

EASWARI ENGINEERING COLLEGE

(Autonomous Institution)

BharathiSalai, Ramapuram, Chennai - 600 089

[A Unit of SRM Group of Educational Institutions, Approved by AICTE
| Affiliated to Anna University, Chennai | NAAC Accredited 'A' Grade |
2(f) & 12(B) Status(UGC) | ISO 9001:2015 Certified | NBA Accredited
Programmes | FIST Funded (DST) | SIRO Certified (DSIR)]



AUTONOMOUS

Academic Regulations 2019

(Norms and Rules)

Version 1.6
15 June 2020

M.E. Programmes
(Applicable to the Students Admitted from the
Academic Year 2019-20 Onwards)

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Academic Regulations 2019

Common to All M.E. Full- Time Programmes

CHOICE BASED CREDIT SYSTEM (CBCS)

These regulations are applicable to students admitted into M.E. Programmes from the academic year 2019 – 2020 onwards.

(i) Preamble

India through National Board of Accreditation (NBA) is officially a permanent signatory of **Washington Accord** from 13 June 2014. This is considered as a significant step of progress for the higher-education sector in India. The Washington Accord covers professional engineering academic degrees under Outcome Based Education (OBE). The OBE has to ensure that the required outcomes (knowledge, skills and attitude / behaviour) are acquired by the learners of a programme under 'Learner Centric' model. With the OBE process in mind, the Educational system of Easwari Engineering College (EEC) has been framed to provide the needful scope for the learners through the CBCS that

will pave the platform to strengthen their knowledge, skills and attitude / behaviour. CBCS offers flexibility to learners by including interdisciplinary electives and industry based courses.

(ii) Objectives of CBCS

- To shift focus from the teacher-centric to student-centric education
- To allow students to choose inter-disciplinary, intra-disciplinary and skill oriented courses (even from other disciplines according to their learning needs, interests and aptitude) to provide more flexibility
- To make education broad-based and at par with global standards
- To help students earn credits by choosing unique combination of courses
- To offer flexibility for students to get international exposure by completing a course at world class institutions facilitating the transfer of credits earned
- To provide necessary flexibility to students to gain the vital life skills
- To equip students to keep abreast of industrial requirements and societal needs

1 Definitions and Nomenclature

1.1 University

University means the affiliating university, ANNA UNIVERSITY, Chennai.

1.2 Institution

Institution means EASWARI ENGINEERING COLLEGE, RAMAPURAM, CHENNAI – 600 089, an autonomous institution affiliated to Anna University, Chennai.

1.3 Head of the Institution

Head of the Institution means the Principal of the institution who is responsible for all academic activities and for the implementation of relevant rules of this regulation.

1.4 Programme

Programme means Degree Programme that is, M.E. Degree Programme.

1.5 Head of the Department

Head of the Department means head of the department concerned.

1.6 Controller of Examinations

Controller of Examinations means the authority of the Institution who is responsible for all Examination related activities.

1.7 Branch

Branch means specialization or discipline of M.E. Degree Programme such as Structural Engineering, Communication Systems and Embedded System Technologies.

1.8 Course

Every paper / subject of study offered by various departments is called a course (e.g. Operating Systems).

1.8.1 Classification and Numbering of Course

Each course is assigned with a 10 digit course code which has the structure as in Table 1.

1.9 Curriculum

The various components / courses studied in each programme that provides appropriate outcomes (knowledge, skills and attitude/behaviour) in the chosen branch is called curriculum.

1.9.1 Credits

Course work is measured in units called credit hours or simply credits. The number of hours of a course per week is the number of credits for that course. One credit per lecture hour per week is assigned for each theory course. Laboratory, tutorial courses, etc., are assigned 0.5 credits per hour per week. Laboratory and Tutorial hours shall be of either 2 hours or 4 hours duration per week. The credit detail of a course and semester is shown in Table 2.

1.9.2 Earning Additional Credits

1.9.2.1 In a semester, a student is permitted to register for a maximum of 24 credits.

Table 1 – Course Code Structure

YY N DD C L S S A						
YY	N	DD	C	L	SS	A
2 Digits	1 Digit	2 Digits	1 Digit	1 Digit	2 Digits	1 Digit
Year of Regulation	Programme Number	Course Offering Department	Type of Course	Semester of the Course	Course Serial Number	Additional Qualifier
2019 Regulations	1 – B.E. / B.Tech 2 – M.E. / M.Tech 3 – M.B.A	LE - English PY - Physics CY - Chemistry MA– Mathematics GE - General MB–Management Sciences AT - Automobile Engineering CE - Civil Engineering CS - Computer Science and Engineering EC - Electronics and Communication Engineering EE - Electrical and Electronics Engineering EI - Electronics and Instrumentation Engineering ME - Mechanical Engineering IT - Information Technology AI – Artificial Intelligence and Data Science BM – Biomedical Engineering RO – Robotics and Automation	H – Humanities, Social Sciences including Mgt. Courses B – Basic Science Courses S – Engineering Science Courses C – Professional Core Courses E – Professional Elective Courses O – Open Elective Courses P – Project / Start up A - Seminar, Internship etc., M – Mandatory Courses	1 – 1 st Semester 2 – 2 nd Semester ...	01 02 etc.,	T- Theory L – Laboratory I – Industry B – Bridge J – Joint

#Employability Enhancement Courses / Personality Development Courses

Table 2 – Credit Detail of a Course and Semester

Nature of Course	L	T	P	R	C
Theory	3	0	0		3
	4	0	0		4
Theory + Tutorial	3	2	0		4
	3	1	0		3.5
Practical	0	0	2		1
	0	0	4		2
	0	0	2	2	2
	0	0	3	1	2
Project-Phase I and Phase II	0	0	0	44	22
Note: Minor projects can be planned for theory courses which does not have corresponding laboratory. The courses having minor projects should have working models.					
Total Number of Credits	Regular		To be between 68 and 72		
Number of credits per Semester (for semesters 1 & 2)	17 to 23				
Number of courses per semester (for semesters 1 and 2)	5/6 theory + 1/2 laboratory (or) 5/6 theory + 1 laboratory and/or 1 Mini project				
Number of courses per semester (for semesters 3)	2/3 theory + Project work / Start up (Phase-I)				
Number of courses for semester 4	Project work / Start up (Phase-II)				
Note: Total number of courses not to exceed 10 in any semester					

1.9.2.2 It is mandatory to satisfy the pre-requisites (if any), prescribed in the curriculum and syllabus to register for courses to earn additional credits.

1.9.2.3 One period is 50 minutes. One credit means one period per week for theory and 2 periods for practical.

1.10 Standing Committee

Standing Committee comprises all academic heads.

1.11 Department Consultative Committee (DCC)

DCC is chaired by the head of the department and comprises at least 1 Professor, 2 Associate Professor / Assistant Professor, Class Advisor and Mentor of the concerned student

2 Admission

2.1 First Year M.E.

The norms for admission, eligibility criteria such as marks, number of attempts, physical fitness and mode of admission will be as prescribed by the University.

2.2 For students re-admitted from earlier Regulations (due to discontinuation for different reasons) **to 2019** Regulations, a “Course Equivalence Committee” will be constituted by the Principal to decide the Courses exempted and additional Courses to be appeared for, by the concerned student.

3 Branches of Study

The following branches of study approved by the University are offered by the institution:

M.E. Degree Programmes

- Communication Systems
- Computer Science and Engineering
- Embedded System Technologies
- Engineering Design
- Structural Engineering

4 Curriculum Structure

4.1 According to the National Board of Accreditation (NBA), India, for each Post Graduate (PG) programme, the curriculum has to be evolved after finalizing the Programme Educational Objectives (PEOs) and the corresponding Programme Outcomes (POs). The POs have been directly listed by NBA for PG programmes. Programme Specific Outcomes (PSOs) are to be evolved. The curriculum that evolves should broadly ensure the achievement of the POs and PSOs, and thus the PEOs of the programme.

4.2 All India Council for Technical Education (AICTE), New Delhi in its “Model scheme of instructions and syllabus for PG engineering degree programmes” published during January 2018 has prescribed a model curriculum structure for PG Engineering degree programmes. A Typical sequencing plan for courses at Degree Programmes is as shown in Table 3.

The suggested Course Work (=70 Credits), at 17 credits / Semester on an average with built-in flexibility of +/- 20% as indicated earlier in Table 2 needs to be completed successfully by a student to qualify for the award of the PG Engineering Degree from the concerned University / Institution. A widely accepted plan for sequencing the Course Work can be as in **Table 3**.

Table 3: Sequencing Plan for Courses at PG Engineering Degree Programmes

Semesters	Subject Area Coverage
I	Foundation Courses (FC), Professional Core(PC) and Professional Elective (PE), Employability Enhancement Courses (EEC), Mandatory Courses
II	Foundation Courses (FC), Professional Elective (PE), Professional Core (PC), Open Electives (OE), Employability Enhancement Courses (EEC), Mandatory Courses
III	Professional Elective (PE), Professional Core (PC), Open Electives (OE), Employability Enhancement Courses (EEC), Mandatory Courses, Project / Start up Phase –I
IV	Project / Start up Work phase –II

The typical curriculum structure for PG degree programmes is given in **Table 4**.

Table 4 - Curriculum Structure for PG Degree Programmes

S. No	Course Work Subject Area	Range of Total Credits			
		In %		in NUMBERS assuming total credits = 70	
		Min	Max	Min	Max
1	Foundation Courses(FC)	4.2	8.5	3	6
2	Professional Core(PC)	30	34.2	21	24
3	Professional Electives (PE)	17.1	21.4	12	15
4	Open Electives (OE)	4.2	8.5	3	6
5	Employability Enhancement Courses (EEC)	2.0	40	2	28
6	Mandatory Courses (MC)	4	10	-	-

Foundation Courses (FC) includes mathematics, Research Methodology, Employability Skills

Professional Core (PC) relevant to the chosen specialization / branch.

Professional Electives (PE) relevant to the chosen specialization / branch.

Open Electives (OE) from other technical and / or emerging subject areas.

Employability Enhancement Courses (EEC) includes Project / Start up Work Phase I and Phase II, Technical Seminar and / or Internship in Industry or elsewhere.

Mandatory course will not play role in CGPA calculation.

4.3 Semester Curriculum

The curriculum of each semester shall be a blend of theory, practical courses and project / Start up work as stated in **Table 2**.

Electives: Every student shall choose electives from the list of electives related to their degree programme in consultation with the class advisor, Programme Co-ordinator and the HoD. The student will be required to study 2 types of electives called “Open Electives” and “Professional Electives” and the electives will spread over from 1st semester to 3rd semester. Professional electives are courses offered by a department to the students of their own branch and Open electives are courses offered by other departments to widen the student’s knowledge in interdisciplinary courses.

4.4 Medium of Instruction

The medium of instruction for Lectures, Examinations and Project work is English.

4.5 Industrial Training / Internship

Internship is mandatory for all branches of study. Assessment and grading will be as per clause 4.2. The students have to mandatorily 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 organizations / Universities (after due approval from the Department Consultative Committee – DCC) for the period prescribed in the curriculum during summer /winter

vacation, in lieu of industrial training. A student will earn 1 or 2 or 3 credits for an internship of continuous 2 or 4 or 6 weeks respectively.

4.6 Industrial Visit

Every student is required to go for at least one Industrial Visit in the first and second semesters of the Programme. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

4.7 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 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 at least one month before the course is offered. **Students can take a maximum of two one credit courses or one two credit course** during the entire duration of the Programme.

4.8 Online Courses

4.8.1 Students may be permitted to credit a maximum of two online courses of 3 credits each with the approval of **Standing Committee**

4.8.2 The DCC may recommend online courses to the Standing Committee from time to time. The DCC has to ensure that the student has not studied such courses

and would not repeat it again as Professional Core / Professional Elective / Open Elective. For assessment of online courses, refer Clause 14.9.

- 4.9** “Writing Intensive Course” with an impetus to develop the writing skills and enhance report writing skills through at least one course during the entire programme of study. It can be in the form of written assignments, reports and case study.

5 Duration of the Programme

- 5.1** Each academic year will consist of **Two** semesters.
- 5.2** The normal and maximum permissible number of semesters for each programme is 4 and 8 semesters respectively.
- 5.3** The duration of the programme as given in Table 5 shall be followed as per the regulations published by Anna University from time to time.

Table 5 – Duration of the Programme

Category	Number of Semesters	
	Normal	Maximum Permissible
Regular	4	8

6 Course Registration

- 6.1** The student shall register for the courses that s/he 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 (with the facility to drop courses to a maximum of 6 credits (vide clause 6.2). The student can also register for courses for which the student has failed in the earlier semesters.

This registration is for undergoing the course as well as for writing the End Semester Examinations. No Elective course shall be offered by any department unless a minimum 20 students register for the course. However, if the students admitted in the associated branch & semester is less than 20, this minimum will not be applicable.

The courses that a student registers for, in a particular semester may include:-

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

6.2 Flexibility to Add / Drop Courses

- 6.2.1** A student has to earn the total number of credits specified in the curriculum of the respective Programme of study in order to be eligible to obtain the degree.
- 6.2.2** From second to final semesters, the student has the option of dropping existing courses in a semester during

registration. Total number of credits of such courses cannot exceed 6.

6.2.3 The student shall register for the Project work (Phase-II) in the final semester only.

6.2.4 From second semester onwards, the student has the option to study additionally a maximum of 2 theory courses (only electives if offered) in a semester.

6.2.5 In case, a student drops a course of study in one semester, she/he shall register for that course in the next given opportunity and earn necessary attendance in that course exclusively to become eligible to appear for the End Semester Examinations (ESE) in that course.

6.3 Course Registration process for Summer / Winter Success

6.3.1 Students in the following cases can register for Theory and Laboratory courses in the summer / winter success if she/he:

6.3.1.1 Was not permitted to attend the end semester examinations due to lack of attendance (vide clauses of section 10) in the regular semester

6.3.1.2 Failed in the first reappearance of the course

6.3.1.3 Has lack of attendance / failed in the course registered for, during previous summer / winter success

6.3.2 However, students in the following cases may also opt to take courses in the summer / winter success if s/he:

6.3.2.1 Has arrears in the regular semester, and opt to re-earn his / her Continuous Assessment Marks (CAM)

- 6.3.2.2** Wishes to take courses (without pre-requisites) offered in the 3rd semester. Such courses can be registered for, after the 1st semester, when offered in the summer/winter success
- 6.3.2.3** Students can register for a maximum of 2 courses (combination of theory and laboratory course) in the summer success
- 6.3.2.4** Students can register for a maximum of 1 course (theory or laboratory course) in the winter success
- 6.3.2.5** For final year students, under special circumstances Department Consultative Committee (DCC) will decide on requests for registration of additional courses over and above the arrear course registration limits
- 6.3.2.6** For all the courses registered by the student in the summer / winter success, s/he should pay the prescribed fee, in addition to the regular semester fee.
- 6.3.2.7** Announcement for summer/winter success will be made 2 weeks prior to the last working day of the semester by CoE, after consultation with respective department heads.
- 6.3.3** List of courses for summer / winter success is finalized by the head of the department, CoE and Principal. Vice-principal (Academic) is a special invitee.

6.4 Add / Drop Period

A student can add or drop the courses registered within the first 5 instructional days, from the commencement of a regular semester (not applicable to summer/winter success) subject to the availability of resources and the minimum/maximum number of credits required to be registered in a semester as specified vide clause 6.2. In view of its short duration, students cannot avail Add/Drop provision for the courses registered during Summer/Winter Success.

7 Class Coordinator and Student Counsellor

7.1 Class Coordinator (Advisor)

Head of the Department will allot one faculty member to be the class advisor for a particular batch of students throughout their period of study. The role of class advisors is as follows:

- i) To motivate and closely monitor the performance of the students.
- ii) To build a strong alumni base for the institution by maintaining a meaningful rapport with students and parents.
- iii) To maintain all important documents of the students for reference/inspection by all committees.
- iv) To work closely with the student counsellors on matters related to students attached to the student counsellors and update the details of the students from time to time.

Specifically with respect to CBCS, the class advisors will:

- i) Guide students to get enrolled and register for courses of a semester.
- ii) Authorise the final list of students registered for the courses at the beginning of each semester.

7.2 Student Counsellor (Mentor)

By guiding and counselling students, faculty can create a greater sense of belongingness amongst our student community. To help the students in planning their courses and for general guidance on the academic programme, the Head of the Department will allot a certain number of students to a teacher of the department who shall function as student counsellor throughout their period of study.

The student counsellor will guide / monitor the courses chosen by the students, check attendance and progress of the students and counsel them periodically. The student counsellors should ensure that each student is made aware of the various options for progress. Students are monitored and guided to become overall performers. Students select and work for career choices of their interest. The student counsellors shall update and maintain the student counsellor record of each student attached to them. The student counsellors shall also help the class advisors to update the students details attached to them.

The student counsellor may also discuss with the class advisor, HoD and parents about the progress of the students.

8 Class Committee

- 8.1** Every class will have a class committee constituted by the HoD. The members of the class committee will be as follows:-
- 8.1.1** Chairperson (a senior faculty who is preferably not teaching any course for the class)
 - 8.1.2** All faculty handling courses for the class
 - 8.1.3** Students (a minimum of 6 consisting of 3 boys and 3 girls on pro-rata basis)
- 8.2** The functions of the class committee shall include the following:-
- 8.2.1** Clarify the regulations of the programme and the details of rules therein.
 - 8.2.2** Inform the student representatives about the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
 - 8.2.3** Inform the student representatives about the details of Regulations regarding marks assigned 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
 - 8.2.4** Analyze the performance of the students of the class after each assessment test and initiate steps for improvement.
 - 8.2.5** Identify slow learners, if any, and request the faculty concerned to provide additional help / guidance / coaching to such students.

- 8.2.6** Discuss and sort out problems experienced by students in the classroom and in the laboratories.
- 8.3** The class committee shall be constituted within the first week of commencement of any semester.
- 8.4** The chairperson of the class committee may invite the class advisor / student counsellor and the Head of the Department to the meeting of the class committee.
- 8.5** The Principal may participate in any class committee meeting.
- 8.6** The chairperson is required to prepare the minutes of every meeting, submit the same through the Head of the Department to the Principal within two days of the meeting and arrange to circulate the same among the students and faculty concerned. Points requiring action by the management shall be brought to the notice of the management by the Principal.
- 8.7** The class committee meetings are to be conducted as scheduled below.

Meeting 1	Within one week from the date of commencement of the semester
Meeting 2	One week before the 1 st assessment test
Meeting 3	One week before the 2 nd assessment test

During the first meeting of the class committee, the students are to be informed about the nature and marks of assessments as per the framework of the Regulations. During these meetings the student representatives shall meaningfully interact and express opinions and suggestions of the students of the class to improve the effectiveness of the teaching-learning process.

9 Course Committee for Common Courses

Each common theory / laboratory course offered to more than one class / branch shall have a Course Committee, comprising all the faculty teaching the common course with one of them nominated as Course Coordinator.

S. No	Nature of Common Courses	Person Responsible for Forming Course Committee and Nominating Course Coordinator
1	For common course handled in a particular department	Respective HoD
2	For common courses handled in more than one department	Controller of Examinations (CoE) to put up the course committee details to the Principal, get the same approved and intimate to the concerned faculty

The course committee will ensure that a common question paper is prepared for the tests / exams and uniform evaluation is carried out. The Course committee will meet a minimum of 3 times in each semester. The schedule for the course committee to meet is as follows.

Meeting 1	Before one week of the start of the semester
Meeting 2	One week before 1 st assessment test
Meeting 3	One week after 2 nd assessment test

10 Requirements for Completion of a Semester

10.1 A student who has fulfilled the following conditions shall be deemed to have satisfied the attendance requirements for appearing in the end semester examinations of a particular course.

10.2 Ideally every student is expected to attend all periods and earn 100% attendance. However, the student shall secure not less than 75% attendance course - wise taking into account the number of periods prescribed for that course in the curriculum.

Note: Faculty members have to mark attendance as “**present**” only for those students who are **physically present** in the class.

Note: The need to award On Duty (OD) is eliminated as the student shall benefit from the 25% margin in attendance in each course to take part in co-curricular and extra-curricular activities.

10.2.1 Apart from 25% margin in attendance, an additional 10% relaxation in attendance shall be provided (after being recommended by Department Consultative Committee) for students who secure attendance greater than or equal to 65% and less than 75% in any course in the current semester due to the following reasons only:

- i) Medical reasons (hospitalization / accident and or illness)
- ii) Due to participation in sports events or design competitions or NCC and / or NSS activities with prior written permission from the Head of the Institution through the Head of the Department

The student shall be considered for exemption from the prescribed attendance requirement for the reasons stated above and if exempted, the student shall be permitted to appear for the end semester examinations of that course. In all such cases, the students should have submitted the required documents on joining after the absence, to the Head of the Department through the Class Advisor.

10.2.2 A student who secures attendance of less than 75% in any course after considering the exemption from the prescribed attendance requirement for reasons as mentioned in Clause 10.2.1 shall not be permitted to appear for the End-Semester Examinations of that course.

10.2.2.1 Free From Attendance: However, a student who has more than or equal to 8.5CGPA at the end of the 2nd semester with no standing arrears is exempted from the minimum attendance requirement for appearing end semester examination.

10.2.3 In the first attempt (not permitted for the subsequent attempts) of writing the End Semester Examination of a course if a student fails, the student can decide for any one of the following two options.

10.2.3.1 Retain CAM option: In this case, the student retains the existing CAM and proceeds to write the supplementary exams.

10.2.3.2 Re-earn CAM option: In this case, the student has to re-register by paying the prescribed fee for the course when it is offered next in the subsequent academic year. The existing CAM will get nullified. The student has to re-

earn the CAM by taking-up all the internal tests, assignments and group presentation.

10.2.4 A student will lose the eligibility to proceed to the subsequent semester in the following case:

10.2.4.1 If a student has lack of attendance in 04 (four) or more courses (one credit courses not to be taken in account) offered in a particular semester, the student will be detained in that semester in both Theory and Practical courses. The student cannot proceed to the next semester. The student shall seek readmission as per the norms of Anna University / DOTE (Directorate of Technical Education). **“Free from Attendance”** category of students (Refer clause 10.2.2.1) is exempted.

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

11 Requirements for Appearing for End Semester Examinations

11.1 A student will be eligible to appear for the End Semester Examinations of a course if the student has satisfied the attendance requirements (vide Clause 10.2) and has registered for examination in those courses of that semester by paying the prescribed fee.

11.2 Students who do not satisfy clause 10.2.1 and 10.2.2 in a course shall not be permitted to appear for the End-Semester Examinations of that course. The student has to re-register and repeat such course(s) in the subsequent semesters when it is offered next.

- 11.2.1** If a student is prevented from writing end semester examination of a course due to lack of attendance, the student has to register for that course again, when offered next, along with regular courses of the current semester, attend the classes and fulfil the attendance requirements for the re-registered courses also as per clause (10.2).
- 11.2.2** For students who re-register for a course due to lack of attendance, the student has to again earn the CAM marks as per the clause [10.2.3.2] mentioned in the regulations. After gaining the needful attendance in the course, if the student takes up the end semester examination and fails, the option of re-earning CAM [clause 10.2.3.2] will not be made available to them.
- 11.2.3** If a student fails to clear a course in four attempts (one attempt as regular and three attempts as arrears, that includes the attempt of re-earning CAM) in a particular course through end semester examinations / supplementary examinations, the CAM of that course will cease to be counted from the **fifth attempt** and the student will be allowed to appear for end semester examinations and based on the students' performance in the end semester examination alone, the result will be declared (that is, the student will be evaluated only by the end semester examinations).
- 11.2.4** A course which has prerequisite can be registered for, by a student, provided, the student has passed in the prerequisite course.
- 11.2.5** If the course, in which the student has failed / lack of attendance, is a Professional Elective or an Open Elective, the student may register for the same or any

other Professional Elective or Open Elective course (prescribed in the curriculum) respectively in the subsequent semester, whenever it is offered next.

11.2.6 If a student has lack of attendance as per clause [10.2.4.2] the student will be detained in that semester in both Theory and Practical courses. The student cannot proceed to the next semester. The student shall seek readmission as per the norms of Anna University / DOTE (Directorate of Technical Education).

11.3 There will be no minimum CAM requirement in a course to register for the end semester examinations. CAM will be earned by a student as follows:

Theory Courses: Internal marks will be awarded by conducting two assessment Tests and assignments for all theory courses.

Practical Courses: Internal marks will be awarded by:

- i) “Continuous assessment” of the performance of the student in each laboratory exercise / experiment.
- ii) Conducting one model practical exam for every practical course.

Note: The students will be provided with a laboratory workbook and this will be the **only document** the student will maintain / get assessed periodically.

12 Retests

A student who has not appeared for any one of the two internal tests (theory courses) shall be permitted to appear for a Retest (only one retest is permitted) only under the following two cases:

Case 1: Participation in NCC, NSS, Sports (in the beginning of the year, the Physical Director should give the list of students who are in the institution team and who will represent the institution in sports events) or demise of immediate family member.

Case 2: Any other reasons: A committee constituting 1 Professor, 1 ASP/AP and Class Advisor will scrutinize the case and submit their recommendations to the HoD, who in turn will forward the proposal to the Principal, get the approval and conduct retest. In case, the retest is required by more than 10% of the students of a course, a review shall be done by a central committee appointed by the Principal and its approval is required.

Retests should be permitted only very rarely for genuine reasons with the approval of HoD and Principal. Retest is not permitted for improvement.

13 Provision for Withdrawal from Examination

A student may, for valid reasons (medically unfit / unexpected family situations), be granted permission to withdraw (after registering for the examinations) from appearing for any course or courses in the end semester examinations. This facility can be availed **only once** during the entire duration of the degree programme. Withdrawal of application will be valid only if the student

is, otherwise, eligible to write the examination and the application for withdrawal is made prior to the examination in the concerned course or courses. The application for withdrawal should be recommended by the Head of the Department and approved by the Principal. Withdrawal will not be considered as appearance for the purpose of classification of degree under Clause 21.

14 System of Evaluation

14.1 General Guidelines

The total marks for each course (Theory and Practical) will be 100, comprising two components as given below.

- a) Continuous Assessment Marks (CAM) – 50 Marks
- b) End Semester Examinations (ESE marks) – 50 Marks

14.2 Marks Distribution

14.2.1 Procedure for award of Marks is as follows:

14.2.1.1 Theory Courses: The distribution of marks for theory courses for assessment test and End Semester Examination is given in **Tables 6 and Table 7** respectively.

Integrated Courses: For the theory course with lab component, the internal assessment will be based on two components. The internal test - 1 and internal test – 2 will be from theory portions. The sum of marks from the two internal tests shall be reduced to 50 marks. For the laboratory component, assessment test will be made internally and the mark shall be reduced to 50 marks. The sum of these 100 marks may then be arrived at for 50 and rounded to the nearest integer.

Table 6 – Distribution of Marks for Theory Course in Assessment Test

S. No.	Components for CAM	Syllabus Coverage for the test	Duration of the test	Marks (max.)	Question Paper Pattern
01	Internal Test – I (50 Marks)	Portions = First 50 % of the syllabus	90 Minutes	15	<p>Three question paper patterns have been listed for internal test. The selection of the pattern to be decided by the faculty handling the course.</p> <p>PATTERN – 1 (50 Marks): Part A - 20x1 = 20 Marks Q.No.-1 to 20 - Multiple choice questions[#] and Part B - 15x2 = 30 Marks Q.No.-21 to 35</p> <p>PATTERN – 2 (50 Marks): Part A - 10 x 1 = 10 Marks Q.No.-1 to 10 Multiple choice questions[#] , Part B - 05 x 2 = 10 Marks Q.No.-11 to 15 - (Short Answer) and Part C^{\$} - 03 x 10 = 30 Marks Q.No.-16 – compulsory, Q.No.-17, 18,19 (any two to be answered)</p> <p>PATTERN – 3 (50 Marks): Part A - 20 x 1 = 20 Marks Q.No.-1 to 20 - Multiple choice questions[#] and Part B^{\$} - 2 x 15 = 30 Marks Q.No.-21- Compulsory, Q.No.-22 and 23 (any one to be answered)</p> <p>Pattern – 4 (50 Marks): Part A – 5 x 2 = 10 Marks Q.No. 1 to 5 – Short answers and Part B – 2 x 13 = 26 Marks Q.No 6 and 7 (either or type) Part C^{\$} – 1 x 14 = 14 Marks (either or type)</p> <p>Unit Test Pattern (25 Marks) Part A – 5 x 2 = 10 Marks, Part B – 1 x 8 = 8 Marks (compulsory), Part C - 1 x 7 = 7 Marks (any one to be answered) Note: HOTS of Bloom's taxonomy to be followed wherever applicable in all the patterns</p>
02	Internal Test – II (50 Marks)	Portions = Remaining 50 % of the syllabus	90 Minutes	15	
03	Retest (only once)	Re Test Portions = Middle 50% of the syllabus	90 Minutes	Same weightage as one internal test	

[#](multiple choice, multiple selection, sequencing type, match the following, assertion – reason type)

^{\$}**Note:** Case studies, analytical questions, design or evaluation or analysis or application oriented questions to be given in this part

S. No.	Components for CAM	Syllabus Coverage for the test	Duration of the test in hours	Marks (max.)	Question Paper Pattern
04	Assignment	-	-	10	<p>Assignments pattern for each course has to be finalized by the HOD before commencement of the semester and to be included in the course plan. The choice for assignment pattern is as follows:</p> <ul style="list-style-type: none"> • “1 [online] objective type test + 1 written assignment” pattern has to be used in at least two courses in a semester • A course for which minor project has not been given, either “2 written assignments” or “1 written assignment + 2 written quiz” pattern has to be used • for online objective type test, 50 multiple choice questions (multiple choice, multiple selection, sequencing type, match the following, assertion – reason type) for 50 marks has to be used
05	Group presentation	-	-	10	<ul style="list-style-type: none"> • 1 group presentation • Number of members in a group should match with the number of theory courses in the semester
06	Minor project®	-	-	20	01 minor project (individual / group)
07	Writing Intensive Course®	-	-	20	It can be in the form of written assignments, reports and case study in maximum of 3 courses during the entire programme of study.
08	Attendance (Refer clause-11)	Attendance will not contribute to CAM of a course			--
Total				50	

Note: Internal Tests 1, 2 and Retest can have any one of the three patterns as indicated in Table 7. The course should have the same pattern for that semester internal assessment. The question paper pattern identified for a course should be intimated to the CoE, Principal, Students through the Head of the Department before the commencement of the course.

® (In place of assignment and group presentation)

Table 7 - Distribution of Marks for Theory Course in End Semester Examination

S. No.	Exam	Syllabus Coverage for the exam	Duration of the exam in hours	Max. Marks Weightage	Question Paper Pattern
01	End Semester Exam	Full Syllabus	3	50	<p>Pattern 1: Part A - $10 \times 1 = 10$ Marks Q.No.-1 to 10 Multiple choice questions (multiple choice, multiple selection, sequencing type, match the following, assertion – reason type) Part B - $10 \times 2 = 20$ Marks Q.No.-11 to 20 Short Answer Part C - $05 \times 14 = 70$ Marks Q.No.-21 –compulsory Q.No.-22 to 27 (any four to be answered)</p> <p>Pattern 2: Part A – $10 \times 2 = 20$ Marks Q.No. 1 to 10 – Short answers and Part B – $5 \times 13 = 65$ Marks Q.No 6 and 7 (either or type) Part C^s – $1 \times 15 = 15$ Marks (either or type)</p> <p>Total = 100 Marks</p> <p>Note 1 : Case studies, analytical questions, design or evaluation or analysis or application oriented questions to be given in part C. HOTS of Bloom's taxonomy to be followed wherever applicable</p> <p>Note 2: Question paper pattern for each subject shall be announced before the start of the semester.</p>
Total				50	

14.2.1.2 Practical Courses: Every practical exercise / experiment in all practical courses will be evaluated based on the conduct of exercise / experiment and records maintained by the students. There will be one model practical examination. The criteria for awarding marks for continuous assessment is given in Table 8

Table – 8 - Distribution of Marks for Practical Course

Items	Marks(Maximum)
Continuous assessment [#]	30
Model practical examination	20
End Semester Examination	50
Attendance { Refer clause-11}	-
Total	100

[#]Continuous assessment norms (for each exercise / experiment):

Parameters	Range
1. Preparation	10 to 20%
2. Conduct of the exercise / experiment	20 to 30%
3. Observations made (data collection)	10 to 30%
4. Calculations, inferences, result	10 to 30%
5. Viva-voce	10 to 20%
Total	100

14.2.1.3 Project Work / Start up

Project work shall be supervised by a faculty of the concerned department.

Phase - I

Continuous assessment

Phase-I of the project work will be in the 3rd semester of the programme with 8 to 10 credits. There shall be a minimum of three assessments (each for 100 marks) by a review committee during the semester. There will be equal weightage for all the assessments. The student shall make presentation on the progress made before the committee. The Head of the Institution will constitute a review committee for each programme of study. These assessment marks will be added and converted to 100 marks. Phase-I will purely be assessed internally. A project report is to be submitted for Phase-I at the end of the semester as per the deadline announced by the COE.

End Semester Examination

There will be end semester examination at the end of Phase-I. The grade point thus obtained in the Phase-I evaluation will be entered in the grade sheet of the 4th semester.

Phase-II

Phase-II of the project work will be in the 4th semester of the programme with 14 to 16 credits. The marks for assessment for Phase-II of the project work shall be 100.

Continuous assessment

There shall be three assessments (each for 100 marks) by a review committee. There will be equal weightage for all the assessments. The student shall make presentation on the progress made before the committee. These three assessment marks will be added and converted to 50 marks.

End Semester Examination

The evaluation of the Project work at the end of the semester will be based on the project report and a Viva-Voce Examination by a team consisting of one internal examiner and one external examiner for each programme. The Controller of Examinations shall appoint the internal examiner and external examiner. The evaluation report from the examiners will be for 50 marks. The breakup of marks for the Internal assessment and external assessment is as given in Table 9:

Table 9. Project Work Internal and External Assessment

Internal Assessment (50 Marks)			External Assessment (50 Marks)			
Review I	Review II	Review III	Project report	Presentation	Response to queries	Publication quality
15 marks	15 marks	20 marks	10 Marks	10 marks	20 marks	10 marks

Marks Allotment for Publications	
Publications in reputed journals with impact factor	10 marks
International / National Conference Publications which can be located on Internet and /or are included in hard-copy volumes / proceedings, published by reputed publishers	05 marks
Publications in any other journals, including open access journals	05 marks
International / National Conference Publications in hard-copy volumes /Proceedings for conferences conducted by reputed Institutions (like IIT, IISc, NIT, Govt. aided colleges, etc.)	04 marks
Publications in any other conference	02 marks

Along with this external mark for 50, the internal mark with a maximum of 50 will be added to get the marks for 100. The grade point thus obtained in the project Phase-II evaluation will be entered in the grade sheet of the 4th semester. The Project Report prepared according to approved guidelines and duly signed by the supervisor(s) and Head of the Department shall be submitted to the department as per the deadline announced by the COE. If a student fails to submit the project report on or before the specified deadline, s/he is deemed to have failed in the Project Work and shall re-register for the same in a subsequent semester. If a student registers for the project work viva-voce examination and **does not appear** for the examination, they can register for the supplementary examination. If a student **fails** in the project work viva-voce examination, they can register for the project work

viva voce examination only during the subsequent end semester examinations.

Start up

In lieu of end programme project work, the student can opt individually or in group for initiating start up.

14.2.1.4 Attendance and Assessment Record:

Every faculty is required to maintain an “ATTENDANCE AND ASSESSMENT RECORD” for each course handled, which consists of students attendance in each lecture / practical / project work class, the assessment marks and the record of class works (topics covered). 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 assessment marks and attendance. The HoD after due verification will sign the above record. At the end of the semester, the record should be submitted to the Principal for verification. After such verification, these records will be kept in safe custody by the respective HoD for five years. **Minimum overall attendance of 75% in a course will be an eligibility criterion to take up end semester examinations and attendance will not contribute to CAM of a course.**

**In this case Head of the Department is the service taken Department Head. Example, maths is a service course in Computer science Engineering department, then record of class work to be submitted to Computer science Engineering Department Head.*

14.3 End Semester Examinations

14.3.1 Theory Courses

The End Semester Examinations for theory courses will be conducted with the pattern of Question Paper and duration as stated in Table 7 under clause 14.2.1.1. The evaluation will be for **100 marks**. However, the question paper pattern for courses like Engineering Graphics and Machine Drawing will be designed differently to suit the specific need of the courses.

14.3.2 Practical Courses

End semester examinations for practical courses will be conducted jointly by one internal examiner and one external examiner, appointed by the Controller of Examinations with the approval of the Principal. The evaluation will be for **100 marks** and the weightage for End Semester Practical examination will be **50marks**.

14.3.3 Question Paper Setting for ESE

Both internal and external experts with sound knowledge in Revised Bloom's Taxonomy will be appointed for setting question papers by the Controller of Examinations. Head of the department will give internal list of panel of question paper setters to Controller of Examination when requested.

14.3.4 Evaluation of Answer Book

Both internal and external members will be appointed for evaluating answer books by the Controller of Examinations. Head of the department / Board Chairman will suggest the list of internal and external

examiners based on the subject expertise and experience of faculty members available to Controller of Examination.

14.4 Malpractice

If a student indulges in malpractice in any continuous assessment test / end semester examinations, s/he shall be liable for punitive action as prescribed by the University.

14.5 Supplementary Examinations

A student failed in practical / theory courses in regular examination should compulsorily register for the same in the subsequent semester as a supplementary examination

Students who have completed the eighth semester will be eligible for attending the **special supplementary exam** for all semester arrear papers (from 1st to 8th semesters) in the even semester examination session, soon after their eighth semester regular examination results. Students can register only up to a **maximum of six courses** for the special supplementary exams.

Controller of Examinations (COE) will publish a schedule of special supplementary examinations after the last date of registering for the examinations. The pattern of evaluation will be the same as that of end semester examinations. The revaluation of answer script will not be applicable for special supplementary examinations. However challenge of evaluation of answer script is allowed. The arrear examination will be termed as

supplementary examinations and such appearance in supplementary exam will be treated as another attempt and will be reflected in the grade sheet

Note: Refer clause 16 for procedure for re-totalling / revaluation / challenge of evaluation.

14.6 A student who has appeared and passed any course is not permitted to re-enrol / re-appear in the course / exam for the purpose of improvement of the grades.

14.7 ASSESSMENT FOR EMPLOYABILITY ENHANCEMENT COURSES

14.7.1 Employability Enhancement Courses (except Project Phase I and Project Phase II) can be evaluated through seminar/ case study which are 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 Head of the Institution will evaluate the seminar and at the end of the semester the marks can 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%).

14.7.2 The Industrial / Practical Training, Internship, shall carry 100 marks and shall be evaluated through internal assessment only. At the end of Industrial / Practical training / internship, the candidate shall submit a 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 will be conducted internally during the beginning of odd semesters by a three member Departmental Committee constituted by the Head of the Institution. The certificates (issued by the industry) submitted by the students shall be attached to the mark list sent by the Head of the Institution to the Controller of Examinations.

14.8 ASSESSMENT FOR VALUE ADDED COURSES

The one / two credit course 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 assessment shall be reduced to 100 marks and rounded to the nearest integer. A committee consisting of the Head of the Department, faculty handling the course and a senior Faculty member nominated by the Head of the Institution shall monitor the evaluation process. The list of students along with the marks and the grades earned may be forwarded to the Controller of Examinations for appropriate action at least one month before the commencement of End Semester Examinations.

14.9 ASSESSMENT FOR ONLINECOURSES

Students may be permitted to credit two online course (which is provided with certificate) approved by the Standing Committee (SC). The DCC may recommend online courses to the Standing Committee from time to time. If a student passes the course, offered and evaluated by NPTEL, the equivalent grade

recommended by Anna University for the marks awarded by the NPTEL will be considered for the course.

As per Anna university recommendations, if a student passes the course as evaluated by the NPTEL offering the course, the absolute grading system shall be followed and the grades shall be decided as follows.

Letter Grade	Marks
O	88 – 100
A+	76 – 87
A	64 – 75
B+	52 – 63
B	40 - 51

This online course of 3 credits each can be considered in lieu of two professional electives in 3rd semester.

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

15 Passing Minimum

15.1 Passing minimum for each theory, practical courses and project work is :

- **50%** in the end semester examinations
- **Minimum 50%** of the grand total of continuous assessment marks and end semester examinations marks put together.

15.2 For students scoring less than the passing minimum marks in the end semester examinations, the term “**RA**” against the concerned course will be indicated in the grade sheet. The student has to reappear in the subsequent examinations for the concerned course as

arrears as and when it is offered next. For a student who is absent for theory / practical / project viva-voce, the term “**Ab**” will be indicated against the corresponding course. The student should reappear for the end semester examinations of that course as arrear in the subsequent semester as and when it is offered next. The letter grade “**W**” will be indicated for the courses for which the student has been granted authorized withdrawal (refer clause 13). The student should reappear for the end semester examinations of that course in the subsequent semester as and when it is offered next. For students having shortage of attendance, letter grade ‘SA’ against the concerned course will be indicated in the grade sheet. The student should re-register for the course again, when offered next. (refer clause 11.2.1)

16 Methods for Redressal of Grievances in Evaluation

Students who are not satisfied with the grades awarded, can seek redressal by the methods given in **Table 10**.

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

Table 10 – Grievance Redressal Methodology in Evaluation

Sl. No	Redressal Sought	Methodology
		Regular Examination & Supplementary Examination
1.	Revaluation	Students who wish to apply for Revaluation can register directly by paying the fees within 5 working days from the publication of results and apply for Revaluation. Maximum

		a student can register 5 theory courses for revaluation.
2.	Challenge of evaluation	Students who wish to apply for Challenge of Evaluation can register directly by paying the fees within 3 working days from the publication of results and apply for Challenge of Evaluation. They need not apply for regular revaluation. Maximum a student can register 5 theory courses for Challenge of Evaluation.

These are applicable only for theory courses in regular and supplementary examinations subject to maximum of 5 theory courses in a semester.

16.1 Challenge of Evaluation

- a) A student can make an appeal to the CoE for the review of answer scripts after paying the prescribed fee.
- b) A Committee consisting of 2 experts appointed by CoE will review and declare the result.
- c) If the result is in favour of the student, the fee collected will be refunded to the student.
- d) The final mark will be announced by CoE.

17 Classification of Performance

17.1 Award of Letter Grades

17.1.1 Course Performance

All assessments of a course will be evaluated on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded

as per the range of total marks (out of 100) obtained by the candidate in each course as detailed below in Table 11.

Table 11 – Letter Grade for Course Performance

Letter Grade	Grade Points	Marks Range
O (Outstanding)	10	91 - 100
A+ (Excellent)	9	81 - 90
A (Very Good)	8	71 – 80
B+ (Good)	7	61 – 70
B (Average)	6	50 - 60
RA (Re-Appear)	0	< 50
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 s/he obtains any one of the following grades: “O”, “A+”, ‘A’, ‘B+’, ‘B’.
- ‘SA’ denotes shortage of attendance (as per clause 10.2.2) 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 Marks Sheet as well as in Result Sheet. CAM has to be earned for ‘SA’ category only. If the grade W is given to course, the attendance requirement need not be satisfied.
- If the grade RA is given to a course (theory / practical / integrated), the attendance requirement

need not be satisfied, but has to appear for the end semester examination and fulfill the norms specified in clause 11 to earn a pass in the respective courses.

17.1.2 Attendance Performance

Attendance is the physical presence and active learning participation of a student in the class / laboratory / field work etc., Every faculty member facilitating a course will maintain a record of students attendance and their learning participation till the last instruction day in the semester. The percentage of attendance calculated up to this point subject wise will be indicated in grade sheet by a code letter as in Table 12.

Table 12 – Letter Grade for Attendance Performance

Attendance Rounded to	Letter Code
95 % and above	H+
85 to 94 %	H
75 to 84 %	M
Below 75 %	L

17.2 The grades O, A+, A, B+, B obtained for the one credit course shall figure in the Mark sheet under the title '**Value Added Courses**'. The Courses for which the grades are RA, SA **will not figure in the mark sheet.**

17.3 Semester Grade Point Average (SGPA)

On completion of a semester, each student is assigned a Semester Grade Point Average which is computed as below for all courses registered by the student during

that semester.

$$\text{Semester Grade Point Average} = \sum (C_i \times GP_i) / \sum C_i$$

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.

17.4 Cumulative Grade Point Average (CGPA)

The overall performance of a student at any stage of the degree programme is evaluated by the Cumulative Grade Point Average (CGPA) up to that point of time.

$$\text{Cumulative Grade Point Average} = \sum (C_i \times GP_i) / \sum C_i$$

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.

18 Issue of Grade Sheets

- 18.1 Separate grade sheet for each semester will be given to the students by the CoE after the publication of the results.
- 18.2 After the completion of the programme, a consolidated grade sheet will be issued to the students.
- 18.3 No separate grade sheet for special supplementary examination will be issued to the students by the CoE after the publication of special supplementary examination result. The result of the special supplementary examination will get reflected only in the

consolidated statement of grade (that is, consolidated grade sheet).

19 Temporary Break of Study from a Programme

- 19.1** Break of study is not normally permitted. However, if a student intends to temporarily discontinue the programme in the middle of a semester / year for valid reasons (such as accident or hospitalization due to prolonged ill health) and wishes to rejoin the programme in the next year, he / she shall request in advance to the Principal through the Head of the Department stating the reasons. The application shall be submitted not later than the last date for registering for the semester examinations in that concerned semester. Break of study is permitted only once during the entire period of the degree programme.
- 19.2** The student permitted to rejoin the programme after the break, shall be governed by the rules and regulations in force at the time of rejoining.
- 19.3** The duration specified for passing all the courses for the purpose of classification of degree (vide Clause 20) shall be increased by the period of such break of study permitted.
- 19.4** If a student is detained for want of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted Break of Study and Clause 21 is not applicable for this case.

20 Eligibility for the Award of Degree

A student shall be declared to be eligible for the award of the M.E. Degree provided the student has successfully completed the course requirements and has passed all the prescribed examinations in all the Four semesters within a maximum period of 4 years reckoned from the

commencement of the first semester to which the candidate was admitted.

21 Classification of Degree

The degree awarded to eligible students will be classified as given in **Table 13**.

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

22 Award of Degree

The award of Degree to all eligible students will be approved by the Academic Council of the institution. The degree will be issued by Anna University Chennai. The consolidated Grade Sheet will be issued by the institution.

23 Industrial Visit

Every student is expected to undertake one local Industrial visits during the 1st, 2nd and 3rd semesters of the programme. The faculty in consultation with the Head of the Department will organize the visit. Faculty should accompany the students during Industrial visits.

24 Personality and Character Development

Every student is expected to undertake personality and character development programmes through Club activities. The students may optionally participate in various club activities.

25 Discipline

Every student is required to be disciplined and maintain decorum both inside and outside the campus. They should not indulge in any activity which can bring down the reputation of the University or institution. The Principal

shall refer any act of indiscipline by students to the “discipline and welfare” committee.

Table 13 – Classification of Degree

S.No	Class Awarded	Criteria
1	First class with distinction	<ul style="list-style-type: none">a) .Should have passed the examination in all the courses of all the four semesters in the student's First Appearance within three years, which includes authorized break of study of one year (if availed). Withdrawal from examination (Clause 13) will not be considered as an appearance.b) Should have secured a CGPA of not less than 8.50c) Should not have been prevented from writing end semester examination due to lack of attendance in any of the courses.
2	First class	<ul style="list-style-type: none">a) Should have passed the examination in all the courses of all four semesters within three years, which includes authorized break of study of one year (if availed) or prevention from writing the End Semester Examination due to lack of attendance (if applicable).b) Should have secured a CGPA of not less than 7.0
3	Second class	<ul style="list-style-type: none">a) All other students (not covered in clauses at S.No. 1 and 2 under Clause 21) who qualify for the award of the degree (vide clause 20) shall be declared to have passed the examination in Second Class.

26 Special Provisions

26.1 One Credit Courses:

Students can also opt for one credit industry oriented courses for a minimum of 15 hours duration, which will be offered by experts from industry on specialized topics apart from the prescribed courses of study of the programme. Students can complete such one credit courses during the semesters 1st, 2nd and 3rd, as and when these courses are offered by any of the departments. The student can register for and successfully complete a maximum of 4 one credit courses during their overall period of study of a programme.

Steps involved in designing and assessment of one credit courses:

Step 1: The HOD and industry expert shall decide name and syllabi of the one credit courses.

Step 2: The concerned HOD shall collect the name list of the students who are interested in attending the above course. Each batch should consist of 6 to 9 students.

Step 3: The course shall be taught by industry experts as a course instructor.

Step 4: The course instructor shall give assignments and conduct assessment tests and viva voce as needed.

Step 5: The final examination of the course shall be conducted and evaluated by the industry expert.

Step 6: No end semester examination for one credit course will be conducted. Instead, one assessment examination will be conducted by industry expert as per the procedure given in the Table 14.

Table 14 - Evaluation Procedure for One Credit Courses

Only one course end examination for 2 hours to be conducted internally	50 Marks
Proposed frame work for question paper and marks distribution	
Objective type questions (20 x 1 mark)	20 Marks
Application oriented questions (3 x 10 marks)	30 marks
Total	50 marks

The exam for 2 hours duration is to be conducted at the end of the course. Passing criteria is 50% (that is, 50 marks out of 100 marks). If the student passes the course, it will be indicated in the grade sheet with the corresponding grade. The grading system will be same as that followed for the other theory and practical courses. If the student fails to pass the course, the one credit course will not get reflected in the grade sheet. There is no arrear exam for one credit courses. The one credit courses will be considered for computing CGPA.

26.1.1 Considering 3 one credit industry oriented courses in lieu of one three credit professional elective course:

- One credit industry oriented courses may be offered in the 1st, 2nd and 3rd semesters.
- A pass in 3 one credit courses will be taken in lieu of one professional elective course offered in 3rd semester. This provision will be provided only once for one professional elective of 3rd semester that will be proposed by the concerned HoD and approved by the Principal.

- Out of the 3 one credit courses so considered in lieu of one professional elective course, all 3 or minimum of 2 one credit courses are to be technical courses and one of the 1 credit courses may be in humanities also.
- The grade for this professional elective course will be the average grade of the 3 considered one credit courses.

26.2 Guided Self-study of Professional Elective (PE) Course

- If a student, after his/her first year study, has no history of arrears and his/her CGPA is greater than 8.0, then s/he is eligible to register for one professional elective course of his/her programme as a guided self-study course with the approval of DCC. This shall be allowed only once during the entire period of study.
- One faculty member approved by the DCC shall be responsible for the periodic monitoring and evaluation of the student(s) who has/have registered for the guided self-study of the professional Elective course. Though the student need not attend the classes, he/she shall appear for continuous assessment tests, submit assignments and appear for End Semester Examinations (ESE).

27 Human Excellence Courses

Human Excellence courses like Yoga (with one credit for each of the two courses in two different semesters, 15 hours duration per semester) will be offered. Credits and grade will be indicated for these courses in the grade sheet and will be considered for computing CGPA.

Evaluation procedure for human excellence courses

27.1 General Guidelines

The total marks for each course will be 100, which will be assessed continuously.

- Continuous Assessment Marks (CAM) – 100 Marks

27.2 Marks distribution

Procedure for award of Continuous Assessment Marks (CAM) has been shown in **Table 15**.

27.3 Passing Minimum

Passing minimum for each human excellence course is **50% of CAM**

27.4 Lack of attendance

If a student has lack of attendance in human excellence course, the student should re-register for the course when it is offered next in the subsequent year.

27.5 Failure in Human Excellence courses

If a student fails in a human excellence course, the CAM will get nullified. The student has to take up the assessments as stated under Table 14 based on which CAM will be evolved. The schedule for such assessments will be announced by the Controller of Examinations as per norms applied for other theory courses.

Table 15 - Evaluation Procedure for Human Excellence Courses

S.No	Components for CAM	Marks (Max)	Remarks
1	Practical (Yoga demonstration)	40	Yogasana Practical assessment shall be conducted during regular classes. Criteria for evaluation will be correctness, poise and ease of performing yoga postures.
2	Assignment	10	The class will be divided into maximum seven groups. Each group shall submit a report / concept note on a specific issue (or) individual assignment
3	Written examination	50	Any one of the following patterns to be used to prepare the test question paper: Pattern 1: 05 Descriptive type questions × 10 marks = 50 marks (Any 05 out of 07 questions) Pattern 2: 10 Descriptive type questions × 02 marks = 20 marks (Any 10 out of 12 questions) 03 Descriptive type questions × 10 marks = 30 marks (Any 03 out of 04 questions)
Total		100	

28 Internationalization

Students are motivated to take-up projects / internships / certifications / courses in reputed universities abroad after 1st semester of the programme.

- The concerned department or institution is accredited by their national board or international board.
- The suitable concession in credits to be recommended by DCC and approved by the standing committee prior to the student attending the course.
- Grade to be finalized with the visiting University and HoD of the concerned department of the institution.

29 Revision of Regulations and Curriculum

The institution may from time to time revise, amend or change the Regulations, scheme of Examinations and syllabi, if found necessary. Academic Council assisted by Board of Studies and Standing Committee will make such revisions / changes.

Note: Any ambiguity in interpretation of these Regulations is to be put up to the Standing Committee, whose decision will be final.

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EASWARI ENGINEERING COLLEGE

(Autonomous Institution)

BharathiSalai, Ramapuram, Chennai - 600 089

Amendments Made in Academic Regulations 2019 Version 1.5 – M.E. Programmes

Clause	Version 1.5 (M.E.)	Version 1.6 (M.E.)
4.8.1	Students may be permitted to credit only one online course of 3 credits with the approval of Head of the Institution	Students may be permitted to credit a maximum of two online courses of 3 credits each with the approval of Standing Committee
4.8.2	Students may be permitted to choose one online course (which is provided with certificate) subject to a maximum of three credits. The approved list of online courses will be provided by Standing Committee (SC) from time to time. The student needs to obtain certification or credit to be eligible for final assessment by COE office. The student should attend one terminal examination related to the 'online course' at institution side for awarding grade. 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 at least one month before the course is offered	The DCC may recommend online courses to the Standing Committee from time to time. The DCC has to ensure that the student has not studied such courses and would not repeat it again as Professional Core / Professional Elective / Open Elective. For assessment of online courses, refer Clause 14.9

Clause	Version 1.5 (M.E.)		Version 1.6 (M.E.)	
Table – 8 Distribution of Marks for Practical Course	Items	Marks (Maximum)	Items	Marks (Maximum)
	Continuous assessment#	30	Continuous assessment#	30
	Model practical examination	20	Model practical examination	20
	Attendance { Refer clause-11}	-	End Semester Examination	50
	Total	50	Attendance { Refer clause-11}	-
			Total	100
6.1	The student shall register for the courses that she/he 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 (with the facility to drop courses to a maximum of 4 or 6 credits (vide clause 6.2)). The student can also register for courses for which the student has failed in the earlier semesters. In such a case, the registration of odd semester courses is permissible during odd semester only and even semester courses in even semester only		The student shall register for the courses that she/he 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 (with the facility to drop courses to a maximum of 4 or 6 credits (vide clause 6.2)). The student can also register for courses for which the student has failed in the earlier semesters.	
10.2.3.1	Retain CAM option: In this case, the student retains the existing CAM and proceeds to write the supplementary exams / End Semester Examinations as and when they are conducted		Retain CAM option: In this case, the student retains the existing CAM and proceeds to write the supplementary exams.	
14.2.1.1	Theory Courses: The distribution of marks for theory courses for assessment test and End		Theory Courses: The distribution of marks for theory courses for assessment test and End	

Clause	Version 1.5 (M.E.)	Version 1.6 (M.E.)
	Semester Examination is given in Tables 6 and Table 7 respectively.	Semester Examination is given in Tables 6 and Table 7 respectively. Integrated Courses: For the theory course with lab component, the internal assessment will be based on two components. The internal test - 1 and internal test – 2 will be from theory portions. The sum of marks from the two internal tests shall be reduced to 50 marks. For the laboratory component, assessment test will be made internally and the mark shall be reduced to 50 marks. The sum of these 100 marks may then be arrived at for 50 and rounded to the nearest integer.
14.5 Supplementary Examinations	A student failed in practical / theory courses in regular examination should compulsorily register for the same when it is offered next as a supplementary examination. The institution will conduct only the examinations for the odd semester courses (regular exam + supplementary exam for arrears of the odd semesters) during November / December and will conduct only the exams for the even semester courses (regular exam + supplementary exam for arrears of the even semesters) during April / May of an academic year. Both regular and supplementary examinations will be offered in one schedule.	A student failed in practical / theory courses in regular examination should compulsorily register for the same in the subsequent semester as a supplementary examination. Students who have completed the fourth semester will be eligible for attending the special supplementary exam for all semester arrear papers (from 1 st to 4 th semesters) in the even semester examination session, soon after their fourth semester regular examination results. Students can register only upto a maximum of 5 courses for the special supplementary exam. Controller of Examinations (COE) will publish a schedule of special supplementary examinations after the last date of registering for the

Clause	Version 1.5 (M.E.)	Version 1.6 (M.E.)
	<p>Students who have completed the fourth semester will be eligible for attending the special supplementary exam for all semester arrear papers (from 1st to 4th semesters) in the even semester examination session, soon after their fourth semester regular examination results. Students can register only upto a maximum of 5 courses for the special supplementary exam.</p> <p>Controller of Examinations (COE) will publish a schedule of supplementary examinations after the last date of registering for the examinations. The pattern of evaluation will be the same as that of end semester examinations.</p> <p>The revaluation of answer script will not be applicable for supplementary examinations. However challenge of evaluation of answer script is allowed. The arrear examination will be termed as supplementary examinations and such appearance in supplementary exam will be treated as another attempt and will be reflected in the grade sheet</p>	<p>examinations. The pattern of evaluation will be the same as that of end semester examinations. The revaluation of answer script will not be applicable for special supplementary examinations. However challenge of evaluation of answer script is allowed. The arrear examination will be termed as supplementary examinations and such appearance in supplementary exam will be treated as another attempt and will be reflected in the grade sheet</p>
14.9 ASSESSMENT FOR ONLINE COURSES	<p>Students may be permitted to credit one online course subject to a maximum of three credits (which is provided with certificate), approved by the Standing Committee (SC). The DCC may recommend online courses to the Standing Committee from time to time. This online course of</p>	<p>Students may be permitted to credit two online course (which is provided with certificate) approved by the Standing Committee (SC). The DCC may recommend online courses to the Standing Committee from time to time. If a student passes the course, offered and evaluated by NPTEL, the equivalent grade</p>

Clause	Version 1.5 (M.E.)	Version 1.6 (M.E.)																																																									
	<p>3 credits can be considered once instead of one professional elective course in 3rd semester. The student needs to obtain certification or credit to become eligible for writing the End Semester Examinations to be conducted by Controller of Examinations. The course shall be evaluated only through the End Semester Examination conducted by Controller of Examinations during the odd semesters [Refer clause 4.8.2]</p>	<p>recommended by Anna University for the marks awarded by the NPTEL will be considered for the course. This online course of 3 credits each can be considered in lieu of two professional electives in 3rd semester.</p>																																																									
<p>Table 11 – Letter Grade for Course Performance</p>	<table> <tr> <th>Letter Grade</th><th>Grade Points</th><th>Marks Range</th></tr> <tr> <td>O (Outstanding)</td><td>10</td><td>91 - 100</td></tr> <tr> <td>A+ (Excellent)</td><td>9</td><td>81 - 90</td></tr> <tr> <td>A (Very Good)</td><td>8</td><td>71 - 80</td></tr> <tr> <td>B+ (Good)</td><td>7</td><td>61 - 70</td></tr> <tr> <td>B (Average)</td><td>6</td><td>50 - 60</td></tr> <tr> <td>RA (Re-Appear)</td><td>0</td><td>< 50</td></tr> <tr> <td>Ab (Absent)</td><td>-</td><td>-</td></tr> <tr> <td>SA (Shortage of Attendance)</td><td>-</td><td>-</td></tr> <tr> <td>W (withdrawal)</td><td>-</td><td>-</td></tr> </table>	Letter Grade	Grade Points	Marks Range	O (Outstanding)	10	91 - 100	A+ (Excellent)	9	81 - 90	A (Very Good)	8	71 - 80	B+ (Good)	7	61 - 70	B (Average)	6	50 - 60	RA (Re-Appear)	0	< 50	Ab (Absent)	-	-	SA (Shortage of Attendance)	-	-	W (withdrawal)	-	-	<table> <tr> <th>Letter Grade</th><th>Grade Points</th><th>Marks Range</th></tr> <tr> <td>O (Outstanding)</td><td>10</td><td>91 - 100</td></tr> <tr> <td>A+ (Excellent)</td><td>9</td><td>81 - 90</td></tr> <tr> <td>A (Very Good)</td><td>8</td><td>71 - 80</td></tr> <tr> <td>B+ (Good)</td><td>7</td><td>61 - 70</td></tr> <tr> <td>B (Average)</td><td>6</td><td>50 - 60</td></tr> <tr> <td>RA (Re-Appear)</td><td>0</td><td>< 50</td></tr> <tr> <td>SA (Shortage of Attendance)</td><td>0</td><td>-</td></tr> <tr> <td>W (withdrawal)</td><td>0</td><td>-</td></tr> </table>	Letter Grade	Grade Points	Marks Range	O (Outstanding)	10	91 - 100	A+ (Excellent)	9	81 - 90	A (Very Good)	8	71 - 80	B+ (Good)	7	61 - 70	B (Average)	6	50 - 60	RA (Re-Appear)	0	< 50	SA (Shortage of Attendance)	0	-	W (withdrawal)	0	-
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17.1.1	<p>- A student is deemed to have passed and acquired the corresponding credits in a particular course if s/he obtains any one of the following grades: "O", "A+", 'A', 'B+', 'B'.</p>	<p>- A student is deemed to have passed and acquired the corresponding credits in a particular course if s/he obtains any one of the following grades: "O", "A+", 'A', 'B+', 'B'.</p> <p>- 'SA' denotes shortage of attendance (as</p>																																																									

Clause	Version 1.5 (M.E.)	Version 1.6 (M.E.)
	<ul style="list-style-type: none"> - 'SA' denotes shortage of attendance (as per clause 10.2.2) and hence prevention 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 Marks Sheet as well as in Result Sheet. CAM has to be earned for 'SA' category only. If the grade W is given to course, the attendance requirement need not be satisfied. - If the grade RA is given to a core theory course, the attendance requirement need not be satisfied. However if the grade RA is given to a Laboratory course/ Project work / Seminar and any other Employability enhancement courses, the attendance requirements (vide clause 10.2) should be satisfied i.e the student has to re register for the same. - 'Ab' denotes that the student was absent for the examination of that particular course. 	<p>per clause 10.2.2) and hence prevented from writing the end semester examinations. 'SA' will appear only in the result sheet.</p> <ul style="list-style-type: none"> - '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 Marks Sheet as well as in Result Sheet. CAM has to be earned for 'SA' category only. If the grade W is given to course, the attendance requirement need not be satisfied. - If the grade RA is given to a course (theory / practical / integrated), the attendance requirement need not be satisfied, but has to appear for the end semester examination and fulfill the norms specified in clause 11 to earn a pass in the respective courses.

Clause	Version 1.5 (M.E.)			Version 1.6 (M.E.)		
Table 13 – Classification of Degree	S.No	Class Awarded	Criteria	S.No	Class Awarded	Criteria
	1	First class with distinction	a) Passing of the examinations of all the courses in all four semesters in the first appearance . b) CGPA ≥ 8.50 c) One year authorized break of study (Clause 19) and one authorized withdrawal (Clause 13) is permissible.	1	First class with distinction	a) .Should have passed the examination in all the courses of all the four semesters in the student's First Appearance within three years, which includes authorized break of study of one year (if availed). Withdrawal from examination (Clause 13) will not be considered as an appearance. b) Should have secured a CGPA of not less than 8.50 c) Should not have been prevented from writing end semester examination due to lack of attendance in any of the courses.

Clause	Version 1.5 (M.E.)			Version 1.6 (M.E.)		
	S.No	Class Awarded	Criteria	S.No	Class Awarded	Criteria
Table 13 – Classification of Degree	2	First class	a) Passing of the examinations of all the courses in all four semesters within a maximum of Six semesters. b) CGPA ≥ 7.0 c) One year authorized break of study (Clause 19) and one authorized withdrawal (Clause 13) is permissible.	2	First class	a) Should have passed the examination in all the courses of all four semesters within three years, which includes authorized break of study of one year (if availed) or prevention from writing the End Semester Examination due to lack of attendance (if applicable). b) Should have secured a CGPA of not less than 7.0
	3	Second class	a) All other students (not covered in clauses at S.No. 1 under Clause 21) who qualify for the award of the degree (vide clause 20) shall be declared to have passed the examination in Second Class.	3	Second class	a) All other students (not covered in clauses at S.No. 1 and 2 under Clause 21) who qualify for the award of the degree (vide clause 20) shall be declared to have passed the examination in Second Class.

EASWARI ENGINEERING COLLEGE

(Autonomous Institution)

BharathiSalai, Ramapuram, Chennai - 600 089

Amendments Made in Academic Regulations 2019 Version 1.6 - M.E. Programmes (Approved in 5th Academic Council and 35th Governing Council Meeting)

Clause	Version 1.6 (M.E.)	Amendments
6.1	<p>The student shall register for the courses that s/he 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 (with the facility to drop courses to a maximum of 6 credits (vide clause 6.2). The student can also register for courses for which the student has failed in the earlier semesters. In such a case, the registration of odd semester courses is permissible during odd semester only and even semester courses in even semester only. This registration is for undergoing the course as well as for writing the End Semester Examinations. No Elective course shall be offered by any department unless a minimum 20 students register for the course. However, if the students admitted in the associated branch & semester is less</p>	<p>The student shall register for the courses that s/he 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 (with the facility to drop courses to a maximum of 6 credits (vide clause 6.2). The student can also register for courses for which the student has failed in the earlier semesters. This registration is for undergoing the course as well as for writing the End Semester Examinations. No Elective course shall be offered by any department unless a minimum 20 students register for the course. However, if the students admitted in the associated branch & semester is less than 20, this minimum will not be applicable.</p>

Clause	Version 1.6 (M.E.)	Amendments
	than 20, this minimum will not be applicable.	
10.2.3.1	Retain CAM option: In this case, the student retains the existing CAM and proceeds to write the supplementary exams / End Semester Examinations as and when they are conducted	Retain CAM option: In this case, the student retains the existing CAM and proceeds to write the supplementary exams.
Table 6 – Distribution of Marks for Theory Course in Assessment Test	<p>Three question paper patterns have been listed for internal test. The selection of the pattern to be decided by the faculty handling the course.</p> <p><u>PATTERN – 1 (50 Marks):</u> Part A - 20x1 = 20 Marks Q.No.-1 to 20 - Multiple choice questions[#] and Part B - 15x2 = 30 Marks Q.No.-21 to 35</p> <p><u>PATTERN – 2 (50 Marks):</u> Part A - 10 x 1 = 10 Marks Q.No.-1 to 10 Multiple choice questions[#] , Part B - 05 x 2 = 10 Marks Q.No.-11 to 15 - (Short Answer) and Part C^s - 03 x 10 = 30 Marks Q.No.-16 – compulsory, Q.No.-17, 18,19 (any two to be answered)</p> <p><u>PATTERN – 3 (50 Marks):</u> Part A - 20 x 1 = 20 Marks Q.No.-1 to 20 - Multiple choice questions[#] and Part B^s - 2 x 15 = 30 Marks</p>	<p>Three question paper patterns have been listed for internal test. The selection of the pattern to be decided by the faculty handling the course.</p> <p><u>PATTERN – 1 (50 Marks):</u> Part A - 20x1 = 20 Marks Q.No.-1 to 20 - Multiple choice questions[#] and Part B - 15x2 = 30 Marks Q.No.-21 to 35</p> <p><u>PATTERN – 2 (50 Marks):</u> Part A - 10 x 1 = 10 Marks Q.No.-1 to 10 Multiple choice questions[#] , Part B - 05 x 2 = 10 Marks Q.No.-11 to 15 - (Short Answer) and Part C^s - 03 x 10 = 30 Marks Q.No.-16 – compulsory, Q.No.-17, 18,19 (any two to be answered)</p> <p><u>PATTERN – 3 (50 Marks):</u> Part A - 20 x 1 = 20 Marks Q.No.-1 to 20 - Multiple choice questions[#] and Part B^s - 2 x 15 = 30 Marks Q.No.-21- Compulsory, Q.No.-22 and 23 (any one to be answered)</p> <p><u>Pattern – 4 (50 Marks):</u> Part A – 5 x 2 = 10 Marks Q.No. 1 to 5 – Short answers and Part B – 2 x 13 = 26 Marks Q.No 6 and 7 (either or type) Part C^s – 1 x 14 = 14 Marks (either or type)</p> <p>-----</p> <p align="center"><u>Unit Test Pattern (25 Marks)</u></p> <p>Part A – 5 x 2 = 10 Marks, Part B – 1 x 8 = 8 Marks</p>

Clause	Version 1.6 (M.E.)	Amendments
	Q.No.-21- Compulsory, Q.No.-22 and 23 (any one to be answered)	(compulsory), Part C - 1 x 7 = 7 Marks (any one to be answered) Note: HOTS of Bloom's taxonomy to be followed wherever applicable in all the patterns
Table 7 - Distribution of Marks for Theory Course in End Semester Examination	<p>Part A - 10 x 1 = 10 Marks Q.No.-1 to 10 Multiple choice questions (multiple choice, multiple selection, sequencing type, match the following, assertion – reason type)</p> <p>Part B - 10 x 2 = 20 Marks Q.No.-11 to 20 Short Answer</p> <p>Part C - 05 x 14 = 70 Marks Q.No.-21 –compulsory Q.No.-22 to 27 (any four to be answered) Case studies, analytical questions, design or evaluation or analysis or application oriented questions to be given in part C</p> <p>Note: HOTS of Bloom's taxonomy to be followed where applicable</p> <p>Total = 100 Marks</p>	<p>Pattern 1:</p> <p>Part A - 10 x 1 = 10 Marks Q.No.-1 to 10 Multiple choice questions (multiple choice, multiple selection, sequencing type, match the following, assertion – reason type)</p> <p>Part B - 10 x 2 = 20 Marks Q.No.-11 to 20 Short Answer</p> <p>Part C - 05 x 14 = 70 Marks Q.No.-21 – compulsory Q.No.-22 to 27 (any four to be answered)</p> <p>Pattern 2:</p> <p>Part A – 10 x 2 = 20 Marks Q.No. 1 to 10 – Short answers and Part B – 5 x 13 = 65 Marks Q.No 6 and 7 (either or type) Part C^s – 1 x 15 = 15 Marks (either or type)</p> <p>Total = 100 Marks</p> <p>Note 1 : Case studies, analytical questions, design or evaluation or analysis or application oriented questions to be given in part C. HOTS of Bloom's taxonomy to be followed wherever applicable</p> <p>Note 2: Question paper pattern for each subject shall be announced before the start of the semester.</p>

Clause	Version 1.6 (M.E.)			Amendments		
Table 10 – Grievance Redress Methodology in Evaluation	S. No	Redress Sought	Methodology Regular Examination & Supplementary Examination	S. No	Redress Sought	Methodology Regular Examination & Supplementary Examination
	1.	Re Totalling	Apply for photo copy of answer book and then apply for re totalling (within 5 days of declaration of result)	1.	Revaluation	Students who wish to apply for Revaluation can register directly by paying the fees within 5 working days from the publication of results and apply for Revaluation. Maximum a student can register 5 theory courses for revaluation.
	2.	Revaluation	Apply for photo copy of answer book and then apply for revaluation after course expert recommendation (within 5 days of declaration of result)	2.	Challenge of Evaluation	Students who wish to apply for Challenge of Evaluation can register directly by paying the fees within 3 working days from the publication of results and apply for Challenge of Evaluation. They need not apply for regular revaluation. Maximum a student can register 5 theory courses for Challenge of Evaluation.
	3.	Challenge of Evaluation	Apply for photo copy of answer book , apply for revaluation after course expert recommendation			

Clause	Version 1.6 (M.E.)			Amendments
			and then apply for challenge of evaluation (within 3 days of publication of revaluation result).	
14.3.3 Question Paper Setting for ESE	50% of theory courses in a semester will be randomly selected for setting question papers by external experts with sound knowledge in Revised Bloom's Taxonomy by the Controller of Examinations. Head of the Department will give internal list of panel of question paper setters to set question papers in the remaining 50% of the theory courses.			Both internal and external experts with sound knowledge in Revised Bloom's Taxonomy will be appointed for setting question papers by the Controller of Examinations. Head of the department will give internal list of panel of question paper setters to Controller of Examination when requested.
14.3.4 Evaluation of Answer Book	50% of theory courses in a semester will be randomly selected by the Controller of Examinations for evaluation by External Examiners. Head of the Department will nominate senior faculty to evaluate the answer books in the remaining 50% of the theory courses.			Both internal and external members will be appointed for evaluating answer books by the Controller of Examinations. Head of the department / Board Chairman will suggest the list of internal and external examiners based on the subject expertise and experience of faculty members available to Controller of Examination.
14.5 Supplementary Examinations	A student failed in practical / theory courses in regular examination should compulsorily register for the same when it			A student failed in practical / theory courses in regular examination should compulsorily register for the same in the subsequent semester as a supplementary

Clause	Version 1.6 (M.E.)	Amendments
	<p>is offered next as a supplementary examination.</p> <p>The institution will conduct only the examinations for the odd semester courses (regular exam + supplementary exam for arrears of the odd semesters) during November / December and will conduct only the exams for the even semester courses (regular exam + supplementary exam for arrears of the even semesters) during April / May of an academic year. Both regular and supplementary examinations will be offered in one schedule.</p> <p>Students who have completed the eighth semester will be eligible for attending the special supplementary exam for all semester arrear papers (from 1stto 8thsemesters) in the even semester examination session, soon after their eighth semester regular examination results. Students can register only up to a maximum of six courses for the special supplementary exams.</p> <p>Controller of Examinations (COE) will publish a schedule of supplementary examinations after the last date of registering for the examinations. The pattern</p>	<p>examination.</p> <p>Students who have completed the eighth semester will be eligible for attending the special supplementary exam for all semester arrear papers (from 1stto 8thsemesters) in the even semester examination session, soon after their eighth semester regular examination results. Students can register only up to a maximum of six courses for the special supplementary exams.</p> <p>Controller of Examinations (COE) will publish a schedule of special supplementary examinations after the last date of registering for the examinations. The pattern of evaluation will be the same as that of end semester examinations. The revaluation of answer script will not be applicable for special supplementary examinations. However challenge of evaluation of answer script is allowed. The arrear examination will be termed as supplementary examinations and such appearance in supplementary exam will be treated as another attempt and will be reflected in the grade sheet</p>

Clause	Version 1.6 (M.E.)	Amendments												
	of evaluation will be the same as that of end semester examinations.The revaluation of answer script will not be applicable for supplementary examinations. However challenge of evaluation of answer script is allowed. The arrear examination will be termed as supplementary examinations and such appearance in supplementary exam will be treated as another attempt and will be reflected in the grade sheet.													
14.9 ASSESSMENT FOR ONLINECOURSES	<p>Students may be permitted to credit two online course (which is provided with certificate) approved by the Standing Committee (SC). The DCC may recommend online courses to the Standing Committee from time to time. If a student passes the course, offered and evaluated by NPTEL, the equivalent grade recommended by Anna University for the marks awarded by the NPTEL will be considered for the course. This online course of 3 credits each can be considered in lieu of two professional electives in final year of the programme. A student earned only one 3 credits through online course, can drop only 8th semester professional elective.</p>	<p>Students may be permitted to credit two online course (which is provided with certificate) approved by the Standing Committee (SC). The DCC may recommend online courses to the Standing Committee from time to time. If a student passes the course, offered and evaluated by NPTEL, the equivalent grade recommended by Anna University for the marks awarded by the NPTEL will be considered for the course.</p> <p>As per Anna university recommendations, if a student pass the course as evaluated by the NPTEL offering the course, the absolute grading system shall be followed and the grades shall be decided as follows.</p> <table><tr><th>Letter Grade</th><th>Marks</th></tr><tr><td>O</td><td>88 – 100</td></tr><tr><td>A+</td><td>76 – 87</td></tr><tr><td>A</td><td>64 – 75</td></tr><tr><td>B+</td><td>52 – 63</td></tr><tr><td>B</td><td>40 - 51</td></tr></table> <p>This online course of 3 credits each can be considered in lieu of two professional electives in final year of the programme. A student earned only one 3 credits through online course, can drop only 8th semester professional</p>	Letter Grade	Marks	O	88 – 100	A+	76 – 87	A	64 – 75	B+	52 – 63	B	40 - 51
Letter Grade	Marks													
O	88 – 100													
A+	76 – 87													
A	64 – 75													
B+	52 – 63													
B	40 - 51													

Clause	Version 1.6 (M.E.)	Amendments
		elective.
16.1 Challenge Evaluation	<ul style="list-style-type: none"> a) A student can make an appeal to the CoE for the review of answer scripts after paying the prescribed fee. b) CoE will issue the photo copy of answer script to the student. c) The faculty who had handled the course/course expert will evaluate the script based on which the HOD may recommend. d) A Committee consisting of 2 experts appointed by CoE will review and declare the result. e) If the result is in favour of the student, the fee collected will be refunded to the student. f) The final mark will be announced by CoE. 	<ul style="list-style-type: none"> a) A student can make an appeal to the CoE for the review of answer scripts after paying the prescribed fee. b) A Committee consisting of 2 experts appointed by CoE will review and declare the result. c) If the result is in favour of the student, the fee collected will be refunded to the student. d) The final mark will be announced by CoE.
18 Issue of Grade Sheets	18.3 Separate grade sheet for supplementary examination will be issued to the students by the CoE after the publication of supplementary examination result. No separate grade sheet for special supplementary examination will be issued to the students by the CoE after the publication of special supplementary examination result. The result of the special supplementary examination will get reflected only in the consolidated statement of grade (that is, consolidated grade sheet).	18.3 No separate grade sheet for special supplementary examination will be issued to the students by the CoE after the publication of special supplementary examination result. The result of the special supplementary examination will get reflected only in the consolidated statement of grade (that is, consolidated grade sheet).

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EASWARI ENGINEERING COLLEGE

(Autonomous Institution)

BharathiSalai, Ramapuram, Chennai - 600 089

[A Unit of SRM Group of Educational Institutions, Approved by AICTE |
Affiliated to Anna University, Chennai | NAAC Accredited 'A' Grade |
2(f) & 12(B) Status(UGC) | ISO 9001:2015 Certified | NBA Accredited
Programmes | FIST Funded (DST) | SIRO Certified (DSIR)]

Academic Regulations 2019 - Highlights

Common to All M.E. Full- Time Programmes

CHOICE BASED CREDIT SYSTEM (CBCS)

These regulations are applicable to students admitted into M.E. Programmes from the academic year 2019 – 2020 onwards.

Teaching - Learning



Objectives: R19 has been framed to provide the needful scope for the learners through the CBCS which offers flexibility to learners by including interdisciplinary electives and industry based courses.



Credits: Course work is measured in units called credit hours or simply credits. The number of hours of a course per week is the number of credits for that course. One credit per lecture hour per week is assigned for each theory course. Laboratory, tutorial courses, etc., are assigned 0.5 credits per hour per week.



Curriculum Structure: The suggested Course Work (=70 Credits), at 17 to 23 credits / Semester on an average with built-in flexibility of +/- 20%. Types of courses are Foundation Courses (FC), Professional Core (PC), Professional Electives (PE), Open Electives (OE), Employability Enhancement Courses (EEC), Mandatory Courses (MC).



Electives: Professional electives are courses offered by a department to the students of their own branch and Open electives are courses offered by other departments to widen the student's knowledge in interdisciplinary courses.

Mandatory Courses Mandatory courses will not play role in CGPA calculation.



Online Course: Students may be permitted to credit two online course (which is provided with certificate) approved by the Standing Committee (SC). The DCC may recommend online courses to the Standing Committee from time to time. If a student passes the course, offered and evaluated by NPTEL, the equivalent grade recommended by Anna University for the marks awarded by the NPTEL will be considered for the course. **This online course of 3 credits each can be considered in lieu of two professional electives in 3rd semester.**



Duration of the Programme: Each academic year will consist of 2 semesters. The normal and maximum permissible number of semesters for each programme is 4 and 8 semesters respectively.



Class Coordinators

Class Coordinator (Advisor) is assigned to a particular batch of students throughout their period of study in order to motivate and closely monitor the performance of the students. They guide students to get enrolled and register for courses of a semester.



Student Counsellor is assigned with certain number of students and will guide / monitor the courses chosen by the students, check attendance and progress of the students and counsel them periodically throughout their period of study.



Class Committee meeting: (3 / semester) During these meetings the student representatives shall meaningfully interact and express opinions and suggestions of the students of the class to improve the effectiveness of the teaching-learning process.



COMMITTEE MEETING

Course Committee (3 / Semester): Each common course offered to more than one class shall have a Course Committee, comprising the all the faculty teaching the common course with one of them nominated as Course Coordinator, to ensure common question paper is prepared for

the tests and uniform evaluation is carried out.

Project Work – Phase I of the project work will be in the 3rd semester of the programme with 8 to 10 credits. There shall be a minimum of three assessments (each for 100 marks) by a review committee during the semester. Phase-I will purely be assessed internally. A project report is to be submitted for Phase-I at the end of the semester as per the deadline announced by the COE. There will be end semester examination at the end of Phase-I. The grade point thus obtained in the Phase-I evaluation will be entered in the grade sheet of the 4th semester



Project Work - Phase II: Phase-II of the project work will be in the 4th semester of the programme. There shall be three assessments for Phase II project. The evaluation of the Project work at the end of the semester will be based on the project report and a Viva-Voce Examination by a team consisting of one internal examiner and one external examiner.



Start up: In lieu of end programme project work, the student can opt individually or in group for initiating start up.



One Credit Course: Students can opt for one credit industry oriented courses (maximum of 4 courses) for a minimum of 15 hours duration, which will be offered by experts from industry on specialized topics. One assessment examination

will be conducted by industry expert instead of ESE. A pass in 3 one credit courses (minimum 2 courses should be technical) will be taken in lieu of one professional elective course offered in 3rd semester.



Guided Self-study: If a student, after his/her first year study, has no history of arrears and his/her CGPA is greater than 8.0, then s/he is eligible to register for one professional elective course (only once) as a guided self-study course with the approval of Department Consultative Committee (DCC).



Human Excellence courses like Yoga (with one credit for each of the two courses in two different semesters, 15 hours duration per semester) will be offered. Evaluation is done through CAM. Passing minimum is **50% of CAM**. Credits earned will be considered for computing CGPA.



Internationalization Students are motivated to take-up projects / internships / certifications / courses in reputed universities abroad after 1st semester of the programme.

Value Additions



Industry Visit: Every student is required to go for at least one Industrial Visit every year starting from the first year of the Programme.



Value Added Courses: The Students may optionally undergo “Value Added Courses” and the credits earned (maximum of 2 one credit courses or 1 two credit courses) through this, shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree.



Employability Enhancement Courses can be evaluated through seminar/ case study which are purely internal. At the end of Industrial / Practical training / internship / Summer Project, the candidate shall submit a 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 will be conducted internally.

Examinations



Course Registration: Each student has to register for all courses to be undergone in the curriculum of a particular semester (with the facility to drop courses to a maximum of 6 credits). The student can also register for courses for which the student has failed in the earlier semesters. This registration is for undergoing the course as well as for writing the ESEs. It is

mandatory to satisfy the pre-requisites (if any), prescribed in the curriculum and syllabus to register for courses. The courses having minor projects should have working models.

**COURSE
ADD / DROP**

Add / Drop Courses: From 2nd to 4th semesters, the student has the option of dropping existing courses (not more than 6 credits) in a semester within the first 5 instructional days, from the commencement of a regular semester (not applicable to summer/winter success). The student shall register for that the dropped courses in the next given opportunity. Project work (Phase-II) registration is only in final semester.



Summer / Winter Success: Students can register for odd semester courses (maximum of 2) in summer success programme and even semester courses (maximum of 1) in Winter success programme. For all the courses registered by the student in the summer / winter success, s/he should pay the prescribed fee, in addition to the regular fee.



Requirements for Completion of a Semester: Students shall secure not less than 75% attendance course – wise with 10% exemption (greater than or equal to 65% and less than 75%) for the reasons i) Medical reasons ii) participation in sports events or design competitions or NCC and / or NSS activities.

If a student has lack of attendance in 4 or more

courses (in one credit courses are exempted) offered in a particular semester, the student will be detained in that semester in both Theory and Practical courses. Readmission is as per the norms of Anna University / DOTE.



Retain / Re-earn CAM: To retain, Students have to write the supplementary exams / End Semester Exams when they are scheduled. To re-earn, re-register by paying the prescribed fee for the course when it is offered next. The existing CAM will get nullified.



Requirements for Appearing for End Semester Examinations: The student should satisfy the attendance requirements and register for examination in those courses of that semester by paying the prescribed fee. If a student fails to clear a course in four attempts in a particular course, the CAM of that course will cease to be counted from the **fifth attempt**. The student has to appear for end semester examinations and based on his/her performance alone, the result will be declared.

Internal
Marks

Internal Marks will be awarded by conducting two assessment Tests, group presentations and assignments for all theory courses. Performance of the student in each laboratory exercise/experiment and model practical exam will decide the internal marks for practical course. There will be no minimum CAM requirement in a course to register for the end semester

examinations.

retest

Retests shall be permitted only for genuine reasons with the approval of HOD and Principal. Retest is not permitted for improvement.

Withdrawal from Examination: A student may, for valid reasons (medically unfit / unexpected family situations), be granted permission to withdraw (after registering for the examinations) from appearing for any course or courses in the end semester examinations, **only once** during the entire duration of the degree programme.

CAM – 50 Marks
ESE – 50 Marks

System of Evaluation: The total marks for each course (Theory and Practical) will be 100, comprising two components i) CAM – 50 Marks ii) ESE – 50 Marks.

Special Supplementary Exam will be conducted immediately after the results of 4th semester examination. Students who have completed 4th semester are eligible to register for all semester arrear papers (maximum of 5 courses).



Passing minimum for all courses are i) 50% in the ESEs ii) Minimum 50% of the grand total of CAM and ESE marks put together.

CAM – 50 Marks
ESE – 50 Marks

Course Performance: All assessments of a course will be evaluated on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades (O (91-100), A+ (81-90), A (71-80), B+ (61-70), B (50-60), RA (<50), SA (Shortage of Attendance),



W (Withdrawal) will be awarded as per the range of total marks (out of 100) obtained by the candidate in each course.

Attendance Performance: The percentage of attendance calculated subject wise will be indicated in grade sheet by a code letter H + (95% and above), H (85 to 94%), M (75 to 84%) and L (below 75%).



Classification of Degree: The degree awarded to eligible students will be classified as i) First class with distinction (CGPA ≥ 8.5), ii) First class (CGPA ≥ 7.0) and iii) Second class (all other students).

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