

Puducherry

ACADEMIC REGULATIONS 2020 (R-2020)

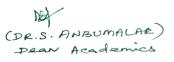
MASTER OF TECHNOLOGY PROGRAMMES



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SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

MASTER OF TECHNOLOGY PROGRAMMES (Four Semesters)

REGULATIONS 2020

CHOICE BASED CREDIT SYSTEMS (CBCS)

(Common to all M. Tech. Full Time Programmes)

1. INTRODUCTION

- 1.1 Sri Manakula Vinayagar Engineering College (SMVEC) envisions to foster knowledge, skills, attitude and values of the aspiring youth to enable them to become global citizens. To achieve this process, the institution has evolved a flexible integrated academic curriculum designed in accordance with the Outcome Based Education (OBE) which is acquired by the learners of a programme under 'Learner Centric' Model.
- 1.2 All the Post Graduate Engineering programme shall be governed by the rules and regulations provided in this version of Academic Regulations (R-2020). The curriculum of each programme provides broad based knowledge, quality course content, academic flexibility, and scope for multi-disciplinary learning activities and opportunities for industry oriented projects.
- **1.3** The provisions made in this document shall govern the policies, procedures, curriculum, conduct of the examinations and evaluation systems
- 1.4 The semester system shall be adopted for academic activities in the college. Normally, odd semester starts in second week of June and even semester starts in second week of December.
- 1.5 Stringent evaluation norms will be followed to maintain quality of engineering education. The examination system will be transparent and governed by the rules and regulations with time bounded activities.

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 from the choices to provide more flexibility in learning system.
- To make education broad-based on par with global standards.
- To help students to earn credits by choosing unique combination of courses.
- To create an international exposure to students by providing International Certificate Courses.



- ❖ To provide necessary training to students for gaining vital life skills through skill development programmes.
- To keep abreast of industrial requirements and societal needs, students are equipped through internship and inculcate the skill of converting Project into Product.
- 1.6 The rules and regulations shall be subjected to amendment made by the Academic Council (AC) from time to time based on the recommendations of the Board of Studies (BoS).

2. PRELIMINARY DEFINITIONS AND NOMENCLATURE

College : Sri Manakula Vinayagar Engineering College

University : Pondicherry University

Programme : M.Tech. Degree

Specialization : Specialization of M.Tech Degree Programme like ECE,

PED, CSE, VLSI and Embedded Systems, Manufacturing

and Networking, etc.,

Course : Theory / Practical subject that is normally studied in a

semester. Eg: Advanced Mathematics for Electrical

Engineers, Nano Electronics, etc.,

Professional Core

Course

Professional Elective

Course

Compulsory course in the curriculum

A course that can be chosen from the listed courses by a

student based on his/her interest which is not covered in professional core courses.

Head of the Institution : The Director cum Principal

Controller of

Examinations (CoE)

The authority who is responsible for all Examination related

activities of the institution

L-T-P-PW-C : L-Lecture, T-Tutorial, P-Practical, PW-Project Work and

C - Credits respectively

Curriculum : The various components / courses studied in each

programme that provides an appropriate outcome in the

chosen branch of study.

Semester Grade Point

Average (SGPA)

Weightage of average grade points of subjects in a

semester.

Cumulative Grade

Point Average (CGPA)

Weightage of average grade points of all subjects in all

semesters completed by a student

Odd semester : The semester that is typically from June to November

Even semester : The semester that is typically from December to May

Period : 50 minutes duration of a theory / practical class

Day : 8 periods in a calendar day

Enrolment : Enlistment of a student on roll in an academic year



Arrear A course in which a student has not fulfilled the

examination passing criteria in the end semester

examination.

CAT Continuous Assessment Test

CAM Continuous Assessment Marks

ESE **End Semester Examination**

ESM End Semester Examination Marks

EEC Employability Enhancement Course

Regular Examination End semester examination conducted for the courses

prescribed in the curriculum of that semester

Arrear Examination End Semester examination conducted for the students who

have not fulfilled the examination passing criteria in the

previous attempt(s).

Supplementary Examination

An additional examination exclusively conducted in the fourth semester for the students with a maximum of two

arrears.

First Attempt Appearing for the end semester examination of a course in

> a semester for which the students have registered. If a student failed to appear for the end semester examination

after registration, it is also treated as first attempt

Academic Council (AC) : An Apex academic body having the power to scrutinize and

> approve the proposals with or without modification of the Board of Studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods,

procedures relevant thereto, etc.

Board of Studies (BoS) An Apex academic body having the powers to approve the

> various courses, suggest teaching methodologies, coordinate research and other academic activities keeping

in view the objectives of the college.

Academic Standing

ASC shall perform the functions under emergent situations Committee (ASC) which are subject to ratification by the Academic Council

(AC).

Academic Appeals

Board (AAB)

If a student finds some anomaly in the award of marks in Continuous Assessment Test /End Semester examination. he/she can make an appeal to the Academic Appeals

Board for review of marks awarded.

Departmental Advisory

Committee (DAC)

The Committee that formulates a process to review the post implementation effects of curriculum and suggest various measures to ensure academic standard and its

excellency of the course offered by the department.

Department

Consultative

Committee (DCC)

Reviews, revises and prepares curriculum structure based on the institutional policy and suggests improvements in syllabus of a course(s) prepared by course teacher(s) and

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forwards the curriculum to BoS for further recommendations. It monitors the academic progress and conduct of classes throughout the semester and takes appropriate corrective measures to improve the quality of

curriculum delivery.

Programme Academic Coordinator (PAC)

Coordinates all the academic activities of the department viz. Curriculum revision, framing of syllabus, time table, reregistration of course(s), display and submission of attendance status and BoS meeting as a member

secretary.

AICTE : All India Council for Technical Education

UGC : University Grants Commission

NBA : National Board of Accreditation

NAAC : National Assessment and Accreditation Council

CRC : Complaint Redressal Committee

3. BRANCHES OF STUDY

Sri Manakula Vinayagar Engineering College offers the following M.Tech. Degree Programmes:

- 1. M.Tech Electronics and Communication Engineering
- 2. M.Tech Computer Science and Engineering
- 3. M.Tech Networking
- 4. M.Tech Power Electronics and Drives
- 5. M.Tech VLSI and Embedded Systems
- 6. M.Tech Manufacturing Engineering

4. ADMISSION ELIGIBILITY

The norms for admission, eligibility criteria such as marks, age limit and mode of admission will be as prescribed by the Pondicherry University from time to time.

4.1 Educational Eligibility

Candidates for admission to the first semester of M.Tech. Degree programme shall be required to have passed B.E / B.Tech in related branches, through regular course of study from an AICTE approved institution or an examination of any University or authority accepted by the Pondicherry University as equivalent thereto, with at least 50% marks in the degree examination or equivalent CGPA (45% marks in case of candidates belonging to reserved category). The list of programmes approved for admission to the various M.Tech degree are given in **Annexure A.**

4.2 Age Limit

There is no age limit for the M.Tech programmes.

5 ACADEMIC STRUCTURE

5.1 Duration of the Program

A student after securing admission shall pursue M.Tech programme for a minimum period of 2 academic years (4 semesters), if not he / she has to complete the degree within the maximum period of 4 years (8 semesters) starting from the commencement



of the first semester.

5.2 Medium of Instruction

The medium of instruction for the entire M.Tech. Degree programme shall be only in **ENGLISH**.

6 CURRICULUM STRUCTURE

According to the National Board of Accreditation (NBA), the curriculum has to be evolved after finalizing the Programme Educational Objectives (PEOs) and the corresponding Programme Outcomes (POs). The Programme Specific Outcomes (PSOs) are to be evolved based on the knowledge and skills developed over the duration of programme. The curriculum that evolves should broadly ensure the achievement of the POs and PSOs, and thus the PEOs of the programme.

6.1 Category of Courses and its Credit Distribution

Course work is measured in units called credit hours or simply credits. One credit per lecture hour per week is assigned for each theory course. Laboratory courses and tutorial are assigned for an hour with 0.5 credits per week. The credits details of courses are shown in Table 1.

Table 1 Credits details of courses

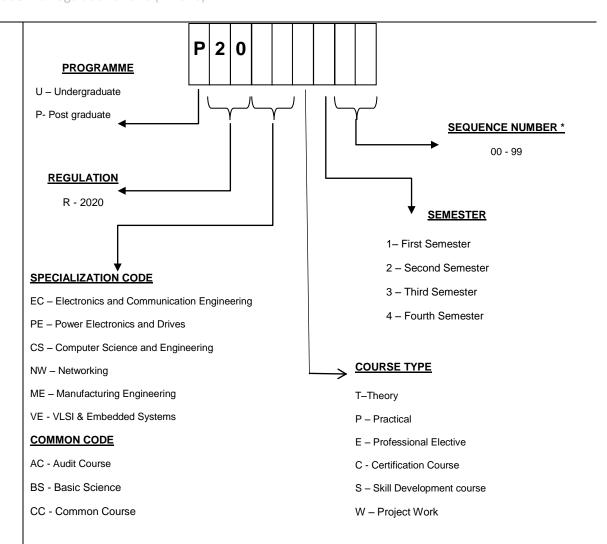
Nature of Course		Nur	nber of h	Credits	
Nature of Course	L	Т	Р	PW	Credits
Theory	3	0	0	-	3
Theory with Tutorial	2	2	0	-	3
Practical	0	0	4	-	2
Project phase-I	0	0	0	12	6
Project phase-II	0	0	0	24	12

Total Number of Credits	Between 70 to 75
Number of credits per Semester	Between 12 to 23

6.2 Course Numbering Scheme

Each course is denoted by a unique code consisting of 9 alphanumeric characters. The details of the numbering scheme are shown in Fig. 1.





^{*}Separate sequence number for theory and practical courses

Fig. 1 Course code formation

6.3 Professional Electives

Each student shall choose a course from the professional elective list specified in the curriculum relating to his/her degree programme in consultation with the Programme Academic Coordinator and the HoD.

6.4 Project Work

Each student shall be required to undertake a suitable project in industry / research organization / department in consultation with the Head of the Department and the project guide. A student shall register for the Project Phase I and II in 3rd and 4th semester respectively..

1. The process and guidelines for industry/Research organization projects

- Students opting for industry / research organization project should decide, identify
 and interact with relevant industry/ research organization in 3rd semester itself.
 Training and Placement cell shall help to establish contact with industries. Students
 shall take necessary help from their department for exact plan of action and apply to
 the industry / research organization through proper channel. The departmental
 committee shall decide the schedule appropriately.
- Students shall submit the application attached with relevant details viz.



- correspondence with industry, area and nature of project, progress report to the department.
- Director cum Principal / Dean Academics shall issue permission letter to the students on the recommendation of HoD. Students shall be allowed to do the project work in the industry.
- An internal guide from the department and mentor from the industry/research organization where the project is to be undertaken shall be allocated to the students.
 Both guides should discuss and finalize the scope of the project work and monitor the progress together.
- Internal guide should visit the industry at least 3 times in a semester to see the progress of his/her student and a brief report should be submitted to the HoD about the project.
- Student should maintain a record on the progress and get the approval from both internal and external guides at least twice in a month either by physically or through email communication. If the progress is not found satisfactory due to any reason, the Guide should take the corrective action, after consulting with Dean Academics through HoD for further extension of the project completion.
- Progress report and certificate of completion of the project work from the industry / research organization shall be submitted by the student to the respective project guide. The mode of evaluation shall be same as adopted for students carrying out in-house project.

2. The Process and guidelines for in-house project

- Project work will be assigned to a single student under the supervision of Project guide(s).
- Students execute their in-house project in the Department with proper approval from the HoD through the respective project guide.

6.5 Employability Enhancement Courses

- 6.5.1 **Certification Courses:** Students shall choose a National/International certification course of 40-50 hours duration specified in the curriculum, which will be offered through Centre of Excellence. These courses carry no credit and will not be considered for CGPA calculation.
- 6.5.2 Skill Development Courses: Skill development courses are non-credit courses, provided to enhance the knowledge and skill set of the students. It is mandatory for every student to register online courses like MOOC / SWAYAM / NPTEL etc. approved by the Department committee comprising of HoD, Programme Academic Coordinator and Subject Experts. Students have to complete relevant online courses successfully. The list of online courses is to be approved by Academic Council on the recommendation of HoD at the beginning of the semester if necessary, subject to ratification in the next Academic council meeting. The Committee will monitor the progress of the student and recommend the grade (100% Continuous Assessment pattern) based on the marks secured in online examinations.

6.6 Audit Courses

The Audit courses namely English for Research paper writing, Disaster Management, Value education, Stress Management by Yoga, Constitution of India etc shall be included in semesters 1 and 2 of M.Tech Curriculum. These are non- credit courses having a minimum of 30 hours duration and students have to complete a minimum of 2 audit



courses.

6.7 Industrial Training / Internship

Students may undergo training or internship during summer / winter vacation at Industry/ Research organization / University (after due approval from the Programme Academic Coordinator and Department Consultative Committee (DCC). In such cases, the internship/training should be undergone continuously (without break) in one organization. Normally no extension of time is allowed. However, DCC may provide relaxation based on the exceptional case. The students are allowed to undergo three to four weeks internship in established industry / Esteemed institution during vacation period.

7 COURSE ENROLMENT AND REGISTRATION

7.1 Course Registration

The registration for each semester courses shall be done in online mode which will commence preferably 10 working days prior to the last working day of the current semester.

7.1.1 After registering for all the courses, the student must attend the classes, satisfy the attendance requirements, earn Continuous Assessment Marks (CAM) and appear for the End Semester Examinations (ESE).

7.2 Arrear Course Registration

In the first attempt of writing the End Semester Examination of a course if a student fails, he/she can retains the existing Continuous Assessment Marks (CAM) earned in his/her first attempt and proceeds to write the supplementary exams / End Semester Examinations as and when they are conducted. Otherwise, if a student wishes to re-earn Continuous Assessment Marks (CAM), he/she 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 presentation as per the norms of regulations.

8 EXAMINATION

8.1 Requirements for Appearing End Semester Examination

A student is expected to maintain 100% attendance in all courses as attendance also carries internal marks (Clause 10.3). A student will be qualified to appear for end semester examinations in a particular course of a semester only if he/she satisfies the below mentioned requirements.

- **8.1.1** The student is permitted to appear for End Semester Examinations, only if he/she maintains minimum 75% of attendance. If he/she secured attendance greater than or equal to 60 % and less than 75% in any course in the current semester can be considered in case of the following reasons:
 - i. Medical reasons (hospitalization / accident and or illness)
 - ii. Due to participation in sports events or any competitions or NCC and / or NSS activities with prior written permission from the Head of the Institution / Dean Academics through the Head of the Department

He/she has to pay the necessary condonation fee prescribed by the college authority with necessary supporting documents for his/her absence.

8.1.2 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 Examination 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 Programme



Academic Coordinator

8.1.3 If any student is suspended for any reason during the semester, 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.

8.2 Movement to Next Higher Semesters

- **8.2.1** A student can move to the next semester provided only if he/she fulfills the minimum attendance requirement for appearing in the end semester examination.
- **8.2.2** The student who has failed to fulfill the above conditions will not be permitted to move to the higher semester, and shall rejoin the programme in the next academic year in the same semester after fulfilling all the requirements as per the regulations.
- **8.2.3** A student who rejoins the programme after the temporary break shall be governed only by the rules, regulations, course of study and syllabi in force, at the time of rejoining the course.

8.3 Provision for Withdrawal from Examination

- 8.3.1 Complete Withdrawal (applicable only for nil arrear students): A student, who is eligible to appear for the semester examinations, will be permitted to withdraw from appearing for the entire End Semester Examinations as one unit (Complete Withdrawal) for valid reasons and on the recommendation of the Head of the Department and with the approval of the Dean Academics. Complete Withdrawal application shall be made before the commencement of the first examination pertaining to the semester. Such withdrawal shall be permitted only once during the entire programme.
- **8.3.2** A student who has completely withdrawn from appearing for End Semester Examinations in a particular semester should appear for the examinations of all the withdrawn subjects in the next semester itself.
- **8.3.3** If all other conditions are satisfactory, the candidate who withdraws is also eligible to be awarded DISTINCTION whereas he/she is not eligible to be awarded a rank.

8.4 Scribe for End Semester Examination

- 8.4.1 If any student is not in a position to write End Semester Examination on account of temporary physical disability or injury due to accident and applies for a scribe (writer) with medical certificate obtained from a medical officer not below the rank of Assistant Director level, then a scribe shall be allowed / assigned by CoE to such student. Normally, such scribe shall neither be a student nor a degree holder of any technical programme having similar competency. The student shall, however, apply in a prescribed proforma to CoE requesting permission for using the scribe well in advance, not on the day of examination, to make necessary arrangements (Scriber, Separate Examination Hall etc.). CoE shall take the undertaking from the scribe in a prescribed proforma. Such student shall produce the permission letter from the CoE for using scribe to the invigilator. He/She should pay the TA/DA and other charges to the scribe. Scribe shall be allowed extra time as per the norms specified by the Controller of Examinations.
- 8.4.2 Student admitted with differently abled category and those who can write, but



at much slower speed as compared to normal student, he/she may be allowed an extra time of 30 minutes for 50 marks paper and 45 minutes for 60 marks paper to write the examination for all the courses. He/She shall seek permission from CoE for the extra time on account of his/her percentage of disability by producing necessary medical certificate from medical officer not below the rank of Assistant Director.

8.5 Supplementary Examinations

Supplementary Examination is an additional examination which will be conducted after the End Semester Examination results / revaluation results. This examination will be conducted in fourth semesters for the students who are having a maximum of two arrears only. For supplementary examination, the continuous assessment marks of the last attempt will be considered.

8.6 Malpractice in Examinations

If any student caught red-handed due to malpractices in examinations then he/she shall be punished as per the recommendations of the Complaint Redressal Committee (CRC) constituted by CoE with the approval of Head of the Institution. The CRC shall inquire and decide the punishment for the unfair means as specified in the Examination manual.

9 ASSESSMENT PROCEDURES FOR AWARDING MARKS

The total marks for each course (Theory, Practical, and Project Work) will be 100, comprising of two components namely Continuous Assessment Marks (CAM) and End Semester Examination Marks (ESM). However, there are EEC and Audit courses that have only continuous assessment for 100 marks without an End-Semester Examination. The Department Consultative Committee (DCC) has to approve such courses for every semester. The scheme of assessment may also be decided by the faculty handling the course concerned with the approval from DCC and shall be made available to the students during the course registration. Each course shall be evaluated for a maximum of 100 marks as illustrated in Table 2.

Table 2 Assessment Components

SI. No	Category of Course	Continuous Assessment Marks (CAM)	End Semester Examination Marks (ESM)
1	Theory Courses	40	60
2	Practical Courses	50	50
3	Project phase -I	50	50
4	Project phase -II	50	50
5	Technical Report writing and Seminar	100	-
6	Seminar on ICT- Hands on Approach	100	-
7	Employability Enhancement Courses(EEC)	100	-
8	Audit Courses	100	-

Students may take National/International reputed professional certification courses after due approval from Department Consultative Committee (DCC). After completion of the course, the DCC has to verify the relevant documents and certificates. The credits and grades shall be mapped by the DCC and recommended to CoE through the HoD.

10 DISTRIBUTION OF MARKS



10.1 Marks Distribution of Continuous Assessment Marks (CAM) and End Semester Examination Marks (ESM)

The scheme of assessment for Continuous Assessment Test and weightage for each assessment is shown in Table 3 and 4 respectively. Table 5 shows the scheme for End Semester Examinations.

Table 3 Scheme for Continuous Assessment Marks

			Con	tinuous	Assess	ment C	omp	onent	s		
S. No	Course Type	Test Marks	Average of Pre /post-test/viva for each experiment	Average of Marks for experiment report for each experiment	Model Exam / Report /viva-voce	Assignment **	Review-1	Review-2	Review-3	Attendance	Total Marks
1	Theory	25	-	-	-	10	-	-	-	05	40
2	Practical	-	15	15	10	-	-	-	-	10	50
3	Project phase -I	-	-	-	-	-	15	15	20	-	50
4	Project phase –II	-	-	-	-	-	15	15	20	-	50
5	Internship	-	-	-	30	-	20	20	30	-	100
6	Technical Report Writing and Seminar	-	-	-	20	-	25	25	30	-	100
7	Seminar on ICT- Hands on Approach	-	-	-	-	-	25	25	50	-	100

^{**} Assignment to be given from Unit-5 and hence it is exempted from CAT and ESE

Table 4 Weightage of Assessment for Theory Courses

S. No	Test	Portion for Test	Test Marks	Duration of Test	Weightage for Internal Marks
1	CAT – 1	2 units (Unit 1 and 2)	40	1 ½ hours	10***
2	CAT – 2	2 units (Unit 3 and 4)	40	1 ½ hours	10
3	CAT – 3	4 Units (Unit 1 to 4)	60	3 hours	15
Continuous Assessment for Theory courses					25

^{***}A minimum of two tests (CAT 1 and 2) to be conducted for every theory course and, out of them, the best one is to be considered for computation of internal assessment marks.



	Table 5 Scheme for End Semester Examinations						
S. No	Course Type	Written Exam	Practical Exam	Practical exam viva	Report and viva - voce	Publication of papers / Prototypes / Patents etc	Total Marks
1	Theory	60	-	-	-	-	60
2	Practical	40)	10	-	-	50
3	Project Phase I	-		-	50	-	50
4	Project Phase II	-	-		40	10	50

Table 5 Scheme for End Semester Examinations

10.2 Question Paper Pattern- Theory

The question paper for the continuous assessment tests must follow Revised Bloom's Taxonomy and indicate expected knowledge level and Course Outcomes (COs). The questions will be chosen only from the first four units of all theory subject to account End Semester Examination marks of 60. Question paper pattern for CAT and ESE is shown in Table 6 (a) and (b) respectively.

Table 6 (a) Question Paper pattern for CAT 1 and 2

2 Mark Questions	10 Mark Questions	Total Marks
5	3	
(At least two questions	(out of 4 Questions and at least	40
from each unit)	two questions from each unit)	

Table 6 (b) Question Paper pattern for CAT 3 and End Semester Examination

2 Mark Questions	12 Mark Questions	Total Marks
6	4	
(At least one question	(out of 6 Questions and at least	60
from each unit)	one question from each unit)	

10.3 Distribution of Marks for Attendance

(a). Theory courses for which there is an internal marks of 40 that includes 5 marks for attendance as shown in Table 3.

The distribution of 5 marks for attendance is as follows:

- 5 marks for 95% and above
- 4 marks for 90% and above but below 95%
- 3 marks for 85% and above but below 90%
- 2 marks for 80% and above but below 85%
- 1 mark for 75% and above but below 80%
- (b). Practical courses for which there is an internal marks of 50 that includes 10 marks for attendance as shown in Table 3.

The distribution of 10 marks for attendance is as follows:

- 10 marks for 95% and above
- 8 marks for 90% and above but below 95%
- 6 marks for 85% and above but below 90%
- 4 marks for 80% and above but below 85%
- 2 marks for 75% and above but below 80%.

10.4 Criteria for Assessment of Project Work



- Interim project report shall be submitted before the project reviews with the
 approval of the guide. The Project Report prepared according to the approved
 guidelines and duly signed by the guide and the Head of the Department shall be
 submitted to the department as per the timeline announced by the department.
- The End Semester Examination for the project work shall consist of an evaluation
 of the final project report by an external examiner, followed by a viva-voce
 examination conducted by a committee consisting of the external examiner and an
 internal examiner.
- The Continuous Assessment Marks (CAM) and End Semester Examinations marks (ESM) distribution for the Project Work is given in Table 7.

Table 7 (a) CAM & ESM break-up for Project Phase I

SI. No			Weightage			
1	Continuous Assessm	Continuous Assessment Marks				
а	Review 1	Review Committee [#]		15		
а	Keview I	Guide	5	15		
b	Review 2	Review Committee#	10	15		
D	Review 2	Guide	5	15		
С	Review 3	Review Committee [#]	15	20		
C	Keview 3	Guide	5	20		
			Total CAM	50		
2	End Semester Marks					
а	Evaluation of Phase I	Internal Examiner	25	50		
а	report and Viva-voce	External Examiner	25			
			Total ESM	50		
		Т	otal Marks	100		

Table 7 (b) CAM & ESM break-up for Project Phase II

SI. No		Description		Weightage		
1	Continuous Assessme	Continuous Assessment Marks				
а	Review 1	Review Committee#	10	15		
а	Review I	Guide	5	15		
b	Review 2	Review Committee [#]	10	15		
D	Neview 2	Guide	5	13		
С	Review 3	Review Committee [#]	15	20		
C	Guid	Guide	5	20		
			Total CAM	50		
2	End Semester Marks					
а	Evaluation of Phase II	Internal Examiner	20	40		
а	report and Viva-voce	External Examiner	20	40		
b Outcome ^{\$}		Publication of papers	10	10		
Ь	Outcome	/prototypes /patents etc	10	10		
			Total ESM	50		
		Т	otal Marks	100		

[#] Review committee consists of internal faculty members nominated by the Head of the Department. The guide of the student being examined shall not be part of the committee.

10.5 Grading for Audit and EEC Courses

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DRAN ACADEMICS

Outcome, in terms of paper publication, patents, product development and industry projects shall be awarded by both internal and external examiners, based on the document proof submitted by the student concerned

Audit and EEC Courses are required to be completed to fulfill the degree requirements. All Audit and EEC Courses are assessed internally for 100 marks. The pass mark is 50%. The marks scored in these courses will not be taken into consideration for the SGPA / CGPA calculations.

10.6 Grading for Internship, Seminar on ICT- Hands on Approach, Technical Report writing and Seminar

Internship, Seminar on ICT- Hands on Approach, Technical Report Writing and Seminar are assessed internally for 100 marks. The pass mark is 50% and the distributions of mark for these courses are given in Table 3.

11 REQUIREMENTS FOR PASSING THE EXAMINATION

11.1 A student is declared to have successfully passed a theory based course if he/she has secured:

- A minimum of 40% marks out of 60 marks in the End Semester Examinations.
- A minimum of 50% marks on combining both Continuous Assessment Marks (CAM) and End Semester Examination Marks (ESM).

11.2 A student is declared to have successfully passed a practical / project based course if he/she has secured:

- A minimum of 50% marks in the end semester examinations.
- A minimum of 50% marks on combining both Continuous Assessment Marks (CAM) and End Semester Examination Marks (ESM).

12 EVALUATION AND GRIEVANCE REDRESSAL MECHANISM

12.1 Evaluation of End semester examination Answer scripts:

End Semester examination answer scripts (theory) will be evaluated independently by two examiners appointed by the Controller of Examinations and if the difference in marks awarded to an answer script by the examiners is less than 15 percent of the total marks earmarked for the End semester examination, then the average of the marks awarded by the two examiners is taken as the mark scored in the examination. If the difference in marks is greater than 15 percent, then the answer script will be evaluated by a third examiner and the mark awarded by the third examiner is taken as the final score.

12.2 Photocopy of Answer Scripts and Re-totaling:

Students who are not satisfied with the grades awarded in the End Semester Examination of Theory Courses for regular and arrear examinations can seek redressal as follows:

- After declaration of results, photocopy of valued answer scripts with the marks awarded to individual answers shall be made available to the students on submission of an application along with the prescribed fees to Controller of Examinations.
- Students can get their answer scripts re-totaled by submitting an application along with the prescribed fees to the Controller of Examinations.
- The provision for getting the photocopy of valued answer scripts and re-totaling is



extended to all the students.

 The Controller of Examinations shall get the answer script re-totaled and revise the grade accordingly.

13 LETTER GRADE AND GRADE SHEET

All assessments of a course will be evaluated exactly based on the marks. 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 given in Table 8, based on the percentage of marks obtained by the candidate in each subject.

S. Range of **Letter Grade Grade Points** No total marks 10 90 to 100 1 S 9 2 80 to 89 Α 8 3 70 to 79 В 7 С 4 60 to 69 6 55 to 59 D 5 5 6 50 to 54 Ε 0 F 7 0 to 49 0 8 Absent FΑ

Table 8 Letter Grade and its range

F - denotes Failure of the course and FA - Failure due to Absent

13.1 Grade Sheet

9

10

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

W

Р

0

0

The College Name and Affiliating University.

Withdrawal from examination

Pass in non-credit course

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

Semester Grade Point Average (SGPA) =
$$\frac{\sum_{i} (C_i \times GP_i)}{\sum_{i} C_i}$$
 $i = 1 \text{ to } n$;

Where n= Number of credit courses in that semester.

 C_i is the Credit of i^{th} course in that semester and GP_i is the Grade Point earned by the student for that i^{th} course. The SGPA is rounded off to two decimals.

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



Cumulative Grade Point Average (CGPA) =
$$\frac{\sum_{i}(C_{i} \times GP_{i})}{\sum_{i}C_{i}}$$
 $i=1 \ to \ m;$

Where $m = Number of credit courses from I^{st} semester to the completed semesters, <math>C_i$ is the Credit of i^{th} course of the completed semesters at that stage and GP_i is the Grade Point earned by the student for that i^{th} course.

13.2 Scheme for conversion of CGPA to Percentage (%) marks:

Some employers / institutions except the students to provide the details of the percentage (%) of marks scored in the semester examination / degree programme. In this regard, a scheme to convert the Cumulative Grade Point Average (CGPA) to Percentage (%) of marks is shown below:

Percentage (%) marks = CGPA x 10

14 ELIGIBILITY FOR THE AWARD OF DEGREE

A student shall be declared to be eligible for the award of M.Tech. Degree provided the student has successfully completed the course requirements and has passed all the prescribed End Semester Examinations in all the four semesters within a maximum period of 4 years calculated from the commencement of the first semester.

14.1 Classification of Degree

After successful completion of the programme, degree will be awarded as per the following classifications based on the final CGPA

1. First class with Distinction

Student who satisfies the following conditions shall be declared to have passed the End Semester Examination in *First class with Distinction:*

- (a) Students who have successfully completed the programme within four consecutive semesters and obtained a final CGPA of 8.5 or above by passing the End Semester Examination in all the courses (Theory and Practical) from first to fourth semester in the first attempt will be declared to have passed in First Class with Distinction.
- (b) Students who have secured a final CGPA of 8.5 or above but failed to clear the courses offered from first to fourth semester in the first attempt are not eligible for *First Class with Distinction* classification. However,

Students who have opted for authorized complete withdrawal (only one time) from examination will also be eligible for *First Class with Distinction* classification but it will not be considered for Ranking.

2. First class

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

- (a) Should have passed the examination in all the courses of all four semesters within two years
- (b) Should have obtained a final CGPA not less than 6.5 shall be declared to have passed in *First Class*.
- (c) Students who have lost the eligibility for *First Class with Distinction* classification by failing to clear the courses offered from 1st to 4th semesters in the first attempt but securing a final CGPA of 8.5 or above shall also be declared to have passed in *First Class*.



3. Second class

All other students (not covered in clauses at S.No.1 and 2 under Clause14.1) who qualify for the award of the degree shall be declared to have passed the examination in Second Class.

14.2 Gold Medals and Ranks

For the Award of Gold Medal and ranks for each branch of study, the CGPA secured from 1st to 4th semester should be considered and it is mandatory that the candidate should have passed all the subjects from 1st to 4th semester in the first attempt. Rank certificates would be issued to the first two candidates in each specialization.

15 TEMPORARY BREAK OF STUDY FROM THE PROGRAMME

A student shall be permitted to withdraw temporarily from the college for the reason beyond his/her control. The applicable rules are:

- i. After withdrawal, the student shall rejoin next year in the same semester during which the student has withdrawn.
- ii. The student shall apply to Dean Academics through HoD stating the reasons for withdrawal, along with supporting documents, consent letter from his/her parent/guardian and clearance/no due from all the concerned departments.
- Dean Academics shall examine the case and recommend for the approval/ratification from Academic Council (AC) /Academic Standing Committee (ASC).
- iv. A student availing temporary withdrawal from the college under the above provision shall be required to pay such fees and/or charges as may be fixed by the AC/ASC for his/her name to be enrolled. However, it may be noted that the fees/charges once paid shall not be refundable.
- v. The total period of completion of the course reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed 4 years in any case including of the period of discontinuance.

16 TERMINATION FROM THE PROGRAMME

A student shall be terminated from the program in the following cases:

- i. Involved in ragging and not obeying disciplinary rules structured by college.
- ii. Not completing the programme in prescribed period; Students shall have to complete M. Tech programme in the maximum period of 4 years (8 semesters) from the date of admission. If not completed, such student will be declared as Failed to Complete Technical Education (FCTE). However, genuine cases with proper justification may be referred to AC for extending programme completion period.

17 DISCIPLINE AND CONDUCT

- **17.1** Any act of misconduct committed by a student inside or outside the campus shall be an act of violation of discipline of the college. Violations of the discipline shall include:
 - (a). Interference to teaching, examination, administrative work, curricular or extracurricular activities and any act likely to cause disruption.
 - (b). Damaging or defacing the property inside or outside the college campus.
 - (c). Engaging in any attempt at wrongful confinement of teachers, employees and students of the college.
 - (d). Use of abusive and derogatory slogans or intimidators' language or incitement of hatred and violence.



- (e). Ragging in any form ("Ragging means causing, inducing, compelling or forcing a student whether by way of a practical joke or otherwise to do any act that detracts from human dignity or violates his person or exposes him to ridicule or to forbear from doing lawful act, by intimidating, wrongfully re-straining wrongfully confining or injuring him or by using criminal force to him or by holding out to him any threat of such intimidation, wrongful restraint, wrongful confinement, injury or the use of criminal offense), as per the directions of Supreme Court of India, is a criminal offence.
- (f). Eve teasing or disrespectful behavior to a student.
- (g). An assault upon or intimidation of, or insulting behavior towards a teacher, officer, employee or student or any other person.
- (h). Getting enrolled in more than one programme /course of study simultaneously.
- (i). Committing forgery, tampering the documents or records, identity cards, furnishing false certificate or false information.
- (j). Organizing instant agitation/meetings without prior permission in the campus.
- (k). Viewing/downloading obscene information/data, images and executable files, sending obscene mails/messages via Facebook/twitter/ other social sites using college servers/personal electronic gadgets in the college premises.
- (I). Sharing the login and password and other details of IT facilities provided to other outside students.
- (m). Refusing to provide an identity card when demanded by any teacher / college authority.
- (n). Consuming or possessing alcoholic drinks, dangerous drugs or other intoxicants in the college campus.
- (o). Possessing or using any weapons and fire arms in the college campus.
- (p). Encroachment of hostel, accommodating guests or other persons in hostels without permission.
- (q). Malpractice in examination
- (r). Indulging in anti-national activities contrary to the provisions of acts and laws enforced by Government.
- (s). Any other act which may be considered by the Head of the Institution or the Discipline Committee to be an act of violation of discipline.
- **17.2** Any act of indiscipline of a student reported to the Head of the Institution shall be referred to Redressal and Disciplinary Committee of the college. The Committee shall enquire into the charges and recommend suitable punishment if the charges are substantiated. The penalties / punishment / actions may include:
 - (a). Written warning and information to the parents/guardian.
 - (b). Imposition of fine
 - (c). Suspension from the College/Hostel/Mess/Library or availing of any other facility.
 - (d). Suspension or cancellation of scholarship/fellowship / studentship or any financial assistance from any source.
 - (e). Recover of loss caused to college property.



- (f). Debarring from participation in sports/NSS/student club activities.
- (g). Disqualifying from holding any representative position in the Class / College / Hostel Mess / Sports / Clubs and in similar other bodies.
- (h). Disqualifying from appearing in placement and receiving any awards.
- (i). Expulsion from the Hostel/Mess/Library/Club/College for a specified period by forfeiting fees.
- (j). Debarring from appearing for an End Semester Examination.
- 17.3 Student(s) involved in any act of indiscipline /malpractice in examination shall be issued notice to him/her, asked to be present before the Complaint Redressal Committee (CRC) on the day at specified time and venue with his/her parents/guardian. He / She shall give written reply /oral explanation to the charges levied against him/her for consideration. If the implicated student(s) fails to appear before the committee, then decision shall be taken as absent, on the basis of available evidence/documents which shall be binding on the concerned student.
- **17.4** Every admitted student shall be issued photo identification (ID) card which must be worn by the students when he / she is inside in the college campus / college bus.

18 ACADEMIC CALENDAR

- **18.1** The academic activities of the college shall be governed by the academic calendar prepared for each academic semester and approved by the AC/ASC. It shall be notified at the beginning of each academic semester. Academic calendar shall incorporate schedule of admission, course registration, course delivery, examination / evaluation, course feedback, course/graduate exit survey, co-curricular activities.
- 18.2 The curriculum shall be typically delivered in two semesters in an academic year. Each semester shall be of 16 weeks (approximately 75 working days) duration, including evaluation, grade moderation and result declaration. Generally, 13-14 weeks (65-70 days) for course content delivery and 4-6 weeks (20 30 days) for examination /evaluation shall be assigned in each semester. The academic session in each semester shall provide at least 75 teaching days with 40 hours per week. The odd and even semesters of an academic year normally begin from second week of June and second week of December respectively.
- **18.3** The academic calendar should be strictly adhered to all other activities including cocurricular and extra-curricular activities that should be scheduled so as not to interfere with the curricular activities as stipulated in the academic calendar.

19 VARIOUS COMMITTEES AND ITS FUNCTIONS

19.1 Academic Council (AC)

Composition of Academic Council:

- 1. The Director cum Principal (Chairman)
- 2. All the Heads of Departments in the college
- 3. Four teaching staff of the college representing different designation are nominated on rotation basis according to the service of seniority.
- Not less than four experts/academicians from outside the college representing such areas as Industry, Commerce, Law, Education, Medicine, Engineering, Sciences etc., to be nominated by the Governing Body.



- 5. Three nominees of the university not less than Professors.
- 6. A faculty member nominated by the Principal (Member Secretary).

Term: The term of the nominated members shall be three years.

Meetings: Academic Council shall meet at least twice a year.

Functions of the Academic Council:

The Academic Council shall have powers to:

- (a). Scrutinize and approve the proposals with or without modification of the Board of Studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto etc., provided that where the Academic Council differs on any proposal, it shall have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving reasons to do so.
- (b). Make regulations regarding the admission of students to different programmes of study in the college keeping in view the policy of the Government.
- (c). Make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels.
- (d). Recommend to introduce the new programme of study to the Governing Body proposals.
- (e). Recommend to the Governing Body regarding the institution of scholarships, studentships, fellowships, prizes and medals, and to frame regulations for the award of the same.
- (f). Advise the Governing Body on suggestions(s) pertaining to academic affairs framed by it.
- (g). Perform other functions as may be assigned by the Governing Body.

19.2 Board of Studies (BoS)

Composition of Board of Studies:

- 1. Head of the Department concerned (Chairman).
- 2. The entire faculty of each specialization.
- 3. Two subject experts from outside the Parent University to be nominated by the Academic Council.
- 4. One expert to be nominated by the Vice-Chancellor from a panel of six recommended by the college principal.
- 5. One representative from industry/corporate sector/allied area relating to placement.
- One postgraduate meritorious alumnus to be nominated by the principal. The Chairman, Board of Studies, may with the approval of the principal of the college, co-opt:
 - (a). Experts from outside the college whenever special courses of studies are to be formulated.
 - (b). Other members of staff of the same faculty.



Term: The term of the nominated members shall be three years.

Meetings: The Board of Studies shall meet at least twice a year.

Functions of BoS

The Board of Studies of a Department in the college shall:

- (a). Prepare syllabi for various courses keeping in view the objectives of the college, interest of the stakeholders and national requirement for consideration and approval of the Academic Council.
- (b). Suggest methodologies for innovative teaching and evaluation techniques.
- (c). Suggest panel of names to the Academic Council for appointment of examiners.
- (d). Coordinate research, teaching, extension and other academic activities in the department/college.

19.3 Academic Standing Committee (ASC)

Composition of Academic Standing Committee is same as that of AC, except external members. ASC shall perform the functions under emergent situations subject to ratification by the AC.

19.4 Academic Appeal Board (AAB)

The entire process of Continuous Assessment shall be made transparent, in which students can get the explanation of marks being awarded from the course instructor, if and when required. However, if a student finds some anomaly in the award of marks in the continuous assessment, he/she can make an appeal to the *Academic Appeal Board* for review of marks awarded. Before appealing for such review, a student shall first approach the concerned Course Instructor and then the concerned Head of the Department, with a request to do the needful. Only after exhausting the above options and in situations where satisfactory actions / remedial measures have not been taken, the student may appeal to the Academic Appeal Board.

The Academic Appeal Board is constituted with Dean Academics as convener and two senior level professors as members, and the concerned Head of the Department and Class Advisor as co-opted members. The board will receive the grievances/complaints /complaints in writing from the aggrieved student regarding anomaly in award of marks. The board will examine the complaints and recommend appropriate measures to the Director cum Principal, for necessary action.

19.5 Departmental Advisory Committee (DAC)

DAC is an another basic constituent of the academic system of an autonomous college. The composition and functions of the DAC are given below

- 1. Chairman: Head of the concerned Department
- 2. Internal Members: Two senior faculty members of the department
- 3. Industry Representative : One representative from industry/corporate sector / is related to the placement
- 4. One academician from other Institution
- 5. One meritorious alumnus
- 6. One parent
- 7. One student
- 8. Member secretary: Programme Academic Coordinator



Term: The term of the nominated members shall be three years.

Meetings: The meeting may be scheduled as and when necessary, but at least twice a year.

Functions of DAC

The DAC of a department in the college shall

- a) Formulate a process to review post implementation effects of curriculum
- b) Suggest measures to ensure academic standard and excellence of the course offered by the department.
- c) Suggest the methodologies for innovative teaching and evaluation techniques; enhancement of industry institute interaction
- d) Identify and recommend the record of new programme
- e) Review target set for attainment of course outcomes and programme outcomes
- f) Guide and provide support to department for enhancing interaction with outside world.
- g) Plan strategically to enhance the academic quality of department.
- h) Address concerns of stakeholders expressed through feedback.
- i) Defining and redefining the Programme Educational Objectives (PEOs) and Programme Outcomes (POs) based on the recommendations by departmental academic committee.
- j) Study the achievement of PEOs and POs reported by department academic committee and suggest measures for improvement.

19.6 Board of Examinations (BoE)

Composition

- 1. Director cum Principal (Chairman)
- 2. Dean Academics.
- 3. Controller of Examination(CoE): Member Secretary
- One expert possessing ten years of industrial/ field experience nominated by the Chairman
- 5. Coordinators (Examinations, Assessment, Results and Tabulation)

Functions of BoE:

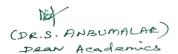
- (a). The BoE shall
 - i. Ensure proper performance of the various duties in conducting examinations viz paper setting, time table preparation, assessment and declaration of results.
 - ii. Recommend examination reforms and shall implement after the approval of academic council.
 - iii. Prepare the detailed time table of examinations as per the schedule approved by academic council.
 - iv. Arrange for strict vigilance during the conduct of examination so as to avoid use of unfair means by the students, faculty and invigilators.



- (b). Chairman, BoE shall constitute Complaint Redressal Committee (CRC) consisting of three members as and when required to deal with the complaints related to the conduct of examinations.
- (c). The recommendations of the CRC shall be approved by Chairman for the BoE to take appropriate disciplinary actions in the concerned matter. The disciplinary actions shall be endorsed by the BoE.
- (d). The BoE shall perform duties and responsibilities that are assigned by Academic Council of the institute from time to time.

20 REVISION OF REGULATIONS AND CURRICULUM

The college may revise, amend or change the regulations of curriculum and syllabi from time to time as and when found necessary.



Annexure A

(Eligible UG/PG Degree for admission of M.Tech Programmes)

M.Tech Programmes in which Admission is Sought	Programmes Eligible for Admission
M.Tech - Electronics and Communication Engineering	 B.Tech/B.E/ Equivalent Degree in Electronics & Communication Engineering Communication Engineering Telecommunication Engineering Electronics & Telecommunication Engineering And related branches through regular course of study from an AICTE approved institution (or) an examination of any University.
M.Tech - Computer Science and Engineering	 B.Tech/B.E/ Equivalent Degree in Computer Science and Engineering/ Information Technology or Equivalent. M.Sc. in Computer Science/Information Technology/ Software Engineering MCA through regular course of study with Bachelor's degree in Computer Science / Computer Applications / Information Technology or equivalent Mathematics / Statistics / Physics / Electronics / Applied Sciences or any AICTE approved institution or an examination of any University or authority accepted by the Syndicate as equivalent thereto with a minimum of 55 % of marks.
M.Tech - Power Electronics and Drives	 B.Tech/B.E/ Equivalent Degree in Electrical & Electronics Engineering Electronics & Communication Engineering Electronics and Telecommunication Engineering Electronics & Instrumentation Engineering Instrumentation & Control Engineering Electronics Engineering Instrumentation Engineering/ Technology Bio Medical Engineering Medical Electronics or any Equivalent Degree
M.Tech - Manufacturing Engineering	B.Tech/B.E/ Equivalent Degree in Aeronautical Engineering Automation Engineering Automobile Engineering Automobile Maintenance Engineering Automotive Technology Ceramic Engineering and Technology Industrial Engineering Industrial Engineering and Management Industrial and Production Engineering Machine Engineering Manufacturing Engineering Manufacturing Engineering and Technology Manufacturing Engineering and Automation Manufacturing Science and Engineering



	 Manufacturing Technology Marine Engineering Material Science and Technology Mechanical Engineering Mechanical and Automation Engineering Metallurgical Engineering Metallurgical and Materials Engineering Mechatronics Mechatronics Engineering Nano Science and Technology Plastic and Polymer Engineering Precision Manufacturing Production Engineering Production and Industrial Engineering Robotics and Automation Surface Coating Technology
M.Tech - VLSI and Embedded Systems	 Tool Engineering B.Tech/B.E/ Equivalent Degree in Electronics and Communication Engineering Electronics and Telecommunication Engineering Electrical and Electronics Engineering Computer Science and Engineering Information Technology Electronics Engineering Electronics and Instrumentation Engineering Instrumentation Engineering / Technology Instrumentation and Control Engineering Biomedical Engineering and Other related branches
M.Tech - Networking	B.Tech/B.E/ Equivalent Degree in Computer Science and Engineering / Information Technology / Electronics and Communication Engineering / Computer Communication and Engineering / Electronic Engineering M.Sc. in Computer Science/Information Technology/ Software Engineering MCA with Bachelor's degree in Computer Science / Computer Applications / Information Technology or equivalent Mathematics / Statistics / Physics / Electronics / Applied Sciences

