# REGULATIONS 2017

M. Tech.

(Applicable from 2017 batch onwards)



## KALASALINGAM Academy of Research and Education

(Under Section 3 of UGC Act 1956) (Accredited by NAAC with 'A' Grade) **Anand Nagar, Krishnankoil - 626 126.** Srivilliputtur (Via), Virudhunagar (Dt), Tamil Nadu.

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#### (M.TECH. REGULATIONS 2017)

#### R.1.0 Admissions

- R.1.1 Announcements for M.Tech. Admission will be made by the Kalasalingam University and the candidates should apply in the prescribed form on or before the specified dates announced by the University.
- R.1.2 (i) Eligibility criteria and qualifying degree for appearing for the Entrance Examination is given in Table 1

**Table 1: Qualification for Admission** 

S.No	Degree	Qualification
1.	M.Tech - Computer Science Engineering	<ol> <li>B.E. / B.Tech.</li> <li>Electrical and Electronics Engineering</li> <li>Electronics and Communication         Engineering</li> <li>Electronics</li> <li>Information Technology</li> <li>Computer Science and Engineering</li> <li>Instrumentation and Control         Engineering</li> <li>Electronics and Instrumentation         Engineering</li> <li>Instrumentation Engineering</li> <li>Software Engineering</li> <li>M.Sc. (5 years integrated)</li> <li>M.C.A (10+2+3+3) years Pattern</li> </ol>

2.	M.Tech - Digital Communication and Network Engineering	<ol> <li>B.E. / B.Tech.</li> <li>Electronics and Communication</li> <li>Electronics</li> <li>Computer Science and Engineering</li> <li>Information Technology</li> </ol>
3.	M.Tech - Environmental Engineering	<ol> <li>B.E. / B.Tech.</li> <li>Civil</li> <li>Geo-Informatics</li> <li>Chemical</li> <li>Industrial Bio Technology</li> <li>Bio – Technology</li> <li>Chemical &amp; Electro Chemical</li> <li>Petroleum Engineering / Technology.</li> <li>Petrochemicals</li> <li>Petroleum Refining &amp; Petro Chemical</li> <li>Environmental</li> <li>M.Sc.</li> <li>Applied Chemistry</li> <li>Environmental Chemistry</li> <li>Biotechnology</li> <li>Environmental Science</li> </ol>
4.	M.Tech - Power System Engineering	<ul> <li>B.E./B.Tech.</li> <li>1. Electrical and Electronics Engineering</li> <li>2. Electronics and Instrumentation Engineering</li> <li>3. Instrumentation and Control Engineering</li> </ul>

5.	M.Tech - Control and Instrumentation Engineering	<ol> <li>B.E./B.Tech.</li> <li>Electronics Engineering</li> <li>Instrumentation Engineering</li> <li>Electronics and Communication Engineering</li> <li>Electrical and Electronics Engineering</li> <li>Electronics and Instrumentation Engineering</li> <li>Instrumentation and Control Engineering</li> </ol>
6.	M.Tech - Network Engineering	<ol> <li>B.E./B.Tech.</li> <li>Electronics and Communication Engineering</li> <li>Computer Science and Engineering</li> <li>Information Technology</li> <li>Electronics</li> </ol>
7.	M.Tech - Embedded System Technologies	<ol> <li>B.E. / B.Tech.</li> <li>Electrical and Electronics Engineering</li> <li>Electronics and Communication         Engineering</li> <li>Electronics &amp; Instrumentation         Engineering</li> <li>Instrumentation and Control         Engineering</li> <li>Computer Science and Engineering</li> <li>Information Technology</li> <li>Electronics</li> <li>Instrumentation</li> </ol>

8.	M.Tech – VLSI Design	<ol> <li>B.E. / B.Tech.</li> <li>Electronics and Communication Engineering</li> <li>Electrical and Electronics Engineering</li> <li>Electronics</li> <li>Instrumentation Engineering</li> <li>Electronics and Instrumentation Engineering</li> <li>Instrumentation and Control Engineering</li> <li>Computer Science and Engineering</li> <li>Information Technology</li> </ol>
9.	M.Tech - Information Assurance and Security	<ol> <li>B.E. / B.Tech.</li> <li>Electrical and Electronics</li> <li>Computer Science and Engineering</li> <li>Electronics and Communication         Engineering</li> <li>Electronics and Instrumentation         Engineering</li> <li>Information Technology</li> <li>Instrumentation and Control         Engineering</li> </ol>
10.	M.Tech – Automotive Systems Engineering M.Tech – Computer Applications	<ul> <li>B.E. / B.Tech.</li> <li>1. Automobile Engineering</li> <li>2. Mechanical Engineering</li> <li>3. Production Engineering</li> <li>4. Manufacturing Engineering</li> <li>5. Mechatronics</li> </ul>

		B.E. / B.Tech.
11.		1. Electrical and Electronics Engineering
		2. Electronics and Communication
		Engineering
		3. Electronics
		4. Information Technology
		5. Computer Science and Engineering
		6. Instrumentation and Control Engineering
		7. Electronics and Instrumentation Engineering
		8. Instrumentation Engineering
		M.Sc. (5 years integrated)
		9. Computer Science
		10. Information Technology
		11. Software Engineering
		B.Sc. (3 years) in IT related major
		courses and M.Sc. (2 years) in IT
		related major courses
		12. Computer Science
		13. Information Technology
		M.C.A (10+2+3+3) years Pattern
12.	M.Tech –	B.E. / B.Tech.
	Information Technology	Electronics and Communication     Engineering
		2. Electrical and Electronics Engineering
		3. Electronics
		4. Information Technology
		5. Computer Science and Engineering.
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13.	M.Tech – Nano Technology	<ol> <li>B.E. / B.Tech.</li> <li>Mechanical Engineering</li> <li>Ceramic</li> <li>Engineering Physics</li> <li>Bio-Technology</li> <li>Chemical Engineering</li> <li>Bio-Medical</li> <li>Industrial Bio-Technology</li> <li>Material Science</li> <li>Bio-Informatics</li> <li>Electronics and Communication Engineering</li> <li>Agricultural Bio-Technology</li> <li>Chemical and Electrochemical Engineering</li> <li>M.Sc.</li> <li>Applied Chemistry</li> <li>Bio-Chemistry</li> <li>Chemistry</li> <li>B. Pharm</li> </ol>
14.	M.Tech – Pharmaceutical Biotechnology	B.E. / B.Tech.  1. Bio- Technology  2. Industrial Bio – Technology  3. Bio Engineering  4. Pharmaceutical Technology  5. Biochemical  6. Biopharmaceutical  7. Bio Medical
		6

M.Sc.  8. Biochemistry  9. Microbiology  10. Genetic Engineering  11. Bio Technology  12. Genetics and Molecular Biology  13. Life Science  14. B. Pharm.  B.E. / B.Tech.  1. Leather  2. Genetic  3. Bio-Chemical  4. Industrial Bio-Technology  5. Bio-Technology  6. Agricultural Bio-Technology  M.Sc.  7. Bio-Chemistry  8. Micro-Biology  9. Bio Technology  10. Genetics  11. Life Science  12. B. Pharm.  B.E. / B.Tech.  1. Electrical and Electronics Engineering			
9. Microbiology 10. Genetic Engineering 11. Bio Technology 12. Genetics and Molecular Biology 13. Life Science 14. B. Pharm.  B.E. / B.Tech. 1. Leather 2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			M.Sc.
10. Genetic Engineering 11. Bio Technology 12. Genetics and Molecular Biology 13. Life Science 14. B. Pharm.  B.E. / B.Tech. 1. Leather 2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			8. Biochemistry
11. Bio Technology 12. Genetics and Molecular Biology 13. Life Science 14. B. Pharm.  15. M.Tech - Biotechnology  B.E. / B.Tech. 1. Leather 2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			9. Microbiology
12. Genetics and Molecular Biology 13. Life Science 14. B. Pharm.  B.E. / B.Tech. 1. Leather 2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			10. Genetic Engineering
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15. M.Tech - Biotechnology  1. Leather 2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			14. B. Pharm.
1. Leather 2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			B.E. / B.Tech.
2. Genetic 3. Bio-Chemical 4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.	15.		1. Leather
4. Industrial Bio-Technology 5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.		Bioteciniology	2. Genetic
5. Bio-Technology 6. Agricultural Bio-Technology M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			3. Bio-Chemical
6. Agricultural Bio-Technology  M.Sc.  7. Bio-Chemistry  8. Micro-Biology  9. Bio Technology  10. Genetics  11. Life Science  12. B. Pharm.  B.E. / B.Tech.			4. Industrial Bio-Technology
M.Sc. 7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			5. Bio-Technology
7. Bio-Chemistry 8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			6. Agricultural Bio-Technology
8. Micro-Biology 9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			M.Sc.
9. Bio Technology 10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			7. Bio-Chemistry
10. Genetics 11. Life Science 12. B. Pharm.  B.E. / B.Tech.			8. Micro-Biology
11. Life Science 12. B. Pharm.  B.E. / B.Tech.			9. Bio Technology
12. <b>B. Pharm.</b> B.E. / B.Tech.			10. Genetics
B.E. / B.Tech.			11. Life Science
1 16   M Tach			12. <b>B. Pharm.</b>
10. M. Tech - 1 Flectrical and Flectronics Engineering	1.0	) ( T 1	B.E. / B.Tech.
Power 1. Electrical and Electronics Engineering	16.		1. Electrical and Electronics Engineering
Electronics and Communication Engineering		Electronics	
3. Electronics and Instrumentation Engineering		and Derives	3. Electronics and Instrumentation
4. Instrumentation and Control Engineering			4. Instrumentation and Control

		5. Electronics
		6. Instrumentation Engineering
17.	M.Tech – Construction Engineering and Management	B.E. / B.Tech. (Civil)
18.	M.Tech – Industrial Safety	Any B.E./B.Tech. degree
19.	M.Tech – Process Control and Automation	<ol> <li>B.E. / B.Tech.</li> <li>Electrical and Electronics Engg.</li> <li>Electronics and Communication Engg.</li> <li>Electronics and Instrumentation Engg.</li> <li>Instrumentation and Control Engg.</li> <li>Electronics</li> <li>Instrumentation</li> </ol>
20.	M.Tech – Transport Engineering	<ul> <li>B.E. / B.Tech.</li> <li>1. Civil Engineering</li> <li>2. Geoinformatics Engineering</li> <li>3. B. Arch</li> <li>4. B. Planning</li> </ul>
21.	M.Tech - Robotics and Automation	<ul> <li>B.E. / B.Tech.</li> <li>1. Automobile Engineering</li> <li>2. Mechanical Engineering</li> <li>3. Manufacturing Engineering</li> <li>4. Mechatronics</li> <li>5. Production Engineering</li> <li>6. Aeronautical Engineering</li> <li>7. Metallurgical Engineering</li> <li>8. Material Science</li> </ul>

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22.	M.Tech - Renewable Energy Technologies	<ol> <li>B.E. / B.Tech.</li> <li>Bio Technology.</li> <li>Industrial Bio-Technology</li> <li>Mechanical Engineering</li> <li>Production</li> <li>Industrial Engineering</li> <li>Electrical and Electronics Engineering.</li> <li>Electronics and Communication Engineering.</li> <li>Electronics and Instrumentation Engineering.</li> <li>Instrumentation and Control Engineering.</li> <li>Energy Engineering</li> </ol>
23.	M.Tech - Software Engineering.	B.E. / B.Tech.  1. Computer Science and Engineering.  2. Information Technology  3. Computer Hardware and Software  M.Sc. (5 years integrated)  4. Information Technology  5. Computer Science  6. Software Engineering  B.Sc. (3 years) in IT related major  courses & M.Sc. (2 years) in IT related  major courses  7. Information Technology  8. Computer Science  M.C.A (10+2+3+3) years Pattern

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24.	M.Tech – Manufacturing (In association with TAFE)	<ol> <li>TAFE Staff with B.E./B.Tech.</li> <li>Automobile Engineering</li> <li>Mechanical Engineering</li> <li>Production Engineering</li> <li>Manufacturing Engineering</li> <li>Mechatronics</li> </ol>
25.	M.Tech – Mobile Communication and Computing	<ol> <li>B.E. / B.Tech.</li> <li>Computer Science and Engineering</li> <li>Information Technology</li> <li>Electrical and Electronics Engineering</li> <li>Electronics and Communication Engineering</li> </ol>
26.	M.Tech – Engineering Design	<ol> <li>B.E./B.Tech.</li> <li>Mechanical Engineering</li> <li>Automobile Engineering</li> <li>Production Engineering</li> <li>Manufacturing Engineering</li> <li>Industrial Engineering</li> <li>Mechatronics</li> <li>Aeronautical Engineering</li> <li>Aero space Engineering</li> </ol>
27.	M.Tech – Structural Engineering	B.E. / B.Tech. (Civil)
28.	M.Tech – Thermal Engineering	B.E./B.Tech.  1. Mechanical Engineering 2. Production Engineering 3. Automobile Engineering 4. Aeronautical Engineering 5. Aerospace Engineering 6. Marine Engineering 7. Manufacturing Engineering 8. Energy

29. M.Tech – VLSI destest and Manufact	1. Electronics and Communication Engg.
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- R.1.3 (i) Admissions to the M. Tech programme in any year will be based on valid GATE (Graduate Aptitude Test in Engineering) score or Kalasalingam University Post Graduate Entrance Examination (KUPGEE) score, normally conducted in the month of May/June of that year by the University.
  - (ii) Candidates sponsored under Quality Improvement Programme (QIP) or other similar programmes are also eligible to apply.
  - (iii) Candidates sponsored by the industries, established institutes / Research and Development organizations / National laboratories are also eligible to apply.
  - (iv) Foreign nationals whose applications are received through Indian Council or Cultural Relations, Government of India are also eligible to apply. Other Foreign nationals, aspiring under self-financing scheme are also eligible to apply, for which applications are to be forwarded through their embassy.

- R.1.4 (i) The Admission Committee will decide on the procedure for conducting the KUPGEE and prepare a merit list of candidates. Subject to fulfilling the minimum performance criteria in the examination, as decided by the committee from year to year, the Admission Committee will offer admission, in the order of merit, to the successful candidates.
  - (ii) The Post-graduate Admissions Committee constituted by the Chairman, Academic Council will decide on the operational aspects of selection of candidates based on the criteria laid down by the Academic Council.
- R.1.5 In addition to fulfilling the requirements/conditions given in R.1.2 the selected candidate will be admitted to the M.Tech. programme after he/she fulfils all the admission requirements as indicated in the Letter of Admission, and after the payment of all the prescribed fees.

### R 1.6 In the matter of admission to the M. Tech programme, the decision of the Admission Committee is final.

R.1.7 If, at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission, the Director (Academic) may revoke the admission of the candidate and report the same to the Academic Council.

#### R.2.0 The Structure of the M.Tech Programme

- R.2.1 The programme of instruction will consist of:
  - (i) Core courses
  - (ii) Elective courses
  - (iii) Project work

The Category wise credit distribution for the M.Tech Programme is given in table 2.

**TABLE 2- Categories of courses for CGPA credits** 

S. No	Category	Credits
I	Core courses	35-37
II	Elective courses	15
III	Project work Phase I	5-6
IV	Project work Phase II	10-12
	Total Credits	65-70

In addition, a student may require to deliver one or more seminars and to undergo industrial / practical training during the programme, as specified in the curriculum and syllabi of the specialization concerned.

- R.2.2 The curriculum of any specialization of the M.Tech programme is designed to have a minimum total of 65-70 credits [with respect to the specialization of the M.Tech programme concerned] for the award of the M.Tech degree.
  - (a) Credits for the CGPA courses are assigned based on the following general pattern:
    - (i) One credit for each lecture period per week
    - (ii) One credit for each tutorial period per week
    - (iii) One or two credit(s) for each laboratory or practical session of three periods per week, depending on the degree of effort required to be put in by the students.

- (b) For the award of the M.Tech. degree, a candidate shall
  - (i) Satisfy all the requirements prescribed by the Regulations of the Academic Council.
  - (ii) Earn not less than 65 70 credits [with respect to the specialization of the M.Tech programme concerned].
  - (iii) Complete all the courses as specified in the curriculum and syllabus of the programme of the specialization concerned, within a minimum period of two years or a maximum period of four years (including the duration of withdrawal from the course on medical grounds or for other valid reasons., as per **R.11.1**, if any) from the date of his/her enrolment.
  - (iv) Should have presented atleast one paper in National/International Conference
- R.2.3 Every specialization of the M. Tech programme will have a Curriculum and Course Content (Syllabi) approved by the Academic Council.
  - The instruction, examinations, seminars and project reports shall be in English, unless otherwise specifically mentioned in the curriculum.
- R.2.4 The complete programme will be of 4 semesters duration. The academic load in each semester may consist of course work and/or project work as specified in the curriculum of the specialization concerned. The total contact hour is normally about 32 hours per week.

- R.2.5. 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. However the concern department HoD/Director (Academic) may grant permission to a student not to register for some of the core courses and substitute them by some other courses depending on the courses successfully completed by the student in the undergraduate programme. This has to be intimated to and approved by the Director (Academic).
- R.2.6 Electives will have to be taken from the courses offered by the Department concerned, in that particular semester from among the list of approved courses. However, the departments can permit selection of electives other than those listed against the department concerned, provided they have relevance to the area of specialization and subject to the approval of the Director (Academic).

#### R.3.0 Faculty Advisor

R.3.1 To help the students in planning their courses of study and for getting general advice on the academic programme, the Department concerned will assign a certain number of students to a Faculty member who will be called their Faculty Advisor.

The Faculty Advisor will help the students in all their endeavours during their period of study.

#### R.4.0 Class Committee

R.4.1 Every class of the M.Tech programme will have a Class Committee consisting of faculty members and students. The constitution of the Class Committee will be as follows:

- (i) A Senior faculty members who is not associated with teaching the particular class, nominated by the Director (Academic) / Head of the Department concerned, to act as the Chairman of the Class Committee.
- (ii) Course Coordinators of all the lecture-based courses
- (iii) Faculty members handling laboratory courses
- (iv) The Class Co-ordinator of the class
- (v) Five students (in the combination of two from the toppers and three from rest of the class) from the respective class to be chosen by the students of the class from amongst themselves (and)
- (vi) Faculty Advisors of the students of the respective class.

#### R.4.2 The basic responsibilities of the Class Committees are

- (i) To review periodically the progress of the classes
- (ii) To discuss problems concerning curriculum, syllabi and conduct of the classes
- (iii) To resolve issues related to slow learners.

The method of assessment during the course will be decided by the teacher in consultation with the class committee and will be announced to the students at the beginning of the semester. Each class committee will communicate its recommendations to the Head of the Department concerned and the Director (Academic).

The Class Committee, exclusive of the student members, is responsible for the finalization of the semester examinations results.

The Class Committees shall meet at least four times in a semester; at the beginning of the semester, after the I Sessional Examination, after the II Sessional Examination, and finally (without the student members) at the end of the semester in order to finalize the grades.

#### **R.5.0** Registration and Enrolment

- R.5.1 Except for the first semester, registration for the courses in a semester will be done during a specified week before the End- Semester examination of the previous semester.
- R.5.2 From the second semester onwards students have to enroll themselves on the first day of each semester. A student will be eligible for enrolment only if he / she fulfils the requirements of **R.9** and is not debarred for enrolment by any disciplinary action of the University. At the time of enrolment a student can drop a course registered earlier and also substitute it by another course for valid reason(s).
- R.5.3 During the final project semester, students are not normally permitted to register for courses. However, students who are in short of a few credits required for the completion of the degree, may be allowed by the Director (Academic) to register for one or two ELECTIVE courses ONLY (under self study or contact courses scheme) along with the project under the specific recommendation from the Head of the department. In such cases the project duration may have to be extended beyond the normal period suitably.

R.5.4 The registration sheet contains the course code, course name, credits assigned to and the category of each course to be registered in that semester. The student can make a choice of courses in consultation with his/her Faculty Advisor.

#### **R.6.0** Registration Requirement

R.6.1 The curriculum for any semester, except the final, normally carries 19 - 28 credits.

In any case, the student should ensure that the total number of courses registered for in any semester should enable him/her to earn the minimum number of credits as specified in **R.9.1**.

#### **R.7.0** Teaching Assistantship (TA)

- R.7.1 Students, who are qualified for M Tech admission through valid GATE score will be eligible, from the third semester onwards, for the award of the TA scholarship notified by the University from time to time.
  - Such students who avail the TA scholarship are permitted to register for not more than three lecture-based theory courses and a project work. Such students are not permitted to carry out their Final year project outside the University.
- R.7.2 Students joining the M. Tech programme under sponsorship scheme with full salary will not be granted any TA even if they are qualified in KUPGEE. Self-financing foreign nationals are not eligible for post-graduate TA.
- R.7.3 All M.Tech students should apply to the Head of the Department for leave stating the reasons whenever they

are not in a position to attend classes/project work. They will not be eligible for TA for the period of absence, if it is unauthorized leave. The intervening holidays will be treated as part of leave with provision of suffixing and prefixing holidays.

#### **R.8.0** Contact Courses

- R.8.1 A contact course may be offered during the regular semester by a department *ONLY* to a Final Year student who has obtained U grade in a *CORE* course. The course will be offered *ONLY* on the recommendation of the department with the mutual agreement of the teacher and student. The students registering for the contact course will have to pay the prescribed fee fixed by the university.
- R.8.2 A student cannot register for more than two contact courses during the semester
- R.8.3 A Contact Course for a subject cannot be offered if a regular semester course is offered for the same subject in a semester.
- R.8.4 Final Year students who wish to take Contact Courses should apply to the Director (Academic) before the commencement of the semester in which the Contact Courses are to be taken.
- R.8.5 The assessment procedure for a Contact Course will be similar to that for the regular semester courses.
- R.8.6 Withdrawal from a Contact Course is not permitted.

### R.9.0 Minimum Requirements to Continue in the Programme

R.9.1 A student should earn not less than 11 credits in the First semester and 28 CGPA credits by the end of the Second semester and 36 credits at the end of the Third semester.

However, students who do not earn the minimum required credits in the odd semester may be given a chance during the even semester to make up for the loss by securing more credits. If a student does not earn the minimum required credits at the end of an academic year, his/her name may be taken off the rolls of his/her current batch and he/she would be enrolled in the subsequent year's batch.

R.9.2 In addition to the above, a student should have a minimum CGPA of 5.0 (see **R.25.2**) at the end of each semester, calculated on the courses completed. However, students who do not fulfil this minimum requirement in the odd semester will be given a chance during the even semester to make up for the loss by securing more credits. If a student does not have the minimum required CGPA of 5.0 (and/or could not earn the minimum required credits as per **R9.1**), at the end of an academic year, his/her name may be taken off the rolls of his/her current batch and he/she would be enrolled in the subsequent year's batch.

#### R.10.0 Maximum Duration of the Programme

R.10.1 A student is ordinarily expected to complete the M.Tech programme in four semesters. However, a student may complete the programme at a slower pace, but in any case, not exceeding five semesters to complete the course work and eight semesters to complete the total programme including project work, including semesters withdrawn on medical grounds or for other valid reason(s), as per R.11.1. However, students have to satisfy the requirements mentioned R.9.1 every semester, failing which their registration is liable to be cancelled.

In case of students who do not complete their project work in four semesters and submit the report in the fifth semester or later, the month and year of completion of the project work and of viva-voce examination will be indicated in the final grade card.

#### R.11.0 Temporary Withdrawal from the Programme

- R.11.1 A student may be permitted by the Director (Academic) to withdraw from the programme for a semester or longer for reasons of ill health or other valid grounds. Normally, a student will be permitted to discontinue the programme for a maximum period of only two semesters.
- R11.2 Students may be permitted to discontinue the programme and take up a job provided they have completed all the course work. The project work can be done during a later period either in the organisation where they work, if it has R and D facility, or in the University. Such students should complete the project within six semesters from the date of enrollment to the programme.

Students desirous of discontinuing their programme at any stage with the intention of completing the project work at a later date should seek and obtain the written permission of the Director (Academic) before doing so.

#### R.12.0 Discipline

- R.12.1 Every student is required to observe discipline and decorous behaviour in all activities related to academics and not to indulge in activities that would tend to bring disrepute to the University.
- R.12.2 Any instance of indiscipline related to the academic activity of a student will be referred to a *Discipline and Welfare Committee*; likewise, any instance of malpractice by a student or faculty member in connection with the examination process will be referred to an *Examination Monitoring and Grievance Redressal Committee* (EMGRC), constituted by the Chairman of the Academic Council.

These Committees will inquire into the matter and make recommendations, along with mentioning suitable punishment for the offenders (if the charges against them are substantiated), to the Staff Council. The Staff Council will consider the recommendation of these committees and decide on the appropriate action to be taken. The Punishment period will be treated as Absent.

#### R.13.0 Attendance

R.13.1 Every faculty member handling a class will register his/her students' attendance till the last day of instruction of the semester and finalise the attendance records of the students.

The particulars of students who have an attendance percentage less than 80 in the courses they had registered themselves for will be displayed in the university notice boards/website before the start of the Sessional examination and end semester examination Students, whose attendance is less than 80% in the courses they had registered themselves for will not be permitted to appear for the sessional examination / End-Semester Examination in these courses.

The attendance percentage, calculated up to the last day of instruction of the semester, will be indicated by a number/letter code as given in Table 3.

TABLE 3: Attendance code

Percentage of Attendance (Rounded to)	Attendance Code
95 and above	Н
88 to 94	9
80 to 87	8
Below 80	L

The Hall Ticket for the End-Semester Examination will be issued only to eligible students upon their clearing all of their dues to the University, Hostel, Library and other Departments/Sections (if any) of the University.

R.13.2 If a student has an attendance percentage lower than 80 in a course, his/her performance in that course will be treated as not satisfactory, and he/she shall be awarded W grade ('W' meaning failure for want of minimum attendance) in that course. This grade shall be mentioned in his/her grade card till the course is successfully completed.

A student who is awarded a W grade for a course must repeat the course, as per regulation **R.24.0** and he/she is not permitted to re-register the course as Contact Course.

R.13.3 All M.Tech students should apply to the Head of the Department for leave stating the reasons whenever they are not in a position to attend classes/project work. They will not be eligible for TA for the period of absence, if it is unauthorized leave. The intervening holidays will be treated as part of leave with provision of suffixing and prefixing holidays.

#### R.13.4 Condonation of Attendance

Those students who have availed medical leave on valid grounds may be considered for condonation of attendance provided the percentage of attendance excluding the period of medical leave is not below 70 % and their attendance including the period of illness does not fall below 80%. Students can avail this facility only once during the entire period of study.

#### R.14.0 Assessment Procedure – Tests and Examinations

R.14.1 The Academic Council will decide from time to time on the system of tests and examinations in each course in each semester. The general guidelines for this are as follows: Two Sessional Examination and End Semester Examination.

#### R.15.0 System of Tests

R.15.1 In the lecture / tutorial based courses, Two *Sessional Examinations* will be held for each course per semester. The details of weightage of marks for the Two Sessional Examinations will be announced by the teacher, in consultation with the Class Committee, and the Contoller of Examinations, at the beginning of the semester.

#### R.16.0 End-Semester Examination

R.16.1 There will be one End-Semester Examination of three hours duration in each lecture-based course.

#### R.17.0 Evaluation of Project

R.17.1 The progress of the students in their Final Year projects will be assessed through three periodical reviews by a Project Review Committee, constituted by the Head of the Department concerned / Director (Academic). Upon completion of the project, the student will have to submit a project report which will be evaluated by duly appointed examiner/s. The evaluation will be based on the report and a viva voce examination on the project.

#### R.18.0 Weightages

R.18.1 The weightages for the different courses are given below:

#### (a) Theory courses:

Two Sessional Examinations	35%
Assignments, Quizzes, Tutorials etc.,	15%
End-Semester Examination	50%

#### (b) Laboratory based courses:

Two Sessional Assessment	50%
End-semester examination	50%

R.18.2 The evaluation for all tests, tutorials, assignments (if any), laboratory works and examinations will be on an absolute basis. The final marks in each course are calculated as per the weightages mentioned in R.18.1.
Course wise grading of students will be done as per R.20.1

#### R.19.0 Make-up Examination

R.19.1 Students who have missed the Sessional examination(s), or End-Semester examinations for valid reasons are eligible to appear for a Make-up Examination.

Students who have missed either Sessional Examinations and the End-Semester examination in the same course for genuine reasons, such as illness, may be permitted to write Make-up Examination only for the missed End-Semester Examination with no marks being awarded for the missed Sessional Examination(s), provided they satisfy the attendance requirements.

Such of the above-mentioned students should make an application, recommended by the Faculty Advisor and Head of the Department concerned to the Director (Academic) within one week of the date of the examination missed, explaining the reason(s) for their absence. Applications received after this period will not be entertained

The Examination Monitoring and Grievances Redressal Committee (EMGRC) will scrutinize the applications and make recommendations to the Director (Academic) on the basis of merit of their applications.

R.19.2 Official permission to take a make-up examination will be given under exceptional circumstances, such as admission to a hospital due to illness.

Students residing in the hostels should produce a Medical Certificate issued by the Chief Medical Officer (CMO) of the University that he/she was admitted in the Hospital during the period of the missed Sessional Examination/End-Semester Examination

Students residing in the hostels and taking medical consultation from outside doctors are required to obtain written permission from the Medical Officer of the University Hospital before they proceed for consultation.

The all Students are required to obtain an endorsement on the certificate of treatment from the Medical Officer of the University Hospital. A student staying outside the Campus permanently / temporarily must produce a medical certificate from a Registered Medical Practitioner and the same should be duly endorsed by the parent / guardian and CMO of the University.

#### R.19.3 A single make-up examination will be held after the End-Semester examination for those who are permitted to take the make-up examination.

The question paper will be common to all students taking the makeup examinations in a given course. The question paper will cover the entire syllabus.

#### R.20.0 Course-wise Grading of Students

#### R.20.1 Letter Grades

Based on the marks obtained by a student in the internal and end semester examination in each theory and practical course, he/she is awarded with a letter grade.

#### (a) For Theory Courses

At the end of each semester, based on the individual performance in a theory course relative to the performance of the class in the particular course, each student is awarded a final letter grade. The letter grades and the corresponding grade points are shown in Table 4a

TABLE 4 a- GRADE CONVERSION TABLE for theory courses (for relative grading)

Grade	<b>Grade Points</b>	Result	
S	10	Pass	
A	9	Pass	
В	8	Pass	
С	7	Pass	
D	6	Pass	
Е	5	Pass	
P	4	Pass	
U	0	Fail	
AB	0	Failure for not writing End Semester Examination	
W	0	Failure due to insufficient attendance	
I	0	Incomplete	

(b) For Practical Courses and Project/Thesis work
At the end of each semester, based on the individual
performance in a particular course, each student is
awarded a final letter grade based on the marks obtained
by him/her on an absolute basis. The letter grades and the
corresponding grade points are shown in Table 4b.

TABLE 4 b- GRADE CONVERSION TABLE (for absolute grading)

Grade	Grade Points	Mark Range (out of 100)	Result
S	10	≥ 90	Pass
A	9	≥ 80 but < 90	Pass
В	8	≥ 70 but < 80	Pass
C	7	> 60 but < 70	Pass
D	6	> 55 but < 60	Pass
E	5	> 50 but < 55	Pass
P	4	≥ 40 but < 50	Pass
U	0	< 40	Fail
AB	0		Failure for not writing End Semester Examination
W	0		Failure for want of minimum attendance
I	0		Incomplete

The I Grade awarded in a course to a student for want of completing prescribed formalities, relevant to that course, will be subsequently changed into pass grade (i.e., S/A/B/C/D/E/P) or U grade in the same semester, on completion of those formalities.

R.20.2 A student is considered to have completed a course successfully and earned the credits if he/she secures a letter grade other than a U, AB, W or I in that course. A letter grade U, AB or W in any course implies a failure in that course. A course successfully completed cannot be repeated.

#### R.21.0 Method of Awarding Letter Grades

- R.21.1 A final meeting of the Class Committee (without the student members) will be convened within seven days of the last day of the end semester examination. The letter grades to be awarded to the students for different courses will be finalized at the meeting.
- R.21.2 Along with the summary sheet, a copy of the result sheet (Grade sheet) for each course, containing the absolute marks, the final grade and attendance code will be submitted by the teachers/Class Co-ordinator to the Class Committee Chairman concerned. After finalization of the grades at the Class Committee meeting, the Grade Summary Sheet and the Grade Sheet of the individual courses will be endorsed and forwarded by the Class Committee Chairman to the Controller of Examinations.

#### **R.22.0** Declaration of Results

- R.22.1 After finalization by the Class Committee as per **R.21.1**, the grade sheets will be submitted for approval by the Controller of Examination to a Grade Approval Committee constituted by the Chairman of the Academic Council. After the verification by the Grade Approval Committee, the grade summary sheet and the grade sheets of the individual courses will be signed and forwarded by the members of the Grade Approval Committee to the Controller of Examinations.
- R 22.2 With the approval of the Grade Approval Committee, the results of all the examinations conducted in a semester will be placed before the Result Passing Committee, constituted by the Chairman of the Academic Council, for the final approval.
  - With the approval of the Result Passing Committee, letter-grades awarded to the students in each course will be announced by the office of the Controller of Examination on the University notice boards and website.
- R.22.3 The U, AB or W grade, once awarded, stays in the record of the student, and is replaced with a pass grade when he/she completes the course successfully later; the CGPA will be accordingly revised.

#### R.23.0 Distribution of Evaluated Answer Books

R.23.1 The student shall have access to his/her answer books in the Sessional and End-Semester examinations through the teachers concerned on the day specified in the Academic Calendar. In case of any dissatisfaction at the valuation, the student may contact and make an appeal to the course teacher concerned on the date of distribution

of the evaluated answer books. If the teacher determines that a case for lower-than-deserved marks brought forward by a student is genuine upon re-examining the answer book, he/she shall forward revised marks to the Controller of Examinations through the Chairman of the Batch Committee, with justification for the revision, and with intimation to the Head of the Department.

If the student is not satisfied with the outcome of the reexamination of his/her answer book by the course teacher, he/she should make an application to the Controller of Examinations for re-evaluation of answer book on the date of distribution of evaluated answer books. Any application for re-evaluation received after that will not be entertained. All applications for reevaluation will be processed by the EMGRC and suitable decision will be taken by the staff council of the University, on the basis of individual merit.

The evaluated answer books after distribution to the students will be retained for a period of one year from the date of examination and will be destroyed by the COE office after this period. No grievances / complaints related to the examination / valuation of answer books will be addressed by the University after this period.

#### **R.24.0** Course Repetition

R.24.1 A student who has secured a U grade in a core course will have the option of either repeating the course when it is offered next or reappearing for the End-Semester Examination in the course (as Arrear examination), conducted in the subsequent semester, to secure a pass grade.

A student securing a W grade in a core course has to repeat the course compulsorily when it is offered next. For the students who are required to repeat the course, he/she can register for an equivalent course if the same course is not offered and earn Sessional Marks in the equivalent course. Grades will be awarded on the basis of ESE marks plus Sessional Examination marks.

R.24.2 A student securing a U grade in an Elective course, may repeat the course if he/she so desires or reappear for the End-Semester Examination in the course, conducted in the subsequent semester, to secure a pass grade; otherwise, he/she may register for another elective (in place of the elective for which he/she was awarded the U grade) and successfully complete the course.

A student securing a W grade in an elective course, may repeat the course, if he/she so desires, to get a successful grade; otherwise, he/she may register for a n o t h e r elective (in place of the elective for which he/she was awarded the W grade) and successfully complete the course.

R.24.3 Arrear examinations for the failed candidates (those securing "U" grade) in a course will be conducted only along with the regular End-Semester examinations in the subsequent semester(s), with a question paper common to them and the regular students of that semester. In case, the said course is not offered in a subsequent semester, the examination will be conducted exclusively for the arrear (backlog) candidates. Question Paper for all the arrear examinations on a course will be on the basis of the latest regulations and syllabus in force.

No sessional examination will be conducted for Arrear Examinations. The student's letter grade will be decided, on a relative basis, along with the class of students with whom the candidate had written the Sessional Examinations and secured Sessional marks.

R.24.4 A course successfully completed cannot be repeated.

#### R.25.0 Grade Card

- R.25.1 The grade card issued at the end of each semester to the students will contain the following:
  - (i) the credits for each course registered for that semester;
  - (ii) the letter grade obtained in each course
  - (iii) the attendance code assigned for each course
  - (iv) the total credits earned in that semester
  - (v) the cumulative credits earned up to the end of that semester
  - (vi) the Grade Point Average of all the courses taken in that semester (SGPA)
  - (vii) the Cumulative Grade Point Average (CGPA) of all the courses taken from the first semester up to the end of that semester
- R.25.2 The Semester Grade Point Average (SGPA) will be calculated according to the following formula

$$SGPA = \frac{\Sigma (C \times GP)}{\Sigma C}$$

where C = Credit(s) for the CGPA course registered and completed,

GP = Grade Point, as per the Grade Conversion Table 4a & 4b, given under R.20.1, for the letter grade obtained by the candidate for the course,

SC = Sum of credits from all the courses taken in that semester, including those in which the student has secured U and W grades.

For the Cumulative Grade Point Average (CGPA) a similar formula is used where  $\Sigma C$ , the sum of credits, is from all the courses taken in all the semesters completed up to the end of that semester.

#### R.26.0 Project Work in Industry or Other Organization

- R.26.1 Sponsored candidates from organizations which have R & D units and facilities for research work and those students who get employment in such organisation after completion of the course work may be permitted to carry out their project work in such organisations during the final semester under the following conditions:
- R.26.2 A departmental committee shall examine the requests from such students, and fix in advance
  - i) an internal guide (a faculty member of the University)
  - ii) area of project work and
  - iii) the name and designation of an external guide (Scientists or Engineer in Industry).

- R.26.3 The above details should be submitted to the Director (Academic) through the Head of the Department and the Director's approval should be obtained before the commencement of the project.
- R.26.4 The students who are permitted to do the project work in an industry will have to pay the tuition and other fees to the University for the third and fourth semester.

#### R.27.0 Eligibility for Award of the M. Tech Degree

- R.27.1 A student shall be declared to be eligible for award of the M. Tech degree if he/she has
  - (i) registered for and successfully completed all the required core courses, elective courses and project;
  - (ii) successfully earned the minimum required credits as specified in the curriculum corresponding to the specialization of his/her study within the stipulated time;
  - (iii) earned the specified credits in all the categories of courses;
  - (iv) no dues to the University, Hostels, Libraries etc.;
  - (v) no disciplinary action pending against him/her.
  - (vi) should have presented atleast in National / International Conference
- R.27.2 **Degree Classification**: The Degree of Master of Technology shall be awarded in three categories:
  - (i) First Class with Distinction
  - (ii) First Class
  - (iii) Pass

For a First Class with Distinction, the student must earn 65 to 70 credits [with respect to the specialization of the M.Tech programme concerned] within two years from the time of admission/enrolment and obtain a minimum CGPA of 8.25 with all courses passed in the first attempt

For a First Class, the student must earn 65 to 70 credits [with respect to the specialization of the M.Tech programme concerned] within three years from the time of admission/enrolment and obtain a minimum CGPA of 6.50.

Students who earn the requisite number of credits (65 to 70 credits [with respect to the specialization of the M.Tech programme concerned]) within four years from the date of admission will be awarded a Pass.

R.27.3 The award of the degree must be recommended by the Academic Council and approved by the Board of Management of the University.

#### R.28.0 Power to Modify

R.28.1 Not with standing all that has been stated above, the Academic Council has the right to modify any of the above regulations from time to time.