



KANNUR UNIVERSITY

(Abstract)

**M-Tech Degree Programmes – Regulations –Modified & Implemented with effect from 2011 admission- Orders issued.**

**ACADEMIC BRANCH**

No.Acad/C3/ 10834/2011

Dated, K.U.Campus. P.O , 22 -08-2012.

- Read: 1. U.O.No. Acad/C3/ 10834/2011 /dated 11-11-2011  
2. Minutes of the meetings of the Board of Studies in Engineering (PG) held on 18-04-2012& 23.07.2012.

**ORDER**

1. The Regulations, Scheme, Syllabi & Pattern of Question Papers for the following M-Tech Degree Programmes were implemented in the University with effect from 2011 Admission, as per the paper read (1) above.

- 1) *Advanced Manufacturing and Mechanical Systems Design*
- 2) *Communication Engineering and Signal Processing*
- 3) *Power Electronics and Drives*

2. The BOS in Engineering (PG ), vide paper read (2) above has recommended certain modifications to **Clauses -2, 2.1, 11, 11.1, 11.2, 11.6, 11.7, 11.9.2(a) & (b) and inserted a new provisio - (a) to clause 11.1** of the Regulations for M-Tech Degree Programmes, for implementation with effect from 2011 Admission.

3. The Vice-Chancellor after examining the matter in detail and in exercise of the powers of the Academic Council conferred under Section 11(1) of Kannur University Act 1996 and all other enabling provisions read together with has accorded sanction to modify the Regulations for M-Tech Degree Programmes, as recommended by the BOS in Engineering (PG) with effect from 2011 Admission, subject to ratification by the Academic Council.

4. Orders are therefore issued implementing the modified Regulations for M-Tech Degree Programmes, with effect from 2011 Admission subject to ratification by the Academic Council.

5. U.O read above stands modified to this extent.

**6. The modified Regulations for M-Tech Degree Programmes effective from 2011 admission is appended.**

Sd/-

1. The Principals of Affiliated Engineering Colleges DEPUTY REGISTRAR (ACADEMIC)  
FOR BREGISTRAR

Copy to

1. The Examination Branch ( Through PA to CE)
2. The Chairman, BOS in Engineering (PG) 3. PS to VC/PA to PVC/ CE/ Registrar.
4. DR/AR-I (Academic) 5. The Central Library 6. SF/DF/FC.

Forwarded/By Order

SECTION OFFICER

**Appendix to U.O .No.Acad C3/10834/2011 dated 22 .08.2012**

**KANNUR UNIVERSITY**



**Modified  
RULES & REGULATIONS  
For  
M.TECH PROGRAMME**

**(From 2011 Onwards)**

## **1. GENERAL**

Postgraduate Degree in Engineering leading to the award of Master of Technology Degree in appropriate branches shall extend over a period of 24 months consisting of 4 semesters. Duration is counted from the day of starting of classes of first semester. Evaluation of the course would be based on the credit system. Grade point average is calculated on the basis of all courses taken by the student.

## **2. ADMISSION**

Admissions will be made in accordance with the instructions received from Director of Technical Education Kerala (DTE) / All India Council of Technical Education (AICTE) / Government of Kerala from time to time.

"Selection of candidates for M Tech programme in Govt. Engineering Colleges under DTE will be supervised by selection committee constituted by Government. Selection to other affiliated colleges shall be supervised by a selection committee consisting of Director of Technical Education or his nominee, a nominee from Kannur University, and College Principal or PG Dean of the Institution concerned. The Principal shall inform in advance the schedule of admissions to DTE and University. Selection will be based on GATE score and as per rules of reservations. In case of tie in GATE score, weightage will be given to marks of qualifying examination. If sufficient GATE qualified candidates are not available, selection will be made from Keralite candidates based on the CGPA/aggregate percentage of marks in their qualifying examinations and such candidates have to produce a Nativity certificate."

### **2.1 Equivalency**

The Eligible Degree for admission to each programme is listed in the table below.

**TABLE1: Equivalency**

<b>Name of M Tech Programme</b>	<b>Eligible B-Tech Degree or equivalent</b>
Communication Engineering and Signal processing(CSP )	Degree in Electronics and Communication Engg (ECE)
Power Electronics and Drives (PED )	Degree in Electrical and Electronics Engg (EEE)
Advanced Manufacturing and Mechanical Systems Design ( AMD)	Degree in Mechanical Engg. (ME) / Production Engg (PE)/ Industrial Engg (IE) / Automobile Engg (AE)/Mechanical Stream Automobile Engineering/Mechanical Stream Production Engineering
Control and Instrumentation	Degree in Electronics and Communication Engg./Applied Electronics and Instrumentation Engg./ Electronics & Instrumentation Engg. /Instrumentation & Control Engg.
Computer Science and Engineering	Degree in Computer Science and Engineering/Information Technology/Computer Engg.
Engineering Design	Degree in Mechanical Engg./Industrial Engg. /Production Engg.
Thermal Engineering	Degree in Mechanical Engg.
Computer Aided Structural Engineering	Degree in Civil Engg.
Signal Processing and Embedded Systems	Degree in Electronics and Communication Engg./Applied Electronics and Instrumentation Engg./ Electronics & Instrumentation Engg.
Computer Networks and Security	Degree in Computer Science and Engineering/ Information Technology/ ComputerEngineering

## 2.2 Duration of the Course

The course for the M.Tech degree shall extend over a period of two academic years comprising of four semesters. The students would undergo course work comprising of theory and practical in the first and second semesters. The third and fourth semesters would be purely dedicated towards thesis work.

The minimum number of working days in each of the four semesters shall be 75.

A student is expected to complete the M Tech programme in **four semesters**. For full-time students, the duration of study shall be a minimum of FOUR semesters and a maximum of FOUR years.

In case of students who do not complete their Project work in the 4th semester, they will be permitted to complete the project work and submit the report in the subsequent semesters. The date of completion of the project work and the date of viva voce examination will be indicated in the grade card.

The student shall complete the M Tech Degree within **four academic years** from the date of admission to the M Tech Programme.

### **2.3 Scholarship**

Scholarships would be granted to eligible students as per the directions of the government.

### **2.4 Other instructions**

a) If, at any time after admission, it is found that a candidate had not in fact fulfilled all the requirements stipulated in the offer of admission, in any form whatsoever, including possible misinformation etc., this matter shall be reported to the DTE/University, recommending revoking the admission of the candidate.

b) Candidates have to fulfill the medical standards required for admission as prescribed in the *Institute Information Brochure* or the *Prospectus*.

c) The Institute reserves the right to cancel the admissions of any student and ask him to discontinue his/her studies at any stage of his/her study period on the grounds of unsatisfactory academic performance or indiscipline or any misconduct.

d) The decision of the DTE/University regarding the admissions is final and binding.

e) Student Exchange Programmes and the Transfer of Credits in such cases shall be as per the corresponding MOU approved by Competent Authority.

f) Every Post Graduate student of the Institute shall be associated with Parent Department, offering the degree programme, throughout his/her study period.

## **3. COURSE STRUCTURE**

### **3.1 General**

The total course package for M.Tech. Degree Programme will typically consist of the following components.

- a. The complete programme will be of 4 semester duration with at least 75 working days in each semester. Academic programme in each semester will consist of course work or project work as specified for each specialization. The total contact hours is 30 hours per week including departmental assistance.
- b. Every stream of specialization in the programme will have a curriculum and syllabi for the courses. The curriculum shall be so drawn up that the minimum number of credits for successful completion of the M Tech programme of any stream is 64.
- c. The Syllabus for each stream will consist of
  - (i) Core courses (Compulsory)
  - (ii) Elective courses
  - (iii) Laboratory course/Seminar/Term Paper/Mini project and Masters research project and dissertation
- d. Credits will be assigned to the courses by following general pattern given in Table 2.

TABLE 2: Distribution of credits for various course works

Course work	Weekly hours	Credits Allotted
Theory Subjects	3	3
Seminar	2	2
Laboratory	2	2
Term Paper/Mini Project	2	2
Industrial Training/Interaction	-	-
Masters Research Project-Phase I	22	8
Masters Research Project and Dissertation-Phase II	22	12

- e. A student will have to register in all the core courses listed in the curriculum of his/her selected area of specialization and successfully complete all of them.
- f. Electives will have to be taken from the subjects offered by the Department in that particular semester from among the list of approved subjects.
- g. The medium of instruction, examination, seminar and project report will be English.

### 3.2 Distribution of credits among 4 semesters.

TABLE 3: Semester wise Distribution of Credits

Semester	Course work content	Total credits allotted	Total credits allotted semester wise
1	6 Theory subjects	6x3=18	22
	Seminar	1x2=2	
	Laboratory	1x2=2	
2	6 Theory subjects	6x3=18	22
	Laboratory	1x2=2	
	Term Paper/Mini Project	1x2=2	
3	Masters Research Project Phase I	1x8=8	8
4	Masters Research Project Phase II & Dissertation	1x12=12	12
	<b>Total credits in all 4 semesters</b>		<b>64</b>

#### 4. COMMITTEES AND RESPONSIBILITIES

The following committees should be constituted for the smooth conduct of the programme.

##### 4.1 Departmental Post Graduate Committee (DPGC):

*Constitution:*

Programme Co-ordinator should be the Chairman

Four other members should be nominated from among the faculty by the HOD.

There shall be one DPGC for every Department that is involved in the teaching for any of the PG degree programmes.

The Chairman may co-opt and/or invite more members including at most two experts from other Departments.

*Functions (Highlights):*

- i. To monitor the conduct of all postgraduate courses of the department.
- ii. To ensure academic standard and excellence of the courses offered by the department.
- iii. To oversee the evaluation of each of the students in a class, for each of the courses.
- iv. To develop the curriculum for postgraduate courses offered by the department, and recommend the same to the Board of Studies.

- v. Moderation (only if and when found necessary) in consultation with the concerned faculty, and approval of the finalized grades, before submission of the same to the University.
- vi. To consolidate the registration of the student and communicate to the HOD.
- vii. To conduct performance appraisal of Course Instructors.
- viii. To provide feedback of the performance appraisal to the faculty member and concerned authorities.
- ix. To consider any matter related to the postgraduate programme of the department.
- x. In cases where a course is taught by more than one faculty member, or by different faculty members for different sections of students, DPGC shall co-ordinate (only in case of need) among all such faculty members regarding the teaching and evaluation of such courses.
- xi. To conduct at least two meetings each semester and also to maintain a record of the same in the department.
- xii. Any appropriate responsibility or function assigned by the University / Institute.

#### **4.2 Project Work Evaluation Committee (PWEC)**

*Constitution:*

- (a) Chairman of DPGC or his nominee ... Chairman
- (b) Project Guide(s) ... Member(s)
- (c) One expert in the relevant field from within / outside the Department, selected by the DPGC ... Member

There shall be one PWEC for each PG project work evaluation.

*Functions (Highlights):*

To evaluate the PG project work and to award an appropriate letter grade. The chairman of PWEC shall submit the report, signed by all the members of the PWEC, to DPGC. The DPGC Chairman shall forward this report to the University.

#### **4.3 Evaluation Committee**

Each Dept. of every Institution offering P G courses will constitute an Evaluation committee to evaluate seminars, Mini-Projects, Pre submission seminar for Masters research project etc. consisting of at least 3 faculty members. The DPGC chairman and another expert in the area of specialization shall be the two essential members of this committee.

#### **4.4 Class Committee**

For semesters 1 and 2 a class committee will be constituted by HOD as follows.



Chairman: Programme coordinator of the concerned M Tech Programme

Members: 1. All teachers handling classes for the particular semester.

2. Two student members from the class (one preferably be a lady)

The term of class committee shall be of one semester.

The basic responsibility of class committee is

1. To review periodically the progress of the classes to discuss problems concerning curriculum and syllabi and the conduct of the classes.
2. Each class committee will communicate its recommendations to the HOD.
3. The class committee is required to meet at least twice in a semester.

#### **4.5 Examination Monitoring Cell**

Head of the each institution should formulate an Examination Monitoring Cell at the institution for supervising all examinations, especially the internal examinations. This cell, with a senior staff member as Convener, shall consist of minimum three members (one shall be a lady).

The collective responsibilities of the examination monitoring cell are

1. Schedule all examinations conducted as part of internal assessment of students.
2. To receive any complaints from students regarding internal examinations, inquire such incidents, and give a report to the Head of Institution for necessary action.
3. To receive any complaint from students regarding issues like out-of-syllabus questions, printing mistakes, etc. of end-semester examinations of theory and practical subjects. The cell shall investigate these complaints and if necessary forward it to university with specific comments.
4. Officiate as the examination squad to keep a vigil on all end-semester examinations. If any malpractices are found/reported by invigilators, inform these to the Head of Institution along with a report about the incident. Head of Institution shall forward all such complaints to the University.
5. Suggest the schedule of all end-semester theory and practical examinations as per the course calendar and inform the University.
6. Suggest the list of examiners for all end-semester practical examinations and to forward it to the University.
7. On formation of PG committees (Engineering) at University level, the responsibilities 5 and 6 will be taken over by them.

To conduct all the theory examinations, a Chief Superintendent and an Assistant Chief Superintendent should be appointed by the Head of Institution.

#### **4.6 Grievance Cell**

Each college should setup a Grievance Cell with at least four faculty members to look into grievances of the students, if any.

#### **4.7 Anti-Ragging Cell**

Head of Institution shall take necessary steps to constitute anti-ragging committee and squad at the commencement of each academic year. The committee and the squad

shall take effective steps as specified by the Honorable Supreme Court of India, to prevent ragging.

## **5. COURSE WORK CONTENT**

### **Semester 1**

The student has to credit six theory subjects – four Core subjects and two Electives. In addition the student has to take up one Seminar and one Laboratory courses.

### **Semester 2**

The student has to credit six theory subjects, one Term Paper/mini project and one Laboratory course. Among 6 Theory subjects, 3 subjects are offered as Core, and three as Electives.

### **Semester 3**

In 2nd year (3rd and 4th semesters) there will be only Project work. The student is required to undertake the Masters Research Project Phase I during 3<sup>rd</sup> semester. Third semester thesis work comprises of Preliminary Thesis work, two reviews of the work and the submission of Preliminary report. The internal evaluation is done by a Project Work Evaluation Committee (PWEC) constituted by the pertinent DPGC. The method of evaluation, including intermediate assessment shall be evolved by the pertinent DPGC. First review would highlight the topic, objectives, methodology and expected results. The first review shall be conducted in first half of this semester. Second review comprises of the presentation of the work completed, preliminary report and scope of work which is to be completed in the 4th semester.

a) Weightage for the two reviews of Masters research project –phase I

Internal evaluation First review: 30%

Internal evaluation Second review: 70%

b) Division of the credits for Masters research project –phase I

Internal evaluation of the Project work by the Guide: 50%

Internal evaluation of the Project work by the Evaluation committee: 50%

In addition, the student has to undergo an industrial training of minimum two weeks duration during the second year.

### **Semester 4**

In 4th semester there will be only Project work. This is the continuation of the work done in 3rd semester. There is a review in the middle of fourth semester to evaluate the progress of the project work. The internal evaluation is done by PWEC constituted by the pertinent DPGC. Towards the end of the semester there would be a pre submission presentation to assess the quality and quantum of the work by the Evaluation committee (PWEC). This would be the pre qualifying exercise for the students for getting approval by the Department committee for the submission of Thesis. At least one Technical paper is to be prepared for possible publication in journals or conferences. The Technical paper is to be submitted along with the Thesis. The final evaluation of the Project will be External. This evaluation is done by an Evaluation Committee constituted by the University. There shall be an open seminar followed by a viva-voce

examination as part of the evaluation. After the evaluation, marks and appropriate grade is awarded, which will be considered for SGPA and CGPA calculations.

The credits allotted may be proportionally distributed between external and internal evaluation as follows.

a) Division of the marks for the internal evaluation of Masters research Phase-II

Internal evaluation of the Project work by the Guide: 50%

Internal evaluation of the Project work by the Evaluation Committee: 50%

b) Division of the marks for the external evaluation of Masters research Phase-II

Final evaluation of the Dissertation by the External Examiner: 50%

Project viva voce by the External examiner and Internal Examiners: 50%

## **6. THESIS REPORT**

The date for submission of the thesis would be announced by the DPGC and will be announced in the academic calendar. A candidate shall submit 4 hard copies and soft copy of the Report of the Project Work to Chairman- DPGC, on or before the specified date. The Report shall be in the format prescribed by the Institute.

The PWEC shall value the report and accept it as such or suggest suitable modifications. The student shall incorporate the changes and resubmit the same to the Chairman, PWEC. After such resubmission, the Chairman, PWEC will certify that the necessary modifications have been incorporated.

## **7. FACILITY FOR STUDENTS TO DO PROJECT WORK OUTSIDE THE PARENT INSTITUTION**

As far as possible the students shall be encouraged to do their project work in the parent institute itself. However, if found essential, they may be permitted to do their project work outside the parent institute in part or full, with the approval of the Department PG committee (DPGC). For students who are availing this facility, the following conditions are to be observed.

- i) The students have to get the prior approval from the Department committee for availing this facility as well as choice of the institution/industry/R&D organization with which the students are associated for continuing their project work. They have to get this approval in the 2<sup>nd</sup> semester itself.
- ii) If they are doing their project work in an educational institution then the institution is to be an institution of national repute like NITs, IITs and IISc.
- iii) Students availing this facility should continue as regular student of the parent institution itself and satisfy the requirements for availing stipend.
- iv) They should have an external as well as an internal guide. The internal guide should belong to the parent institution and external guide should be from the institution/industry/R&D organization with which the student is associated for doing the project work. The external guide should have a postgraduate degree in engineering or equivalent.

- v) Student has to furnish a certificate from the external guide stating the willingness to supervise the Thesis work with the institution/industry/R&D organization with which the student is associated for doing his/her project work and has to submit the same for the approval of the Department committee at the beginning of the third semester.
- vi) The student has to furnish his/her monthly progress as well as attendance report signed by the external guide.
- vii) The external guide and internal guide are to be preferably present during all stages of evaluation of the project work. In case the external guide is not present, the internal guide can alone take the responsibility of conducting the evaluation.

## **8. DEGREE REQUIREMENTS**

The degree requirements of a student for the M.Tech. Degree programme are as follows:

(a) Institute Requirements:

- (i) Minimum Earned Credit Requirement for Degree is 64.
- (ii) Securing a CGPA of at least 5.50 in the Course Work.
- (iii) Satisfactory completion of all mandatory learning courses.

(b) Programme Requirements: The Maximum duration for a student for complying with the degree requirement from the date of registration for his/her first semester, is FOUR years.

## **9. REGISTRATION AND ENROLLMENT**

- a. For the first semester every student has to enroll and register for the courses he/she intends to undergo on a specified date notified to the student. The concerned Programme coordinator/Faculty Advisor will guide the students in registration process.
- b. For the subsequent semesters registration for the courses will be done by Programme coordinator during a specified week after the University/semester examination of the previous semester. The registration card will give details of the core and elective courses, the project/ seminar to be taken in a semester with the number of credits. The student will consult his/her Programme coordinator for choice of courses.
- c. A student has to pay the semester fees before the day of registration or as per the schedule announced by the Principal.
- d. From the second semester onwards all students have to enroll on a specified day at the beginning of a semester. A student will become eligible for enrollment only if he/she has cleared all the dues to institute, hostel and the library up to the end of the previous semester and he/she is not debarred from enrollment.
- e. In extra ordinary circumstances like medical grounds a student may be permitted to withdraw from a semester completely. A student will be permitted to withdraw from the programme only for a maximum continuous period of two years.
- f. Minimum requirements to continue the Programme.

- i) A student should have a minimum 80 % of overall attendance in each semester to register for the University/semester examination.
- ii) A student should have registered for the University/semester examination at the end of every semester.

## **10. ATTENDANCE REQUIREMENTS**

### **10.1 General**

All students must attend every lecture, tutorial and practical classes. Every teaching staff member handling a class will take attendance up to the last instruction day in the semester. Overall attendance will be calculated and displayed within a week after the last working day.

A student with less than 50% attendance in any of the subject during a semester (in lectures/practical/project), shall repeat that semester, irrespective of his/her academic performance, and the nature of absence.

A candidate shall be permitted to appear for the semester University examinations only if he/she satisfies the following requirements:

- (a) He/she must secure not less than 80% attendance in the total number of working hours in each semester.
- (b) He/she must earn a progress certificate from the head of the institution stating that he/she has satisfactorily completed the course of study prescribed in the semester as required by these regulations.
- (c) His/her conduct must be satisfactory.

It shall be open to the Vice Chancellor to grant condonation of shortage of attendance on the recommendation of the Head of the institution in accordance with the following norms.

- The shortage shall not be more than 10%
- Shortage upto 20% shall be condoned once during the entire course provided such shortage is caused by continuous absence on genuine medical grounds.
- Shortage shall not be condoned more than twice during the entire course.
- Candidate who is not eligible for condonation of shortage of attendance shall repeat the semester.

### **10.2 Leave Rules**

- i.) All M Tech students should apply for the leave to the HOD stating the reasons whenever they are not in a position to attend classes/project work. They will not be eligible for GATE scholarship for the period of absence if it is unauthorized leave even if they have not fully utilized the eligible leave.
- ii.) Students are eligible for casual leave as per rules.
- iii.) Students are eligible for duty leave if they perform certain kinds of duties like representing the college in sports and games and involving in the College Union and association activities, etc. On recommendation from concerned faculty

members, Head of Institution shall sanction duty leave for the period of absence. The maximum limit of duty leave that can be granted to a student during a semester is 10% of the number of working days in that semester.

- iv.) Application for duty leave should be submitted to the Head of Institution preferably before the duty is performed or within five working days after returning from duty. If duty leave is sanctioned, the student shall meet the faculty members handling classes for him/her in that semester (within one week after returning from duty), and request them to mark duty leave granted in the record of attendance.

## **11. EVALUATION**

### **11.1(a) Conduct of Examination**

All odd semester University Examinations shall be conducted only during the month of December/January and all even semester University examinations shall be conducted only in June/July.

### **11.1 (b) Assessment in Theory Subjects**

The maximum marks allotted for Internal continuous assessment and end-semester University examinations shall be 50 marks and 100 marks respectively with a total of 150marks.

The weightage to award internal assessment marks should be as follows:

Test papers (minimum two) : 25 marks

Assignments of any suitable mode : 25 marks

### **11.2 Assessment in Practical Subjects**

Internal continuous assessment and end-semester practical examinations will have 1:2 weightage for practical subjects, with 50 marks allotted for internal continuous assessment and 100 marks for end semester examinations.

The weightage to award internal assessment marks should be as follows:

Laboratory class work and records : 70%

Test : 30%

University shall appoint two examiners (Internal and external examiners) for each practical subject in order to conduct end-semester University examinations. The examiners should have a postgraduate degree in engineering.

Award of marks in the end-semester practical examinations (except Project) should be as follows:

Fair record	: 10%
Viva voce	: 20%
Procedure and tabulation format, conducting experiment, results and inference	:70%

No candidate will be permitted to attend the end-semester practical examinations unless he/she produces certified record of the laboratory.

Strict measures will be taken by the University to monitor the laboratory facilities, laboratory experiments conducted, standard of end-semester practical examinations, etc. in every affiliated engineering college. In this regard, an expert team comprising of at least one subject expert from government/government-aided engineering colleges from within/outside the University shall be formulated to assess these aspects in all affiliated engineering colleges. This expert team should visit each engineering college at least once in a year and submit a detailed report to the University regarding the laboratory facilities, laboratory experiments conducted, and standard of end-semester practical examinations in each college.

### **11.3 Assessment of Seminar/Thesis Work**

The seminar, project and Industrial training will be evaluated by the Evaluation committee. The students are required to submit a report of the work done/training undergone and present the contents of the report before the committee which will be evaluated. The internal evaluation of the seminar in first semester and term project/mini project in the second semester would be done by the department Evaluation committee. In the third semester, Masters Research Project Phase I also will be evaluated by the Department Evaluation committee. Final University evaluation of the fourth semester project and dissertation would be conducted by the Guide and an External Examiner appointed by the Kannur University.

### **11.4 Pattern of Questions for End-Semester University Examinations of Theory Subjects**

The question paper shall be prepared preferably

- (a) covering all sections of the course syllabus
- (b) unambiguous and free from any defects/errors
- (c) emphasizing knowledge testing, problem solving & quantitative methods
- (d) containing adequate data/other information on the problems assigned
- (e) having clear and complete instructions to the candidates.

Duration of end-semester examinations will be 3 hours. The pattern of questions for theory subjects shall be as follows:

Candidates have to answer five questions out of seven. There should be at least two subsections for each question. Number of sub questions should not exceed four.

5x20 marks=100 marks

Time: 3 hours

Maximum Total Marks: 100

Weightage for categories such as problem solving, descriptive, drawing, or diagrammatic questions shall be specified along with the syllabus of all subjects, if necessary. Model question paper shall be prepared for each subject at the time of framing the syllabus. This same model question paper along with the syllabus must be sent to the question-paper setter every time for framing the questions. The model question paper shall be made available to students.

It is permitted to have an entirely different pattern of questions especially for subjects involving drawing, design etc, if necessary. However, the modified pattern to be followed shall be clearly specified along with the syllabus of the particular subject.

All question paper setters should supplement the scheme and key for the evaluation

### 11.5 Minimum for Pass

(a) A candidate who secures not less than 40% marks in a subject at the end-semester examinations **and** (b) not less than 50% of the total marks assigned to the subject, shall be declared to have passed the examination in that subject.

Note: The total marks assigned to a subject in the above calculations are the sum of maximum marks assigned to the end-semester examination and maximum internal assessment marks of that subject. Candidates will be assigned grades according to the marks scored, grade 'U' is used for indicating failed subjects.

For Seminar, Term project and Thesis (in 3<sup>rd</sup> and 4<sup>th</sup> semester), the minimum for a pass shall be 50% of the total marks assigned to the respective examination. If a student does not secure this pass marks, he/she will have to repeat the respective subject.

### 11.6 Grade

Range of percentage of marks	Grade	Grade Points
90 and above	S	10
80 and above, but less than 90	A	9
70 and above, but less than 80	B	8
60 and above, but less than 70	C	7
50 and above, but less than 60	D	6
Less than 50	E	0

### 11.7 Improvement

Candidates shall be allowed to improve the grade of any two theory subjects only. This can be done only in the immediate subsequent chance. The higher mark among the two examinations shall be considered. No candidate shall be permitted to improve the grades of the practical examinations and internal assessment marks.

### 11.8 Methods of awarding grades



i) For the first, second and fourth semesters, University will award grades based on percentage of marks obtained in each subject. The percentage of marks is calculated considering internal continuous assessment and end semester examination marks put together.

ii) For third semester grades will be awarded as per the following procedure:

A final meeting of the DPGC will be convened within 2 days after the last day of the semester evaluation/examination. The letter grades to be awarded to the students for the subject will be finalized at this meeting. After the finalization of the grades at the Committee meeting, one copy with the absolute marks and one without the absolute marks but having only the grades will be forwarded by the Committee Chairman to the University through Principal.

### 11.9 Declaration of results and issue of Grade card

1. The grade card will be issued after the publication of the results by the University.

It will contain the following:

- a) The course code, title of the subject/project, mark and grade secured by the candidate for each course registered for that semester.
- b) The total number of credits earned by the student up to the end of that semester.
- c) Grade Point Average of all the courses taken during a semester if he/she has successfully completed all the courses in that semester.
- d) The Cumulative Grade point Average (CGPA) of all the courses taken from the first semester onwards.
- e) Date of admission, Date of completion of the project and date of viva voce.

2. The grade point average will be calculated as follows.

- (a) A Semester Grade Point Average (SGPA) shall be computed for all the students for each semester, as follows:

$$SGPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

where,  $n$  is the number of subjects registered during the semester,  $C_i$  is the number of credits allotted to  $i^{\text{th}}$  subject as per the scheme, and  $G_i$  is the grade points corresponding to the grade awarded to the student for the subject.

- (b) A Cumulative Grade Point Average (CGPA) shall be computed for all the students at the end of each semester by taking into consideration their performance in the present and the past semesters as follows:

$$CGPA = \frac{\sum_{j=1}^m C_j G_j}{\sum_{j=1}^m C_j}$$

where,  $m$  is the number of courses registered up to that semester,  $C_j$  is the number of credits allotted to  $j^{\text{th}}$  subject as per the scheme, and  $G_j$  is the grade points corresponding to the grade awarded to the student for the subject.

An up-to-date assessment of overall performance of a student is obtained by calculating CGPA. CGPA is weighted average of the grade points obtained in all the subjects registered by the students since he entered the M-Tech course.

- (c) Both the SGPA and CGPA shall be rounded off to the second place of decimal and recorded as such for ease of presentation. Whenever the CGPAs are to be used for the purpose of determining the merit ranking in a group of students, only the rounded off values shall be made use of.
3. All candidates who qualify for the degree and secure a CGPA of not less than 6.5 of all the semesters shall be declared to have passed the M Tech Degree examination in First Class
  4. All candidates who qualify for the degree and secure a CGPA of not less than 8 of all the semesters shall be declared to have passed the M Tech Degree examination in First Class with Distinction.

## **12. ADDITIONAL REQUIREMENTS FOR THE DEGREE**

Students are expected to undertake industrial training(s) of total 10 days minimum duration or industrial visits (to minimum 3 industries) for studying about the industries of importance to the concerned branch during 2<sup>nd</sup> to 4<sup>th</sup> semester. Students may also undertake an educational tour of maximum two weeks duration between 2<sup>nd</sup> and 4<sup>th</sup> semesters for visiting industries (at least three) of importance to the concerned branch. Faculty members shall accompany the students for the industrial training/industrial visits/educational tour. Each student shall submit detailed report(s) of the training/visit/tour to the Head of Department within two weeks after the programme. These bound report(s), signed by the staff advisor or faculty in charge of tour/training/visit and by the head of department, shall also be brought during the final Viva-Voce.

## **13 REVISION OF REGULATION**

Notwithstanding all that has been stated above the Kannur University has the right to modify any of the regulations, scheme of studies, Examination and syllabi from time to time.

\*\*\*\*\*