific illness the student is expected to earn a minimum of 75% attendance to become eligible to write the End-Semester Examinations. Therefore, every student shall secure not less than 75% of overall attendance in that semester as per clause 4.3.

7.2 However, a candidate who secures overall attendance between 65% and 74% in that 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 to the Head of the Institution. The same shall be forwarded to the Controller of Examinations for record purposes.

7.3 Candidates who could secure less than 65% overall attendance and Candidates who do not satisfy the clauses 10.1 & 10.2 will not be permitted to write the end-semester examination of that current semester and are not permitted to go to next semester. They are required to repeat the incomplete semester in the next academic year.

8. CLASS ADVISOR

There shall be a class advisor for each class. The class advisor will be one among the (course - instructors) of the class. He / She will be appointed by the Head of the department concerned. The class advisor is the ex-officio member and the Convener of the class committee.

The responsibilities for the class advisor shall be:

- To act as the channel of communication between the HoD and the students of the respective class.
- To collect and maintain various statistical details of students.
- To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- To monitor the academic performance of the students including attendance and to inform the class committee.
- To attend to the students‟ welfare activities like awards, medals, scholarships and industrial visits.

9. CLASS COMMITTEE

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

- Solving problems experienced by students in the class room and in the laboratories.
- Clarifying the regulations of the programme and the details of rules therein. Informing the student representatives, the "academic schedule" including the dates of assessments and the syllabus coverage for each assessment period.
- Informing the student representatives, the details of regulations regarding the weightage used for each assessment. In the case of practical courses (laboratory / project work / seminar etc.) the breakup of marks for each experiment/ exercise/ module of work, should be clearly discussed in the class committee meeting and informed to the students.
- Analyzing the performance of the students of the class after each test and finding the ways and means of improving the Students Performance
- Identifying the weak students, if any, in any specific subject and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students as frequently as possible.

9.2 The class committee for a class under a particular programme is normally constituted by the Head of the Department. However, if the students of different programmes are mixed in a class, the class committee is to be constituted by the Head of the Institution.

9.3 The class committee shall be constituted on the first working day of any semester or earlier.

9.4 At least 2 student representatives (usually 1 boy and 1 girl) shall be included in the class committee.

9.5 The chairperson of the class committee shall invite the Class adviser(s) and the Head of the Department to the meeting of the class committee.

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

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

9.8 The first meeting of the class committee shall be held within one week from the date of commencement of the semester in order to inform the students about the nature and weightage of assessments within the framework of the Regulations. Two or three subsequent meetings may be held at suitable intervals. During these meetings the student members, representing the entire class, shall meaningfully interact and express the opinions and suggestions of the class students to improve the effectiveness of the teaching-learning process.

10. COURSE COMMITTEE FOR COMMON COURSES

Each common course offered to more than one group of students shall have a "Course Committee" comprising all the teachers teaching the common course with one of them nominated as Course Coordinator. The nomination of the course Coordinator shall be made by the Head of the Department / Head of the Institution depending upon whether all the teachers teaching the common course belong to a single department or to several departments. The "Course committee" shall meet as often as possible and ensure uniform evaluation of the tests and arrive at a common scheme of evaluation for the tests.

Wherever it is feasible, the course committee may also prepare a common question paper for the Assessment Test(s).

11. SYSTEM OF EXAMINATION

11.1 Performance in each course of study shall be evaluated based on (i) continuous internal assessment throughout the semester and (ii) Examination at the end of the semester.

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

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

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

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

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

11.3 Industrial Training and Seminar shall carry 100 marks and shall be evaluated through internal assessment only.

11.4 The End Semester examination (theory and practical) of 3 hours duration shall ordinarily be conducted between October and December during the odd semesters and between April and June during the even semesters.

11.5 The End Semester examination for Project Work shall consist of evaluation of the final report submitted by the student or students of the project group (of not exceeding 4 students) by an external examiner and an internal examiner, followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner, the supervisor of the project group and an internal examiner.

11.6 For the End Semester examination of practical courses including Project Work, the internal and external examiners shall be appointed by the Controller of Examinations.

12. PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT

For all theory, laboratory courses, theory courses with laboratory component and project work the continuous assessment shall be awarded as per the procedure given below:

12.1 THEORY COURSES

Two assessments each carrying 100 marks shall be conducted during the semester by the Department concerned. The total marks obtained in all assessments put together out of 200, shall be proportionately reduced for 40 marks and rounded to the nearest integer (This also implies equal weightage to the two assessments).

Assessment I (100 Marks)		**Assessment II (100 Marks)**		**Total**
Individual Assignment / Case Study / Seminar / Mini Project	Written Test	Individual Assignment / Case Study / Seminar / Mini Project	Written Test	Internal Assessment
40	60	40	60	200*

*The weighted average shall be converted into 40 marks for internal Assessment.

Two internal assessments will be conducted as a part of continuous assessment. Each internal 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 internal assessment marks of 200 shall be converted into a maximum of 40 marks and rounded to the nearest integer.

12.2 LABORATORY COURSES

The maximum marks for Internal Assessment shall be 60 marks in case of practical courses. Every practical exercise / experiment shall be evaluated based on conduct of experiment / exercise and records t o b e maintained. There shall be at least one test. The criteria for arriving at the Internal Assessment marks of 60 is as follows: 75 marks shall be awarded for successful completion of all the prescribed experiments done in the Laboratory and 25 marks for the test. The total mark shall be converted into a maximum of 60 marks and rounded to the nearest integer.

Internal Assessment (100 Marks)*	
Evaluation of Laboratory Observation, Record	Test
75	25

* Internal assessment marks shall be converted into 60 marks

12.3 PROJECT WORK

The student shall register for Project Work-I in pre-final semester and Project Work-II in final semester. Project work may be allotted to a single student or to a group of students not exceeding 4 per group. Project Work-II may/may not be a continuation of Project Work-I. If Project Work II is not a continuation of Project Work I, then the topic and constitution of the project team members need not be the same.

12.3.1 Project Work shall be carried out under the supervision of a "qualified teacher" in the Department concerned. In this context "qualified teacher" means the faculty member possessing (i) PG degree or (ii) Ph.D. degree.

12.3.2 The Project Work-II carried out in industry/academic/research institutions need not be a continuation of Project Work-I. In such cases, the Project Work-II shall be jointly supervised by a supervisor of the department and an expert as a joint supervisor from the organization and the student shall be instructed to meet the supervisor periodically and to attend the review committee meetings for evaluating the progress. The review meetings, if necessary, may also be arranged in online mode with prior approval from the Head of the Institution and suitable record of the meetings shall be maintained.

12.3.3 The Head of the Institutions shall constitute a review committee for Project Work for each programme. The review committee consists of supervisor, an expert from the Department and a project coordinator from the Department. If the project coordinator/expert member happens to be the supervisor, then an alternate member shall be nominated. In the case of Industrial Project, the review committee shall have the supervisor, the coordinator from industry and the project coordinator from the Department.

The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be **reduced for 60 marks** and rounded to the nearest integer (as per the scheme given in the table given below).

12.3.4 The project report shall be submitted as per the approved guidelines as given by the Dean Academics, JCE. Same marks shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 30 marks. Marks awarded to each student of the project group is based on the individual performance in the viva- voce examination. 10 Marks are allotted for project report evaluated by the external examiner.

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

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

12.4 OTHER EMPLOYABILITY ENHANCEMENT COURSES

a. The Seminar / Case Study / Mini Project course is to be considered as purely INTERNAL (with 100% internal marks 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. The three member committee appointed by the Head of the Institution, 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%).

b. The Industrial / Practical Training, Summer Project, Internship, shall carry 100 marks and shall be evaluated through internal assessment only. At the end of Industrial / Practical Training / Internship / Summer Project, the student shall submit an attendance certificate from the organization where he / she has undergone training and a brief report. The evaluation will be made based on this report and a viva-voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Institution consisting of the course coordinator and two experts from the Department. The certificates (issued by the organization) submitted by the students shall be attached to the mark list sent by the Head of the Institution to the Controller of Examinations.

c. For all the courses under Employability Enhancement Courses Category, except the Project Work, the evaluation shall be done with 100% internal marks and as per the procedure described in clause 12.5 (a) / (b).

12.5 **ASSESSMENT FOR VALUE ADDED COURSES**

The one / two credit course shall carry 100 marks and shall be evaluated through **continuous assessments only**. Two Assessments as per the clause 12.1 or 12.2 shall be conducted by the Department concerned. The total marks obtained in the assessments shall be reduced to 100 marks and rounded to the nearest integer. A committee consisting of the Head of the Department, staff handling the course and a senior faculty member nominated by the Head of the Institution shall do the evaluation process. The list of students along with the marks and the grades earned shall be forwarded to the Controller of Examinations for appropriate action at least one month before the commencement of End Semester Examinations. The grades earned by the students for Value Added Courses will be recorded in the Grade Sheet, however the same shall not be considered for the computation of CGPA.

12.6 **ATTENDANCE RECORD**

Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD', which consists of attendance marked in each lecture or practical or project work class, the test marks and the record of class work (topic covered), separately for each course. This should be submitted to the Head of the Department periodically (at least three times in a semester) for checking the syllabus coverage and the records of test marks and attendance. The Head of the Department will put his/her signature and date after due verification. At the end of the semester, the record should be verified by the Head of the Institution who will keep this document in safe custody (for five years).

12.7 **CONDUCT OF ACADEMIC AUDIT BY EVERY INSTITUTION**

Every educational institution shall strive for a better performance of the students by conducting the internal assessments as mentioned in Clause 12.

In order to ensure the above, Academic Audit is to be done for every course taught during the semester. For the internal assessments conducted for each course as per

details provided in Clause 12, the academic records shall be maintained in the form of documentation for the individual assignments / case study report / report of mini project submitted by each student and assessment test question paper and answer script. Report of industrial training / internship shall also be maintained, if applicable. For laboratory courses students‟ record shall be maintained. Further, the attendance of all students shall be maintained as a record.

The Head of the Institution shall arrange to conduct the Academic Audit for every course in a semester by forming the respective committees with an external course expert as one of the members drawn from a Technical institution of repute near the institute.

13 REQUIREMENTS FOR APPEARING FOR END SEMESTER EXAMINATIONS

A student shall normally be permitted to appear for the End Semester Examinations for all the courses registered in the current semester (vide clause 6) if he/she has satisfied the semester completion requirements (as per clause 7).

Further, examination registration by a student is mandatory for all the courses in the current semester and all arrear(s) course(s) for the End Semester Examinations failing which, the student will not be permitted to move to the higher semester.

A student who has already appeared for any course in a semester and passed the examination is not entitled to reappear in the same subject for improvement of grades.

14 PASSING REQUIREMENTS

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

14.2 If a student fails to secure a pass in a theory course / laboratory course (except electives), the student shall register and appear only for the end semester examination in the subsequent semester. In such case, the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the student secures a pass. However, from the third attempt onwards if a student fails to obtain pass marks (IA + End Semester Examination) as per clause 14.1, 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.

14.3 If the course, in which the student has failed, is a Professional Elective or an Open Elective course, the student may be permitted to complete the same course. In such

case, the internal assessment marks obtained by the student in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secures a pass. However, from the third attempt onwards if a candidate fails to obtain pass marks (IA + End Semester Examination) as per clause 14.1, then the candidate shall be declared to have passed the examination if he/she secures a minimum of 50% marks prescribed for the End Semester examinations alone.

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, fulfil the attendance requirements as per clause 7 and appear for the end semester examination.

14.4 If a student is absent during the viva - voce examination, it would be considered as fail. If a student fails to secure a pass in Project Work-Phase I, **the student shall register** for the course again in the subsequent semester and can do Project Work-Phase I and Phase II together. However, is case of failure in any phase, the student has to reregister for both phase I and phase II within 30 days.

14.5 The passing requirement for the courses which are assessed only through purely internal assessments (EEC courses except Project Work and laboratory), is 50% of the internal assessment (continuous assessment) marks only.

14.6 A student can apply for revaluation of the student's semester examination answer paper in a theory course, as per the guidelines of the COE on payment of a prescribed fee along with prescribed application to the COE. The COE will arrange for the revaluation and the results will be intimated to the student. Revaluation is not permitted for laboratory course and EEC courses.

15 AWARD OF LETTER GRADES

15.1 The award of letter grades will be decided using relative grading principle. The performance of a student will be reported using letter grades, each carrying certain points as detailed below:

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

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

"SA" denotes shortage of attendance (as per clause 7.3) and hence prevented from writing the end semester examinations. "SA" will appear only in the result sheet.

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

If the grade RA is given to **Theory Courses**/ **Laboratory Courses it is not required to satisfy the** attendance requirements (vide clause 7), but has to appear for the end semester examination and fulfil the norms specified in clause 14 to earn a pass in the respective courses.

If the grade RA is given to **EEC course (except Project Work), which are evaluated only through internal assessment,** the student shall register for the course again in the subsequent semester, fulfil the norms as specified in clause 14 to earn pass in the course. However, attendance requirement need not be satisfied.

15.1.1 **Relative Grading**

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

15.1.2 **Absolute Grading**

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

Table – Grade range for absolute grading

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

15.2 The grades O, A+, A, B+, B, C obtained for the one/two credit course (not the part of curriculum) shall figure in the Grade Sheet under the title **"Value Added Courses/Internship/Industrial Training".** The courses for which the grades obtained are RA, SA will not figure in the Grade Sheet.

15.3 For the students who complete the NCM Courses satisfying attendance requirement, the title of the NCM Courses will be mentioned in the Grade Sheet. If the attendance requirement is not satisfied, it will not be shown in the **Grade Sheet.**

15.4 **AWARD FOR LETTER GRADE FOR ONLINE COURSES**

The award of letter grades will be decided using absolute grading principles. The performance of a student will be reported using letter grades, each carrying credit points as detailed below.

Letter Grade	Grade Points*	Marks Range
O (Outstanding)	10	90-100
A+ (Excellent)	9	80-89
A (Very Good)	8	70-79
B+ (Good)	7	60-69
B (Average)	6	50-59
C (Satisfactory)	5	40-49

15.5 **GRADE SHEET**

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

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

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

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

where $\mathbf{C_i}$ is the number of Credits assigned to the course

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

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

16. ELIGIBILITY FOR THE AWARD OF THE DEGREE

16.1 A student shall be declared to be eligible for the award of the M.E. Degree provided the student has

- Successfully gained the required number of total credits as specified in the curriculum corresponding to the student's programme within the stipulated time.
- Successfully completed the course requirements, appeared for the End – Semester examinations and passed all the subjects within the period as prescribed in clause
- 5.1 and 5.1.1.
- Successfully passed any additional courses prescribed by the Dean Academics whenever the student is readmitted under Regulations R-2021 from the earlier Regulations.
- No disciplinary action pending against the student.
- The award of Degree must have been approved by the Syndicate of the University.

16.2 CLASSIFICATION OF THE DEGREE AWARDED

16.2.1 FIRST CLASS WITH DISTINCTION

A student who satisfies the following conditions shall be declared to have passed the examination in **First class with Distinction:**

- Should have passed the examination in all the courses of all the four semesters.
- Should have secured a CGPA of not less than **8.50**.
- Should NOT have been prevented from writing end semester examination due to lack of attendance in any semester.

16.2.2 FIRST CLASS

16.2.2.1 A student who satisfies the following conditions shall be declared to have passed the examination in First class:

16.2.2.2 Should have passed the examination in all the courses of all four semesters.

16.2.2.3 Should have secured a CGPA of not less than 6.50.

16.2.3 SECOND CLASS

All other students (not covered in clauses 16.2.1 and 16.2.2) who qualify for the award of the degree **(**vide Clause 16.1) shall be declared to have passed the examination in **Second Class**.

16.3 A student who is absent in end semester examination in a course / project work after having registered for the same shall be considered to have appeared in that examination for the purpose of classification. (subject to clause 17).

16.4 **Photocopy / Revaluation**

A student can apply for photocopy of his/her semester examination answer paper in a theory course, as per the guidelines of the COE, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Institutions. The answer script is to be valued and justified by a faculty member, who has handled the subject and recommend for revaluation with t h e breakup of marks for each question. Based on the recommendation, the student can register for the revaluation through proper application to the Controller of Examinations. The Controller of Examinations will arrange for the revaluation and the results will be intimated to the student concerned through the Head of the Institutions. Revaluation is not permitted for practical courses and EEC courses.

A student can apply for revaluation of answer scripts for not exceeding 5 subjects at a time.

16.5 **Review**

Students not satisfied with Revaluation can apply for Review of his/ her examination answer paper in a theory course, within the prescribed date on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of the Institution. Students applying for Revaluation only are eligible to apply for Review.

17. PROVISION FOR WITHDRAWAL FROM END-SEMESTER EXAMINATION

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

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

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

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

17.4 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).

17.5 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 I and II respectively and the same shall not be considered as reappearance.

17.6 Withdrawal is permitted for the end semester examinations in the final semester, as per clause 16.2.1.

18 PROVISION FOR AUTHORISED BREAK OF STUDY

18.1 A student is permitted to go on authorised break of study for a maximum period of one year as a single spell.

18.2 Break of Study shall be granted only once for valid reasons for a maximum of one year during the entire period of study of the degree programme. However, in extraordinary situation the student may apply for additional break of study not exceeding another one year. If a student intends to temporarily discontinue the programme in the middle of the semester for valid reasons, and to re-join the programme in a subsequent year, permission may be granted based on the merits of the case provided he / she applies to the Dean, Student Affairs in advance, but not later than the last date for registering for the end semester examination of the semester in question, through the Head of the Institution stating the reasons therefore and the probable date of re-joining the programme.

18.3 The student permitted to re-join the programme after break of study / prevention due to lack of attendance, shall be governed by the Curriculum and Regulations in force at the time of re-joining. The students re-joining in new Regulations shall register for additional courses, if any, as notified by the Dean Academics under change of Regulations. These courses may be from any of the semesters of the curriculum in force, so as to bridge the curriculum in force and the old curriculum. In such cases, the total number of credits to be earned by the student may be more than or equal to the total number of credits prescribed in the curriculum in force.

18.4 The authorized break of study is included in the duration specified for passing all the courses for the purpose of classification (vide Clause 16.2).

18.5 The total period for completion of the Programme reckoned from, the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of break of study in order that he/she may be eligible for the award of the degree.

18.6 If any student is prevented for want of required attendance, the period of prevention shall not be considered as authorized „Break of Study" (Clause 18.1).

18.7 If a student in Full Time mode wants to take up a job / start-up / entrepreneurship during the period of study he/she shall apply for authorised break of study for one year. The student shall join the job / start-up / entrepreneurship only after getting approval of the same by the Dean Academics with due proof to that effect.

18.8 No fee is applicable to students during the Break of Study period.

19 DISCIPLINE

19.1 Every student is required to observe disciplined and decorous behaviour both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the College. The Head of the Institution shall constitute a disciplinary committee consisting of the Head of the Institution, Two Heads of Department of which one should be from the faculty of the student, to enquire into acts of indiscipline. In case of any serious disciplinary action which leads to suspension or dismissal, then a committee shall be constituted including one management representative.

19.2 If a student indulges in malpractice in any of the End Semester internal examination he / she shall be liable for punitive action as prescribed by the COE from time to time.

20 REVISION OF REGULATIONS, CURRICULUM AND SYLLABI

The College may from time to time revise, amend or change the Regulations, curriculum, syllabus and scheme of examinations through the Academic Council with the approval of the Governing Council.

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