

**Pandit Deendayal Petroleum University**  
**Gandhinagar-382007.Gujarat**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**Rules for M. TECH. Programme**  
**(For the Batch year 2016 onwards)**

**1. CATEGORIES OF M. TECH. STUDENTS:**

The University admits M. Tech. students under the following categories:

**1.1 REGULAR (FULL – TIME)**

A student in this category would spend full time for his M. Tech. and receive fellowship/assistantship from this University or any other recognized funding agency.

**1.2 SPONSORED (FULL – TIME)**

A student in this category is sponsored by a recognized R&D organization, national institute, government and non-government organization/institutions or industry for doing M. Tech. in on a full time basis. He should have at least two years of working experience in the respective field. He will not receive any financial support from the University. Sponsorship letter (Form I) should be attached with the application for admission.

**2. MINIMUM QUALIFICATIONS/CRITERIA FOR ADMISSION**

Students for admission to the M. Tech. Programme must satisfy the following criteria:

**(A) (i) M. Tech. in Petroleum Engineering:**

Bachelor's degree in Petroleum Engineering, Petroleum Refinery Engineering, Petrochemical Engineering, Chemical Engineering, Chemical Technology, Mechanical Engineering, Civil Engineering, Mining Engineering / M. Sc. or M.Sc Tech. in Applied Geology, Applied Geophysics, Petroleum Geology, with Mathematics as one of the courses of study at the bachelors level, and with a minimum CPI of 6.5 on a 10 point scale or equivalent (60% of aggregate marks).

**(ii) M. Tech. in Nuclear Engineering:**

Bachelor's degree in Mechanical/Electrical/Electronics/ Instrumentation & Control/Chemical / Civil / Metallurgical / Production/Industrial Engineering OR M.Sc. in Electronics/Physics/Nuclear Physics with a minimum CPI of 6.5 on a 10 point scale or equivalent (60% of aggregate marks)

**(iii) M. Tech. in Energy Systems & Technology (Focused on Solar Energy):**

Bachelor's degree in Electronics/Electrical/Instrumentation & Control/Mech./ Production Engg./Semiconductor Technology/Energy Science & Engg. OR M.Sc. or equivalent degree in Physics/Applied Physics/ Electronics/Optoelectronics; with a minimum CPI of 6.5 on a 10 point scale or equivalent (60% of aggregate marks).

(B) Students have to qualify in the entrance examination and personal interview conducted by the University.

### **3. ADMISSION PROCEDURE**

- 3.1 Admission to the M. Tech. Programme will normally be in the months of May/June every year. For admission an advertisement will be released generally in the month of April/May (on the University website as well as in the national news papers).
- 3.2 Admission to the Regular (Full-Time) category of students is granted on the basis of written and oral admission test held usually during the month of June or July every year. Candidates without valid GATE score may be considered for admission without fellowship. Admission to the Sponsored (Full-Time) category is granted on the basis of interview/admission test along with Regular (Full-Time) category of students.
- 3.3 The applicants who have completed or are likely to complete all the examinations including the thesis oral examination, viva etc. of the qualifying degree by the date of admission to the programme may be considered for provisional admission after payment of requisite fees; however, if admitted, they must produce the evidence of their having passed the qualifying degree examination with the specified minimum marks/CPI (as specified in clause 2), failing which their admission is liable to be cancelled. In such cases, fees paid by the candidate will not be returned.

### **4. FINANCIAL SUPPORT**

Students admitted to the M. Tech. Programme under Regular (Full-Time) category will be considered for assistantships/fellowships, etc. subject to the following norms:

- 4.1 Due consideration of a valid and qualified GATE or any other score recognized by the University will be made if it is produced at the time of the selection procedure.
- 4.2 Students receiving assistantship/fellowship from the University or from any other funding agencies will be required to perform academic duties assigned to them by the School as per rules in force from time to time.
- 4.3 To become eligible for the continuance of the fellowship in subsequent semesters, the students are required 1. To have earned Minimum CPI of 6.5 in every examination. 2. To have passed every semester examinations at the first attempt besides regular attendance, disciplined and exemplary behavior and compliance with all other norms, as prescribed by the University from time to time. Continuance of the financial assistance from semester to semester shall subject to the discipline, punctuality and good academic performance as laid down in the rules.
- 4.4 Only those students who are currently registered in the postgraduate programme shall be entitled to assistantships/fellowships. The students on leave longer than that specified under the leave rules are not entitled to assistantships/fellowships.

## **5. LEAVE RULES**

### **5.1 A M. Tech. student is eligible for 30 days of leave in a calendar year.**

5.1.1 The leave of 30 days includes medical and all other leaves, in an academic year. If any Saturday, Sunday or Holiday falls during the leave, they will be counted towards leave except for such holidays prefixed or suffixed with the leave. The accumulated leave can be availed during vacation period.

5.1.2 Out of the 30 days of leave per annum, an M. Tech. Student will be permitted to avail maximum 15 days of leave on completion of each semester. However, any leave not availed at the end of any semester can be carried over to the next semester and the cumulative can be availed together, subject to a maximum of 30 days at a time.

5.1.3 During the semester period, (i.e. July–November and January –May), a student will be allowed only a maximum of one week leave including holidays.

5.2 Absence without obtaining prior sanction of leave will be considered as an act of indiscipline and shall entail reduction of scholarship on a *pro rata* basis, besides any other action that may be decided by the School.

5.3 Any absence over and above the prescribed limit of admissible leave shall entail deduction from the assistantship/fellowship, besides other actions as may be decided by the School.

## **6.1 ADMISSION**

Candidates whose selection is approved by the Chairman, Admission Committee will be admitted to the M. Tech. programme of the School after payment of the prescribed fees.

## **6.2 ACADEMIC REQUIREMENTS**

Registration at the beginning of each semester, on the prescribed dates announced in the Academic Calendar, is mandatory for every student until he completes his program. No student is allowed to attend a course without registration in that course. In case of compelling reasons, the School provides for Late Registration, whereby a student is allowed to register after the last date of registration on payment of a prescribed fine.

The student registers for course(s) during a given semester, on the basis of the program as prescribed in the curriculum.

Registration is done in person, normally on the first day of each semester, for which the schedule is announced in advance. Students having outstanding dues to the School or hostel will not be permitted to register; if a student fails to register during any semester his studentship is liable to be cancelled.

### 6.3.1 SEMESTER LOAD AND COURSE UNITS

A semester load is at least of 15 credits. Theory courses carry credits in the range of 4 to 8, practical courses carry credits 1 to 3 and Seminar/Project/Dissertation carry credits in the range of 5 to 10 (See Appendix I for an explanation).

*“Successful Research Development Programme” will be conducted as an Audit Course.*

### 6.3.2 COURSE STRUCTURE

- (a) The two year M. Tech. Programme would be consisting of a zero credit bridge course and four semesters. The first two semesters will contain five to six subjects each.
- (b) The first two semesters are for the courses. The third and fourth semesters would be for seminar project work / dissertation.
- (c) There would be a training of six to eight weeks. The training would be undertaken during summer vacation period in industry/reputed R&D organization/university. Mentoring for industrial orientation, etc. would be done during winter vacation period.

### 6.3.3 CREDITS AND SPI/CPI

Credit: A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

Requirements for students registered in M. Tech. are of four semesters. They will be required to complete a minimum of 90 credits of load of which 55 to 60 credits shall be through course work and 30 to 35 through project/seminar/dissertation. Every M. Tech. student must complete prescribed courses. SPI and CPI will be calculated on the basis of all the Postgraduate courses taken by the student.

No student registered for the M. Tech. programme shall continue in the programme for more than 3 years.

### 6.3.4 Evaluation GRADES AND POINTS

- (a) The performance of the students in their course work will be evaluated in terms of letter grades: O, A<sup>+</sup>, A, B<sup>+</sup>, B, C, P, F. These grades are equivalent to the following points/ratings on a 0 - 10 scale.

Marks Obtained	Letter Grade	Grade Point
≥80	O (Outstanding)	10
70-79	A+(Excellent)	9
60-69	A(Very Good)	8
55-59	B+(Good)	7
50-54	B(Above Average)	6
45-49	C(Average)	5

40-44	P (Pass)	4
<40	F(Fail)	0
	Ab (Absent)	0

In order to pass a course examination it is required to obtain overall minimum 40% of the maximum marks of the respective course examination. However to pass a theory course, it is required to obtain minimum 35% of the maximum marks separately in its End Semester Examination component, provided the total overall obtained is the minimum 40% of the maximum marks for the course.

***The percentage allocation for evaluating a Theory course will generally remain as given below:***

☞ 25% for Mid Semester examination, 50% for End Semester, and 25% for the Internal Assessment like Quiz, Test, Assignment, Attendance, Project, Viva, Responsiveness in class room, etc. but at least three components should be used to decide the internal assessment marks.

***.The percentage allocation for evaluating a Practical course will generally remain as given below:***

☞ 50% for the Laboratory Work and 50% for the Laboratory related Examination.

The Grade to Percentage conversion-formula devised from AICTE directive is as given below

$$\text{PERCENTAGE} = \frac{(\text{CPI} - 0.5)}{0.1}$$

A student passes the course if he gets any grade in the range of '**O to P**' but fails if he gets the grade **F or NA/Ab**. A student is awarded fail grade **F** if his performance in the course is poor. He is eligible for re-examinations per the time-table announced.

The grade '**NA/Ab**' is assigned to the students absent in the examination for any reason, as a mark of the absence.

For all students, who appeared for reexamination, the same grade will be awarded, which is evaluated by the examiner, without lowering.

(b) The grade Ab/NA is assigned to the students absent in the examination.

(c) If a student remains absent in any component of evaluations other than the End Sem. examination, his final grade will correspond to the total of weighted marks

he obtained in remaining components of evaluation he appeared at. This is applicable for sem. 1 & 2.

- (d) For the students failed in a course, the resubmission and thereupon reevaluation of assignment under component of internal assessment will be permissible at the subsequent re-examinations.
- (e) The value of the final percentage marks after considering all the components of a course examination will be calculated in the integer value which is next to the fraction-point value e.g. 43.3 or 43.7 will be considered as 44 by the examiner.
- (f) Where a student fails in a course examination, he may be graced by not more than 3% marks in final overall result of the course to pass it. A minimum requirement if any to pass in a component/s of a course evaluation shall have to be fulfilled without gracing.

The above referred scopes of gracing and calculating the marks in terms of the next integer are applicable only to the final/overall percentage result of a course examination.

### **6.3.5. ACADEMIC PERFORMANCE REQUIREMENTS**

- (a) The SPI (Semester Performance Index) or CPI (Cumulative Performance Index) of a student in any particular semester is calculated as follows:

The point equivalent to the grade awarded in each course for which the student has registered is multiplied by its unit rating.

These products are added and the sum is divided by the total number of units.

The ratio is the SPI or CPI depending on whether the number of units refer to those in that particular semester or to those in the total period of students postgraduate programme.

Based on the grades and their numerical equivalents, Semester Performance Index (SPI) and Cumulative Performance Index (CPI) of the student are calculated at the end of each semester: SPI and CPI are calculated up to the second decimal.

- (i) SPI: The performance of a student at the end of every semester is evaluated in terms of the weighted average of grade points secured in all the courses for which the student registers in the semester, and is known as SPI.
- (ii) CPI: It indicates the overall academic performance of a student in all the courses registered up to and including the last completed semester. It is computed in the same manner as the SPI, considering all the courses.

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

where  $C_i$  = Credit for the course  $i$

$G_i$  = Grade points obtained for the course  $i$  (O=10, A<sup>+</sup>=9, A=8, etc.)

$n$  = number of courses registered in a semester

$$CPI = \frac{\sum_{k=1}^m S_k \cdot C_k}{\sum_{k=1}^m C_k}$$

Where  $m$  = total number of semesters under consideration

$C_k$  = total number of credits registered for during a particular semester

$S_k$  = SPI of the  $k$ th semester

CPI reflects all courses studied by the student including the courses if any wherein he has failed/ not appeared.

- (b) The student having CPI less than 6.5 is not allowed to get Fellowships however, he can continue in the M.Tech. programme subject to fulfillment of other conditions.

## b) EXAMINATION

- i) At the end of every Odd/Even semester, there will be examinations of all eight semesters together, i.e. the end semester examination of the *current Odd/Even* semesters and the reexaminations for the *previous Even/Odd* semesters. The end semester examinations of *current Odd/ Even* semesters will be held on alternate day and the re-examination of *previous even /odd* semesters will be held in between those alternate days. In other words, there would be one reexamination for the eligible students failed/not appeared in the End Sem exam.

The examinations will be held on working days &/or also on holidays.

- ii) Registration, Examination etc. for re-examination is to be carried out as per the academic calendar/separate notice, and the evaluation is to be carried out in the same manner as done in the regular semester courses.
- iii) Generally, the examination question paper will be of 100 marks for 3 Hours duration and of 50 marks for 2 Hours duration.
- iv) Students are not permitted to re-register or take re-examination for courses in which they have already obtained a pass grade or 'P', **except particular provision mentioned if any in the rules.**
- v) The number of attempts a student takes to pass the courses shall appear on the grade sheet/transcript.

- vi) It is necessary for a student to complete all the experiments in a Lab/Practical course as a requirement to appear in the practical examination at the respective end semester/reexaminations.
- vii) If a student having course-backlog/s and wants to improve his/her mid semester score can appear along with the respective regular students during their mid semester examinations of the same syllabus by applying for it to the respective School–Admin during the week previous to the exam, subject to the nullification of the previous mid semester score of the student in the respective course/s. Rs. 500/- shall have to be paid by the student as the fees to reappear in the mid semester examination irrespective of the no. of courses-exam of a semester to re-appear. The School-Admin shall inform the concerned course/coordinator for such reappearance of the student/s.
- viii) The backlog-students opting for the repeat of the Mid Sem examination shall also have to appear at the subsequent end semester/reexamination to pass the respective course, as usual.

c) **RE-EVALUATION DUE TO ILLNESS OR ACCIDENT IN CASE OF MISSING QUIZ/MID-SEMESTER EXAMINATION**

The students remaining absent at the Mid. Semester Examination/ Internal assessment while pursuing a semester shall have to appear at the re-test for the same.

The students not appearing at any of the End Semester/Re-examinations are required to submit a letter explaining reason of absence through their parents, to the respective School-Admin. In case of not submitting such explanation properly, such students will not be permitted to appear at the subsequent examinations to pass respective course/s.

d) **DISCLOSING THE EVALUATED ANSWERBOOKS & PERIOD OF ITS RETENTION**

The students can see their evaluated answer books including the assignments and such other documents related to the evaluation for all examinations with the Course Coordinator on the date/s specified by the course coordinator (faculty/teacher) or as specified in the academic calendar as the case may be. Thereafter no claim regarding it shall be grantable. The evaluated answer scripts of every examination will be preserved by the teacher for a minimum period of one year from the date of examination.

e) **TREATMENT OF MALPRACTICE / UNFAIR MEANS**

The students found/ reported for malpractice/ using unfair means in an Examination/ Re-examination/ Assessment will be called in front of a Special Committee constituted for the purpose, which will recommend to the Director its decision about penalizing the concerned students. The Director's decision in such matters shall be final and binding.



**f) PERFORMANCE REQUIREMENTS**

For award of the M. Tech. degree in respective discipline, a student must fulfill the following requirements:

- (i) The student is required to have registered in and passed all the courses of semester I to Semester IV as prescribed by the University in the Curriculum, within three years.
- (ii) His CPI is equal to or more than 6.00.
- (iii) The student is required to have satisfactorily fulfilled other academic requirements also such as the Internships, training, projects, field visits, seminars etc. as specified from time to time.
- (iv) The student is required to have paid all the University dues.
- (v) No pending case of indiscipline against him.

The students who passed all courses of the programme but not earned min 6 CPI can reappear at the ongoing exams in Theory course/s to earn minimum 6 C. P. I. to become eligible for the award of the degree. For such students the actual grade (without lowering further) obtained by them upon reappearing in the examinations shall be the final grades and the previous grades shall be null & void.

**g) ELIGIBILITY FOR ADMISSION TO THE NEXT SEMESTER**

<b>Semester</b>	<b>Conditions</b>
II	-
III	Must not have failed in more than seven courses of I and II Semester, combined.
IV	Must not have failed in more than seven courses of I, II and III Semester combined.

The conditions regarding the no. of F grades are obviously inclusive of NA/Ab grades.

- h) Only those students who fulfill the eligibility criteria for admission to the respective semester can attend the academic sessions as per the class timetable of the semester. The semester fees paid by a student shall be valid for the admission/registration to the respective semester only upon the fulfillment of the eligibility criteria for the same.
- i) If a student having one or more backlog in a semester wants to repeat a semester completely can be permitted upon the approval of the School Director or faculty/Staff nominated by him; subject to the nullification of all the previous academic data of the semester to be repeated. Rs. 20,000/- shall have to be paid by the student as the tuition fees for repeating a semester.

**6.3.6 THESIS/PROJECT**

- (a) Thesis supervisor(s) for a student will be appointed by the School-Director from amongst the faculty members. The School will evolve modalities for appointing of supervisors keeping in view the students' aspirations and faculty interest. No change/addition of Supervisor(s) is allowed after the thesis has been submitted to the academic/examination section.
- (b) In case there has been a change/addition in the Supervisor(s), the thesis will be submitted not earlier than three months from the date of communication of such change/addition to the academic/examination section.
- (c) No student once registered for thesis/project units will be allowed to continue the programme without a Thesis Supervisor having been appointed by the Director. No change in thesis supervisor(s) will be allowed without the consent of the Director. In exceptional cases, with prior approval of the Chairman, Academic Council and on the recommendation of Director, a student may be allowed to have a co-supervisor from outside the School/University.
- (d) Each student will be required to submit one bound copy of the thesis/project each to the academic section and the Thesis Supervisor(s) and to library. The thesis/project will be examined by an Oral Examination Committee consisting of the thesis supervisor(s) and at least two but not more than four other faculty members of the school (not below the rank of Associate Professor) and an external examiner as proposed by the thesis supervisor(s) in consultation with Director of the school. The thesis Supervisor will act as the convener of the Oral Examination Committee.
- (e) Thesis/Project evaluations with a weightage of 40% for mid semester and 60% for end semester examinations.
- (f) Internal supervisor and External examiners will evaluate M.Tech. dissertation with equal weightage between them.

**(g) Acceptance/Rejection of the Thesis/Project**

A thesis/project will be considered to have been accepted if majority of the members of the committee recommend its acceptance. Otherwise the thesis/project will be considered to have been rejected. If a thesis/project is rejected along with a recommendation by the Committee for resubmission after incorporating and modification/correction suggested by the Committee, oral examination for the re-submitted thesis/project will be conducted by the same Committee unless otherwise approved by the Director. If the resubmitted thesis/project is rejected, the student has to undergo his thesis/project work entirely afresh and to complete it successfully within the limit of the same time period as prescribed in the rules.

**7.1 GENERAL CONDUCT & DISCIPLINE**

- a) The University attaches the utmost importance to strict integrity, honesty, and general conduct of the students.

- b) Every student shall conduct himself in a manner befitting his association with an institution of national importance. He is expected not to indulge in any activity that is likely to bring down the prestige of the University.
- c) He should also show due respect and courtesy to the teachers, administrators, officers and employees of the School, and good neighborly behavior to fellow students. Due attention and courtesy is to be paid to visitors to the School and residents of the campus.
- d) Lack of courtesy and decorum, unbecoming conduct (both within and outside the campus), willful damage and/ or removal of PDPU property or belongings of fellow students, disturbing others in their studies, adoption of unfair means during examinations, breach of rules and regulations, noisy and unseemly behavior, and similar other undesirable activities may result in Disciplinary Probation and expulsion/ dismissal from the University.
- e) Every student, while on the university premises, should observe a decent civilized dress code.
- f) Smoking and consumption of alcoholic drinks is strictly prohibited on the University campus.
- g) Ragging in any form is a criminal offence and is strictly prohibited.
- h) Students are not permitted to run any commercial venture in or outside PDPU campus. They are also not permitted to associate/ help/ advise any organizations on a commercial basis and to receive any honorarium for the services rendered during their studies. They are free to work on the campus only if such an opportunity is provided by the University.
- i) The students are required to keep themselves updated with different Notices, Circulars etc. & revisions in the rules if any from time to time informed through Email/Website/Notices. For this the students have to check their email Ids allotted to them through the University and also to check the University website/notice board regularly.

## **7.2 ACADEMIC CONDUCT & DISCIPLINE**

- a) The University attaches the utmost importance to strict integrity and honesty in all segments of academic work.
- b) Any form of dishonesty including attempts to copy or help others copy in any manner is strictly prohibited. Unless specified otherwise by the teacher concerned, students must not collaborate/ syndicate in any manner in completion of home assignments and projects.
- c) Canvassing for grades is strictly prohibited.
- d) Penalty for breach of academic discipline includes expulsion from the University.
- e) Marking proxy attendance for others or having attendance marked by others will attract severe punishment.
- f) Cases of indiscipline or misconduct such as mass abstention from classes, irresponsible behavior inside or outside the classes, use of unethical practices during Internships or violation of the rules and regulations of the Program will be severely dealt with.
- g) The University reserves the right to impose fines for acts of indiscipline. In more severe cases, a student may be placed on Disciplinary Probation for a semester. Repetition of indiscipline during Disciplinary Probation may result in a student being expelled from the University for a semester or academic year.

- h) In any case where the result of an examination has been ascertained and published, and & it is prima facie found that such result has been affected by any malpractice, fraud or any other improper conduct on the part of a student, the Director General shall appoint an ad-hoc committee to examine the matter and seek its opinion. If the opinion of the Committee confirms the mal practice on the part of the student for seeking benefits, following the process of natural justice, the Director General shall amend the result as deemed necessary and order the withdrawal of the certificates/prizes/awards from the student.
- i) A student having less than 50% overall attendance in a semester shall have to repeat the semester.
- j) In any case where the result of an examination has been ascertained and published, and & it is prima facie found that such result has been affected by any malpractice, fraud or any other improper conduct on the part of a student, the Director General shall appoint an ad-hoc committee to examine the matter and seek its opinion. If the opinion of the Committee confirms the mal practice on the part of the student for seeking benefits, following the process of natural justice, the Director General shall amend the result as deemed necessary and order the withdrawal of the certificates/prizes/awards from the student.
- k) In any case where the result of an examination has been ascertained and published, and it is found within six months from the date of declaration of the result that such result has been affected by an error or omission, the Director General shall have power to amend such result in such manner as shall be in accordance with true position and to make such declaration as deemed necessary in that behalf.

**8. All the above rules are subject to the change from time to time.**

## **APPENDIX-I**

### **Postgraduate Courses**

#### **1. Course Units**

The credits of a Postgraduate Course will be arrived at as follows: for each lecture hour and for each tutorial hour, there shall be two and one credit respectively. For each practical (laboratory) and seminar/project/dissertation hour there shall be half credit. Some examples are given in the table below.

<b>Contact hours of the course (per week)</b>	<b>L-T-P</b>	<b>Weightage (Credit)</b>
Three Lecture hours	3-0-0	3
Three Lecture hours + one tutorial hour	3-1-0	4
Three Lecture hours + Two hours lab session	3-0-2	4
Ten Seminar/dissertation/project hours	0-0-10	5

#### **2. Approval of New Courses**

All Postgraduate courses require the approval of the Academic Council (after recommendation from the Board of Studies/ Faculty) before being offered. The course will be proposed by the interested faculty member and submitted to the BoS for consideration, which, in turn, may recommend and forward to the Dean, Faculty of Engineering & Technology.

**FORM I – SPONSORSHIP LETTER**

(This should be typed on the letter head of the sponsoring organization)

Reference No.

Date:

The  
The Director General  
Pandit Deendayal Petroleum University  
Raisan, Gandhinagar- 382 007

Sub: Sponsoring an Employee for M. Tech. Programme

Dear Sir,

We hereby sponsor the candidature of Mrs./Mr. ...., who is an employee in our organization, for joining M. Tech. Programme in .....at your Institute as a full -time student. He has the two years experience (from\_\_\_\_\_to\_\_\_\_\_) of working in the field of \_\_\_\_\_ at ours.

We shall relieve him of his duties in the organization during the two years of the M.Tech. programme.

Signature and seal of the  
Sponsoring Authority