NAAC ACCREDITED

B. Sc. Regulations 2020
(Outcome Based Education)

CONTENTS

REGULATIONS 2020

Degree Programme with Semester System

1. ADMISSION AND ELIGIBILITY

Applicants for admission to the B.Sc. Programmes must have passed higher secondary examination (10+2) or 10 + three years technical diploma examination.

S.No.	Programme	Eligibility
1.	Computer Science	Pass in 10+2 examination or equivalent with Mathematics/ Business Mathematics / Computer Science as one of the subjects
2.	Animation and Multimedia	Pass in 10+2 examination or Pass in 10 + 3 diploma examination.
3.	Mathematics	Pass in 10+2 examination with Physics, Chemistry & Mathematics or Pass in 10 + 3 diploma examination
4.	Physics	Pass in 10+2 examination with Physics, Chemistry & Mathematics / Biology (Natural/ Pure science) or Pass in 10 + 3 diploma examination
5.	Chemistry	Pass in 10+2 examination with Physics, Chemistry & Mathematics / Biology (Natural / Pure Science) or 10+3 diploma examination

2. DURATION OF THE PROGRAMME

The duration of B.Sc. Programmes will be three years, divided into six semesters. The duration of each semester will be 90 teaching days. The maximum number of years to complete the programme is 4 years (+1 for exceptional cases).

3. DEFINITIONS

Programme refers to B.Sc.; *Course* refers to a Theory or Practical Subject. University means Periyar Maniammai Institute of Science and Technology (PMIST), Deemed-to-be University.

4. PRE-REQUISITE

If a prerequisite is specified for a particular course, then the student should have studied the prescribed prerequisite course to register for that particular course.

5. MEDIUM OF INSTRUCTION

Medium of instruction is English.

6. PROGRAMMES OFFERED

Programmes offered under B.Sc. are

- Computer Science
- Animation and Multimedia
- Chemistry
- Mathematics
- Physics

7. CURRICULUM AND CREDIT SYSTEM

The present curriculum of the programme is based on the Outcome Based Education (OBE) and the Choice Based Credit System (CBCS). The Outcome Based Education (OBE) is the system in which the teaching, learning and evaluation process are focused towards the skills and ability acquired by the students during the course of their study. The Choice Based Credit System (CBCS) allows the students to earn their credits according to their interests. Discipline Specific Elective and Open Elective (Generic Elective) courses are different categories of courses offered to impart Choice Based Credit System. Open Elective courses help the student to move horizontally between different branches of Humanities, Sciences and Engineering. Discipline Specific Elective courses help them to expand the knowledge in their field. Student can take non-credit self-learning courses offered in her/his department or any other department which is not considered for grading purpose. One credit stands for one lecture hour or one tutorial or two lab hours. Credits can be obtained only after successful completion of the assessments.

8. PROGRAMME STRUCTURE

8.1. Curriculum Structure

The B.Sc. Programme have minimum of 120 credits and maximum of 140 credits. The programme structure consisting of courses drawn from Ability Enhancement Compulsory Course (AECC), Language Course (LAN), Core Course (CC), Project Work in industry or elsewhere, relevant to the chosen specialization/branch; Discipline Specific Elective (DSE), relevant to the chosen specialization/ branch; Minor Courses (MC); Skill Enhancement Courses (SEC), relevant to the chosen specialization/ branch; Open Elective / Generic Elective (GE) courses from other

technical/humanities/management and/or emerging course areas; University Mandatory courses (UMAN) and In-Plant Training (IPT), participation in any one of the NCC/NSS/SPORTS/RRC/YRC.

8.2. Foundation Course for 1st year students to bridge the gap between School Education and Graduation

8.2.1. B.Sc. Computer Science

    i.   English

    ii. Basic Mathematics and Physics

    iii. Computer Fundamentals

8.2.2. B.Sc. Animation and Multimedia

    i.   English

    ii. Computer Fundamentals

    iii. Animation Basics

8.2.3. B.Sc. Mathematics

    i. English

    ii. Basic Physics, Chemistry and Computer

    iii. Mathematics Fundamentals

8.2.4. B.Sc. Physics

    i. English

    ii. Basic Mathematics, Physics and Computer

    iii. Physics Fundamentals

8.2.5. B.Sc. Chemistry

    i.   English

    ii. Basic Mathematics, Physics and Computer

    iii. Chemistry Fundamentals

8.3. Minor Courses

Three minor courses, each of one credit, are offered in the curriculum (at any semester) for improving the employability skills of the students. The credits earned through these courses will not be taken for the calculation of CGPA or total credit required for completing a programme. However, a student has to pass three minor courses for the award of degree.

8.4. Character and Personality Development

Participation in any one of the NSS/NCC/NSO/YRC during the course of their study is mandatory.

8.5. Number of Courses per Semester

Curriculum of a semester shall normally have a blend of 5 or 6 lecture courses and laboratory courses not exceeding 3. In addition, Minor Courses are also included.

8.6. Field Visit/ Industrial Training

The students should undergo Field Visit/ Industrial Training as part of their curriculum during the fifth semester, as detailed below.

At the end of fourth semester (after the completion of the summative exams)-21 days - 2 credits

Each student should identify and undergo Field Visit/ Industrial Training. She/he has to maintain and submit the field record book along with the attendance duly signed by the authorized person from Industry in which they have undergone training. Assessment of this in-plant training is done in the fifth semester through viva-voce examination giving due weightage to record book, attendance and technical knowledge gained by the candidate during the training.

8.7. Industrial Visit

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

9. ATTENDANCE REQUIREMENT

9.1. The minimum attendance required for appearing in the formative assessment CA1 and CA2 is 65%.

9.2. Maximum of five marks is allotted for attendance as one of the component in CA3

Percentage of Attendance	76-81	82-87	88-93	94-99	100
Marks	1	2	3	4	5

9.3. The minimum percentage of attendance required to appear for the end semester examinations is 75% (course wise).

9.4. If the percentage of attendance is between 65% and below 75% for the individual courses due to medical reasons; then the student is eligible to apply for condonation with a prescribed fee of Rs. 300/ per course and also to produce a medical certificate from a registered medical practitioner not below the rank of a Civil Assistant Surgeon

9.5. If the percentage of attendance is less than 75% and above 65% (overall attendance), she /he has to appear for the exam as supplementary after gaining the required attendance.

9.6. If the percentage of attendance is less than 65% (all courses put together) then the student will be categorized under "Redo candidate".

9.7. For calculating the percentage of attendance; following norms are framed: For CA1 – From the reopening date to the day before CA1 examination For CA2 – From staring date of CA1 – the day before the CA2 examination For End semester – From starting date to last working day.

9.8. If a student falls under Redo category, while rejoining he/she has to again pay the prescribed semester fees along with re-registration fees (Rs.500/-).

10. STUDENT MENTOR

Each faculty member of the Department will be attached with certain number of students as student mentor, appointed by the respective Head of the Department, to help the students in planning their courses of study and for general advice on the academic programme throughout their period of study. The student mentor shall also discuss with or inform the parents about the progress / performance of the students concerned and also monitor the academic/general performance of the students including attendance.

11. EXAMINATION AND ASSESSMENT

11.1. Question Paper Pattern

CA 1 and CA2 Time : 2 Hours	No. of Questions	Marks per Question	Total Marks	Type
MCQ - 10	10	1	10	Compulsory

2 marks – 5	5	2	10	Compulsory
15 marks – 2	2	15	30	Either Or
		Total	50	

End Semester (CA4) Time : 3 Hours	No. of Questions	Marks per Question	Total Marks	Type
MCQ - 10	10	1	10	Compulsory
2 marks – 5	5	2	10	Compulsory
15 marks – 4	4	15	60	Either Or
20 marks – 1	1	20	20	Compulsory
		Total	100	

* Continuous Assessment - CA

11.2. Theory Courses F:S = 50:50 (Formative versus Summative)

(L:T:P 3:0:0   3:1:0   2:1:0)

Sl.No.	Assessment	Duration	Weightage	Remarks
1.	CA1 – Written Examination	2 Hours	15%	Will be conducted during 37th - 42th working day of a semester (Unit I and II) Internal Evaluation
2.	CA2 – Written Examination	2 Hours	15%	Will be conducted during 73th - 78th working day of a semester (Unit III and IV) Internal Evaluation
3.	CA3 - seminar, assignment, quiz, case study, critique, debate, demonstration, drawing, sketch, essay, exhibition, interview, journal / literature review, model, oral examination, presentation, portfolio, practicum, problem solving, projects, reflection, reports, self assessment, etc.	82 days	20%	0 to 82 Days (Minimum three CA3 assessment tools given by the course teacher) Internal Evaluation
4.	CA4 – Written Examination – End Semester	3 Hours	50%	After 90 Days (Equal weightage to all portions) External Evaluation
	Total		**100**	

* Continuous Assessment - CA

11.3. Theory Cum Practical Courses F:S = 50:50 (Formative versus Summative)

(L:T:P 3:1:1 3:0:1)

Sl.No.			Task	Marks	W in %	W (FA)	W (SA)	Remarks
Internal Assessment								
1	Formative	Theory	CA1	15	11.25	37.5		Will be conducted during 37th -42th working day of a semester (Unit I and II) Internal Evaluation – 2 Hours
2			CA2	15	11.25			Will be conducted during 73th -78th working day of a semester (Unit III and IV)Internal Evaluation – 2 Hours
3			CA3	20	15			0 to 82 Days (Minimum 5 to Maximum 8 CA3 assessment tools given by the Course Teacher) Internal Evaluation - 82 days
4		Lab	CA1	15	3.75	12.5		Based on Observation Note Rubrics designed by Course Teacher - 90 days
5			CA2	15	3.75			Lab Mid Exam - 2 Hours
6			CA3	20	5			Product/Simulation/Design/Programme/Process 90 days
External Assessment								
7	Summative	Theory	CA4	50	37.5		37.5	End Semester After 90 Days (Equal weightage to all portions) 3 Hours
8		Lab	CA4	50	12.5		12.5	End Semester After 90 Days (Equal weightage to all portions) External Evaluation - 3 Hours
		Total		200	100 (A) =B + C	50 (B)	50(C)	

* Continuous Assessment – CA, W – Weightage, FA – Formative Assessment, SA – Summative Assessment

A student is declared to pass in the

i. Formative Assessment: There is no passing minimum for FA (B).

ii. Summative Assessment if she/he scores 35% minimum in C.

iii. In total, 40% minimum by putting together of B & C.(i.e. A).

11.4. Theory cum Practical Courses F:S=60:40 (Formative versus summative) L:T:P . 2:0:1

Sl.No.	Assessment	Duration	Weightage	Remarks
1.	CA1 – Written Examination	2 Hours	15%	Will be conducted during 37th - 42th working day of a semester (Unit I and II) Internal Evaluation
2.	CA2 – Written Examination	2 Hours	15%	Will be conducted during 73rd - 78th working day of a semester (Unit III and IV)

				Internal Evaluation
3.	CA4 – Written Examination – End Semester	3 Hours	20%	After 90 Days (Equal weightage to all portions) External Evaluation
4.	CIA1 - Lab Mid Exam	2 Hours	15%	After 45 – 50 Days Internal Evaluation
5.	CIA2 - (Based on observation Note and rubrics designed by lab teacher)	Assessment in every 15 days	15%	During 1- 90 Days Internal Evaluation
6.	CA4 – Lab End Semester	3 Hours	20%	After 90 Days (Equal weightage to all portions) External Evaluation
	Total		**100**	

11.5. Project

Review	%	Schedule
0	0	First Day of the commencement of the semester
I	15	After 15 days
II	15	After 45 days
III (Paper / Patent Submission)	15	After 65 days
IV	15	After 75 days
V	40	After 90 days

11.6. Minimum Requirements of marks for passing a course

11.6.1. Passing Minimum

a. There is no passing minimum for FA. However, a student must secure:

I. Minimum 40% in SA (includes Theory cum Lab) and 50% in total (overall) for all UG

Programmes in Engineering, Architecture, and all PG Programmes

II. Minimum 35% in SA (includes Theory cum Lab) and 40% in total (overall) for all UG

Arts, Science and Humanities and Education programmes

2. Students are permitted to appear for the supplementary examinations both during odd and

even semester.

11.6.2. Formative assessment: provision for improvement

All components pertaining to formative assessment will be offered. A student can take all or a few assessments. The assessment will take place from 4th week of the semester by paying

Rs.100 as exam fee along with the consent of respective HoD. The reassessment will be conducted at the Department level, wherein HoD will act as the Chairperson. This improvement provision is not applicable for the current semester courses.

12. Grade Point versus Marks distribution for UG programmes in Arts, Science and Humanities and Education are given below.

Grade Letter	Grade Point	Performance	Existing	Proposed
O	10	Outstanding	A ≥ 91	No Change
A+	9	Excellent	81≤ A< 91	
A	8	Very Good	71≤ A< 81	
B+	7	Good	61≤ A<71	
B	6	Above Average	55≤ A< 61	
C+	5	Average	45≤ A< 55	50≤ A<55
C	4	Pass	40≤ A< 45	40≤ A<50
U	0	Reappear/Absent	Less than 40	No Change
W	0	Withdrawal		

13. The classification of degree for UG programme in Arts, Science and Humanities and Education as per the table given below.

S.No	CGPA	Class	Proposed CGPA
1	7.5 and above and passed in first attempt Maximum number of courses which can be withdrawn is three and withdrawal considered for only one semester of the programme.	First Class with Distinction	No Change
2	6.0 (in any number of attempt) and above in $n + 1$ consecutive years where n is the number of years for a programme	First Class	No Change
3	6.0<A≤ 5.5	Second Class	6.0<A≤ 5.0
4	Less than 5.5	Third Class	Less than 5.0

12. CALCULATION OF GRADE POINTS

University uses Grade Point Average (GPA), an internationally recognized calculation which is used to find the average result of all grades achieved.

The GPA for each semester is calculated by taking the sum of the products of grade points with the corresponding credits earned by the student divided by sum of credits in that semester. The formula for calculating GPA is given in equation (1).

$$GPA = \frac{\sum_i C_{ni} G_{ni}}{\sum_i C_{ni}} \tag{1}$$

Cumulative Grade Point Average (CGPA) is the sum of the products of grade points with the corresponding credits of all semesters divided by the sum of all credits of all semesters. The formula for calculating CGPA is given in equation (2).

$$CGPA = \frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}} \tag{2}$$

where C denotes course, G denotes grade point, n denotes semester number and i denotes course number.

14. REVALUATION

14.1. Candidates who wish to apply for revaluation should first apply for photocopy of her/his answer script in the prescribed format through the Head of the Department and Dean of School to the Controller of Examination by paying Rs. 400/- (Rupees Four Hundred only) per script within 10 days after the result is declared.

14.2. After receiving the photocopy, the student can verify the copy for any discrepancy like total mistake and omission in the valuation.

14.3. If any discrepancy is noticed the same may be brought to the notice of the Controller of Examinations for remedial action.

14.4. The valuation in the photocopy of the answer script can also be verified by the subject expert and if the expert is convinced that the script deserves higher marks than awarded, she/he can recommend for applying revaluation.

14.5. The student can apply for revaluation in the prescribed form by paying Rs.300/-(Rupees Three hundred only) per script towards revaluation fee within 15 days after the result is declared by submitting revaluation form duly signed by Head of the department and Dean of Faculty.

15. SUPPLEMENTARY EXAMINATIONS

15.1. The students who have not passed the course have to reappear for the supplementary exams in the subsequent semester. PMIST offers fast track supplementary exams programme in 6th semester where a student can take supplementary exams for the courses of 6th semester in a month's time provided she/he have not any standing arrears.

15.2. Students are permitted to appear for the supplementary examinations both during odd and even semester.

15.3. Students who have not passed formative assessment under OBE scheme has to retake those assessments.

15.3.1. All components pertaining to formative assessment, for example CA1, CA2, CA3… etc. will be offered. A student can take all or few assessments. The assessment will take place from week 4 of the semester by paying Rs.100 as exam fee along with the consent of respective HoD. The reassessment will be conducted at the Department level, wherein HoD will act as the Chairperson. This improvement provision is not applicable for the current semester courses.

16. RULES FOR WITHDRAWAL FROM THE PROGRAMME

A student can withdraw from a programme temporarily or permanently due to whatsoever reasons. In that case she/he can rejoin the programme if she/he has temporarily withdrawn from a programme. However the maximum number of years to complete the programme is 5 (+1 for exceptional cases). In addition, a student can withdraw maximum of three courses in any semester and write the exam as supplementary. This withdrawal will not affect their degree classification. Only one time this withdrawal is permitted during her/his programme.

17. RULES FOR CHANGING PROGRAMME OF STUDY

A student can change the programme of study with the due permission from Dean of the respected School and Dean (Academics) before completing 15 working days from the commencement of the programme.

18. ELIGIBILITY FOR THE DEGREE AND CLASSIFICATION OF CLASSES

18.1. The student is eligible for award of degree in B.Sc. programme if she/he earns total number of credits prescribed by the programme curriculum within permitted duration of the programme.

18.2. The degree is classified as *First Class with Distinction* if the student completes the degree in three years in single attempt (maximum number of courses which can be withdrawn is three and withdrawal considered for only one semester of the programme) with CGPA greater than or equal to 7.50. If the student obtains CGPA greater than or equal to 6.0 (should have completed within four years) but less than 7.5, then the degree is classified as *First Class*. If the student obtains CGPA less than 6.0 and greater than or equal to 5.0, then the degree is classified as *Second Class*. If the student obtains CGPA less than 5.0, then the degree is classified as *Third Class*.

18.3. In addition to the above conditions, participation in any one of the NSS/NCC/NSO/YRC during the course of their study is mandatory for award of a degree.

18.4. In order to motivate the students towards research, it is mandatory for the award of the degree that each student should publish one research paper/article in conference/journal during their study period. This is applicable for the students admitted from the academic year 2017-18 onwards.

19. IDENTIFICATION AND SUPPORT FOR SLOW, MEDIUM AND ADVANCED LEARNERS

19.1. Advanced learners, slow learners and medium learners are identified based on the CGPA.

Category	CGPA
Advanced learners	7.5 and above
Medium learners	Above 6 and below 7.5
Slow learners	Less than 6

19.2. The advanced learners of II and III year students are exposed to career based life sciences and soft skills. These skills are taught by the senior teachers of the department and also by external experts.

19.3. Medium learners of III year can also join with the advanced learners during the special programs conducted by the department inviting external experts. On the other days they will be given special coaching on the courses which they are undergoing currently.

19.4. Medium learners of II year are given special coaching/tutorials classes for the courses which they are currently undergoing.

19.5. Slow learners are given remedial classes (coaching /tuition) for the courses which they have to reappear from previous semesters and in weak courses during the current semester.