Indian Institute of Technology, Dharwad

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भारतीय प्रौद्योगिकी संस्थान धारवाड़
Indian Institute of Technology Dharwad

Rules and Regulations

M.Tech. Programme

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Indian Institute of Technology, Dharwad

Preface

Academic Programmes of the Institute are governed by Rules and Regulations as approved by the Senate, which is the highest Academic body of this Institute. The Senate continuously monitors these programmes and makes appropriate modifications/improvements from time to time. This booklet gives comprehensive information on the Rules & Regulations about the M.Tech. Programmes at IIT Dharwad.

The academic system is semester-based and hence the students are required to follow certain procedures and meet certain academic requirements each semester.

It is in the interest of the student that he/she should be fully familiar with the academic systems of this Institute. Particular attention should be paid to the schedule and structure of coursework and project work, the assessment procedure and the rules governing conduct and assessment of these activities.

The academic performance is monitored by the Postgraduate Academic Performance Evaluation Committee (PGAPEC), which also reviews the status of individuals after reviewing their performance.

Contents

1. Programme Committees

The Institute offers Postgraduate Programmes in various areas (listed in Annexure1). The following sections provide the details of the programmes and set of rules governing them.

In order to keep pace with the rapid developments in science and technology and to keep in view the requirements of the nation and the aspirations of students, it is imperative that the academic programmes of the Institute are reviewed continuously. The **PGAPEC** is entrusted with this responsibility. It deliberates upon academic proposals received from the various **Departmental Postgraduate Committees (DPGCs).** Based on its deliberations, it makes suitable recommendations to the Senate for its approval.

2. Faculty advisory systems

On joining the Institute each batch is assigned a departmental Faculty Advisor(s). He/She is expected to consult his/her Faculty Advisor on all matters relating to his/her in- semester and end-semester academic performance and the course/project workload he/she may take in the particular semester. The students are advised to contact the Faculty Advisors for advice about courses within the framework of the norms laid down for the purpose.

3. M. Tech. Programmes

These programmes are of a two-year duration. The total minimum credit requirement for the entire programme varies from one programme to another (i.e., an M.Tech. Programme of Department 'A' may be different from that of Department 'B'). Each programme is managed as per the rules set up by the Department offering the programme.

The total credits are divided between course credits and the M.Tech. project credits, as specified by the individual Programme Committees (PCs). Course credits include theory courses, laboratory courses, seminars, projects and other academic work like practical training, internships field visits, etc. as specified by the PCs.

4. General Information

4.1 Registration

1. On joining the Institute every student is required to plan his/her academic programme in consultation with a Faculty Advisor of the Department in which the student is admitted. Details of the academic requirements of this programme and

details of courses available are given in the bulletin, which are available on the website of each Department.

2. Students are required to register at the beginning of each semester. The prescribed registration dates are announced from time to time in the Academic Calendar.

3. All students have to clear the Institute and Hostel dues before Registration.

4. IIT Dharwad follows a semester system, hence registration at the beginning of each semester is mandatory for every student till he/she completes his/her programme of study. If a student does not register in a particular semester without prior permission of the PGAPEC, he/she ceases to be a student and the admission is liable to be cancelled.

5. Further, if a student does not register for TWO consecutive regular semesters, the admission will be cancelled by the PGAPEC suo moto.

6. The Faculty Advisors are authorized to carry out the course registration and also adjustments as specified later. The Faculty Advisor shall be competent authority to approve the course registration in all cases.

7. Any student who concurrently registers for any postgraduate degree at another organization shall be automatically de-registered at the Institute.

4.2   Rules and Regulations

The rules and regulations governing the M.Tech. programmes are given below:

4.2.1   Admission

Programme Categories and Financial Support

- The Institute admits M.Tech. candidates under the Teaching Assistantship (TA)/ Teaching Assistantship through Project (TAP)/ Fellowship Award (FA).

- Admissions to Institute Teaching assistantship (TA) and Teaching Assistantship through project (TAP) categories are on a competitive basis and based on a valid GATE score.

- Admissions to all categories are subject to availability of seats. The continuation of the financial support and the registration for the selected programme will be subject to satisfactory performance of the duties assigned by the Academic Unit as well as satisfactory academic performance and fulfillment of the other academic and non-academic requirements, as per Institute rules.

4.2.2   Change of Categories

Change of student status is permitted, subject to approval of PGAPEC, from one category to another. Candidates admitted to the Institute via Teaching Assistantship through Project (TAP) cannot change their category to Institute Teaching Assistantship (TA).

4.2.3 Change from M.Tech. to Ph.D.

This provision is to enable a student to apply for an upgrade from Masters degree to PhD degree and should not be considered as admission into Dual Degree (MTech/MS+PhD) program as no such academic program currently exists in IIT Dharwad.

Eligibility

Students registered for MTech/MS and completed all the coursework credit requirements for their respective degree and having minimum CPI of 8.0 (based on course work alone) are eligible to apply for an upgrade to the PhD programme.

The nominal duration of assistantship for MTech and MS is 2 and 2.5 years respectively. Coursework is normally expected to be completed in the first two semesters. The student is expected to be able to assess her aptitude for long term research after gaining flavour of the thesis work for a semester (viz., the third Semester). Thus the request for upgradation is normally expected to be made any time starting from 3rd semester and before the registration for the 4th semester begins. Such a timing will help the student to register for any additional courses in the 4th semester. In any case, no request for upgradation will be considered, if made beyond the period for which the student is originally eligible for assistantship in the degree to which admitted (MTech/MS).

As upgradation is recognition of the capability demonstrated during the tenure before status change, the student should not have any failure grades (FF/FR) in the courses nor should the student be awarded any disciplinary action from the Institute for unacceptable academic or other activities.

Application Process

Upgrade requests from MTech/MS to PhD should be submitted through the supervisor along with a research proposal for PhD programme.

The student will have to present the research proposal in front of the RPC/DPGC which will then give its recommendation on upgrade request from MS/MTech to PhD.

Course work and Thesis

On successful presentation/defence of the research proposal, the student will be exempted from the further stages of MTech/MS project, on upgradation to PhD programme.

All students who upgrade their registration to PhD should successfully complete the credit requirements as stipulated for the PhD program. They should also successfully complete further coursework as deemed necessary for their research work, if any, prescribed by the RPC/DPGC.

After upgradation to PhD, the student will be governed by the Rules and Regulations of PhD programme in force, including the Research Assistantship, confirmation of PhD registration etc.

Considering the NEP 2020 policy, flexibility in choice is available for those students converting from MS as follows - MS student on conversion to PhD program, can seek to switch over from MS-PhD to MTech-PhD program, provided the student completes the additional coursework credit requirements of the MTech program.

Completion or early exit

On successful completion of the PhD degree requirements and the viva-voce examination, the student will get both the degrees (MTech/MS and PhD).

If a student is however required to quit the program, after upgradation but before completing the requirements for the award of PhD degree, (s)he needs to submit and defend a consolidated research wok report as thesis for MTech/MS. The student may, after successful defence, be considered for the award of MTech/MS as an exit option.

4.2.4 Maximum allowed duration for M.Tech. programme

The student must complete the programme within **four** years from the date of original registration for the M.Tech. programme.

4.2.5 No external assignments allowed for full-time students

A full-time student should not take up any other external assignment or job before submitting his/her dissertation.

5. Course Credit Requirement and Course Registration

5.1 Pattern of Courses and Credits

- The courses offered for the M.Tech. Programme may be Lecture Courses, Laboratory Courses, Design Courses, Research Practicum, and R & D Projects.

- The credits assigned to a course is dependent upon the contact hours associated with the course and is obtained by adding all these hours.
- The credits for all the available courses are indicated in the Courses of Study Bulletin, available on the institute website.

5.2 Academic credit requirement

Students are required to complete all the credits required for the M.Tech. programme as approved by the Senate from time to time.

5.3 Research Practicum

Research Practicum shall satisfy the following conditions:

1. Each research practicum shall carry three credits.
2. Research Practicum shall be treated as a course for the purpose of registration & evaluation.
3. Seminar supervisor shall organize the Seminars and forward the grades awarded by the panels of examiners to the Academic Office by the end of the Semester.

5.4 Course Credit Requirements

1. Minimum 125 credits is set for M.Tech., though there may be minor variation in total credits from one specialization to another.
2. The credits for the M.Tech. Project (MTP) are taken as 64 (32 credits each in the 3rd and 4th semesters). Seminar is for 3 credits. Thus, the Institute Core (IC) is 67 credits.
3. The Program Cores (PC) are three theory courses and a lab (about 21 credits).
4. Electives will be a minimum of 35 credits, i.e., at least 6 courses.
5. The students can take up to 12 credits from the UG courses considering the interdisciplinary nature of the programs and the diverse backgrounds of students.
6. The M.Tech. Project/thesis can be taken up with any faculty of the institute as long as the topic is relevant to the specialization.
7. Students with adequate background may be permitted by DPGCs to replace 6 or 12 course credits with R&D projects (distinct from M.Tech. project). If the option is for 12 credits, it can either be taken together in one semester or split into two projects of 6 credits each, taken in two semesters. One cannot register for more than 6 credits towards R&D project in the first semester. The projects will be evaluated as per norms set by each Department and will be awarded letter grades.
8. Along with the credit courses, a student is normally allowed to take a maximum of Two Audit courses per semester, with the consent of the Project Guide/Faculty Advisor, as appropriate.

9. A student is not permitted to re-register for a course, which he/she has undergone and in which (s)he has secured AU, DD or higher grades.

5.5 Course Adjustments

Within the period prescribed in the Academic Calendar, a student can substitute one or more courses by others. For this purpose, the student has to carry out the Course Adjustment in consultation with his/her Faculty Advisor.

5.6 Dropping of course(s)

The last date for dropping a course by the student will typically be two weeks after the mid-semester examination for the semester long courses and one week after the mid-semester examination for the half-semester courses. The last date for dropping of course will be included in the Academic Calendar.

6. Course Assessment and Award of Grades

For every course taken by the students, he/she is assigned a letter grade on his/her combined performance in all the assessments. These grades are described by the following letters and corresponding grade points. **Minimum passing grade in a course is DD.** All grades (including FR, DX, W etc.) obtained by a student will be mentioned in the transcript.

TABLE 1: LIST OF LETTER GRADES

Letter Grade	Grade Point
AP	10 (Grade is awarded to students with exceptional performance)
AA	10
AB	9
BB	8
BC	7
CC	6
CD	5
DD	4
FR	0 (Fail- Repeat the course)
DX	0 (Attendance below 80% - Repeat the course)
PP	Pass
NP	Not Passed
AU	Audit
II	Incomplete (place holder, awarded on medical grounds; gets converted to an appropriate grade after Semester end-semester end re- examination, else will be converted in "FR" else automatically converted to "FR" before subsequent semester)
DR	Dropped

Some courses are only associated with PP/ NP grades. In such courses, satisfactory completion is indicated by the award of the PP grade.

6.1 FR grade

- The letter grade FR shall be treated as failure grades. FR grade will be awarded in case(s), where, in the opinion of the Instructor (panel of examiners in case of the Projects), the student has inadequate academic exposure to the course/has very poor performance in the in-semester and/or end-semester examinations.
- A student getting a FR grade has to re-register for the same course if it is a core subject. If this course is an elective course, he/she may register for an alternative course as prescribed by the DPGC/ without this being counted as an additional course. A student who obtains a fail grade in a course more than once, the grade points/credits will figure only once in the numerator as well as denominator, respectively, for the purpose of SPI/CPI calculations.
- "FR" grade may also be awarded for Academic malpractices. Academic Malpractices are severely dealt with. The details pertaining to Academic malpractices are available on the institute portal.

6.2 Audit Grade

The student registered for a course as audit shall be awarded the grade AU if they fulfill the requirement of minimum of 80% attendance and duly satisfactory in-semester performance as prescribed by the Instructor. The Instructor shall include such AU grades in the final grade report for that course. If the student does not qualify for the grade AU, it will be assumed that the course has been dropped by that student.

6.3 II grade

The grade II shall be awarded to a student in a lecture/ laboratory course if he/she has satisfactory in--semester performance and has fulfilled the attendance requirement, but has not appeared for the semester -end examination. The student will be eligible for a make-up for the semester -end examination if the absence was due to medical reasons or extraordinary circumstances. For re-examination, the student will have to apply to the Academic Office. In case of absence due to medical reasons, the application should be accompanied by a medical certificate issued/ authenticated by IIT Dharwad Hospital. In case of absence due to extraordinary circumstances, the supporting documents should be submitted. DPGC will decide whether re--examination is to be allowed, after consulting with Course Instructor in case of medical reasons. In case a re--examination is allowed and is conducted, the instructor shall decide the final grade on the basis of sum of in--semester

and the re- examination marks. The weightage of the re--examination would be the same as that of the final examination that the student has missed. In all other cases the II grade will be converted to FR grade. In any case, the II grade will not be continued beyond the commencement of the subsequent semester.

6.4 DX grade - Class Attendance Rules

'DX' grade is awarded to students who have inadequate attendance as per following:

IIT Dharwad expects one hundred percent (100 %) attendance from its students. If the attendance of the student, as counted with effect from the first contact hour, falls below eighty percent of the total attendance expected, the instructor may award the student, a 'Drop due to inadequate attendance', 'DX' grade in that course. For the purpose of CPI calculation, the 'Drop due to inadequate attendance' Grade would be treated as equivalent to a 'Course Drop' carried out on initiation by the student. Further, if a student has 80% attendance or more, he/she cannot be awarded the 'DX' grade."

7. Performance Requirement and Re-examination in Courses

7.1 SPI

The performance of a student in a semester is indicated by a number called the Semester

Performance Index (SPI). The SPI is the weighted average of the grade points obtained in all the courses and projects taken by the student during the semester.

Example: Suppose in a given semester a student has taken five courses having credits C_1, $C2$, $C3$, $C4$, $C5$ and his/ her grade points in those courses are G_1, $G2$, $G3$, $G4$, and $G5$ respectively. Then his/ her

$$SPI = \frac{C_1 G_1 + C_2 G_2 + C_3 G_3 + C_4 G_4 + C_5 G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

SPI will be calculated (after re-examination, if any) on the basis of the final grades awarded AA, AB, BB, BC, CC, CD, DD and FR. The SPI is calculated up to two decimal places.

7.2 CPI

An up-to-date assessment from the time the student entered the Institute is obtained by calculating a number called the Cumulative Performance Index (CPI). The CPI is the weighted average of the grade points obtained in all the courses taken by the student since he/she entered the Institute. It is calculated in the same manner as the SPI.

7.3 CPI calculation after clearing a failed course

In case of a student clearing a failed course, or a course taken in lieu of an earlier course as approved by the Department, the earlier failed grade would be replaced by the new passing grade in calculation of the CPI.

7.4 Discontinuation from the programme

7.4.1 Minimum CPI

Minimum CPI for the M.Tech. Programme is 6.0 for continuation of the programme. However, if re-examination is allowed (in case of lower than 6.0 CPI) and taken, CPI will be calculated using the new grade obtained by the student in the re-exam.

7.4.2 FR Grades

A student will be required to discontinue the programme if at the end of any semester he/she has two or more FR grades.

8. Project

8.1 Project Allotment

Each student is expected to decide a topic for project work in mutual consultation with his/her M.Tech. project supervisor by the end of the second semester.

8.1.1 Project supervisor

Each student should have a Project Supervisor from the faculty of the host Department(s) to which he/she is admitted. In addition, a Co-supervisor(s) from within or outside the same Department/ Institute may be co-opted by the Supervisor with prior approval of the DPGC.

8.1.2 Guidance during Supervisor's absence

Whenever a Supervisor leaves the Institute permanently/temporarily, the DPGC shall make alternative arrangements for guidance during the supervisor's absence.

8.2   Schedule for Project Assessment

MTP will be evaluated in two stages. MTP Stage-I will be evaluated by Project supervisor(s) and internal examiner approved by DPGC. MTP Stage-II presentation will be evaluated by a board of examiners approved by DPGC as described in the subsequent section.

8.2.1   Submission of Project (at both stage-I and stage-II)

1.   Students are required to submit a soft copy version of the report at least two weeks prior to the date of presentation to the Supervisor, for perusal and modification and at least one week prior to the date of defense to the Committee for examination.

2.   The viva--voce is to be conducted under departmental arrangements.

3. Forms for submission and final grade reports are to be sent by the panel of examiners to the Academic Office through DPGC on completion of viva voce.

8.2.2   Late Submission of Project

Whenever any project stage is not submitted before the last date as specified in the academic calendar, the student is required to:

1.   Make specific requests for extension (with or without any grade restriction), through supervisor, along with appropriate justification, **at least 15 days before the last date of submission.**
2.   Pay the Institute fees and register for the next semester.

8.3   Project Evaluation

8.4   Committee Members for Evaluation

I Stage	i) Supervisor(s) ii) One Internal Examiner

II (Final) Stage	The II (Final) Stage assessment will be done by a Board of Examiners appointed by the DPGC consisting of the following: i) Supervisor (s) ii) Internal Examiner iii) External Examiner (External to the Department) iv) Chairperson: A HoD or his nominee from another academic unit.

- There will be no grade penalty or restriction for delayed presentation or re-examination (after failure in the first presentation) of the M.Tech. Final stage project presentation.

8.5 Minimum Passing Grade for Project

The minimum passing grade in each of the project assessments shall be CC.

8.6 Stage-I project presentation

In case a student gets a fail grade in the project assessment in stage-I he/she should carry out additional work/modifications etc. as suggested by the panel and appear for assessment within one month from the date of previous assessment. The re-assessment must be completed before the registration date for the next semester. If the student fails in this re--assessment, he/she must repeat that stage completely by re-registering for stage-I in next semester.

9. Temporary Discontinuation

In genuine cases, if the DPGC recommends temporary discontinuation **after course work or project stage- I**, such temporary discontinuation may be considered by the Academic Office. During the period of discontinuation, the student continues to register for the semester and pay the regular semester fees, whereas the student will not be paid the TA fellowship.

9.1 Documentation requirement

Students who have requested Temporary Discontinuation have to submit the following certificates at the time of rejoining the programme:

9.1.1 If a break is permitted on medical grounds

1. He/She should submit medical reports issued/authenticated by the IIT Dharwad Hospital.
2. Joining report though the Head/Convener of the Dept. group to the Academic Office.

9.1.2 If a break is permitted to join a job

1. He/She should submit a relieving certificate from the employer.
2. Joining report through the Head/Convener of DPGC.

9.2 Continuity for finishing stage-II

He/She has to work at a stretch for a minimum period of **6-9** months at the Institute for completing the II stage of the project.

9.3 Maximum allowed duration for M.Tech. programme

The student must complete the programme within maximum permissible duration from the date of original registration for the M.Tech. programme, even if temporary discontinuation is permitted.

10. Conversion to External (EX) category

Option for conversion to External (EX) category for completion of one year long Masters' project is possible as follows:

1. The students who get a job, may apply to convert to 'EX' category.
2. The student must have completed the minimum required course work of the programme to apply for conversion.
3. Students would be required to submit project title, proposed work along with names of guide/co--guide to the DPGC. The DPGC will evaluate the proposal and communicate the recommendation to the PGAPEC.
4. Provision of an External Supervisor will be optional. Students must be in regular contact with the IIT Dharwad Supervisor for completion of the MTP.
5. Submission of "No Objection Certificate" from the Employer for completing the MTP at IIT Dharwad would be mandatory.
6. The student must continue to register and pay semester fees (as applicable for EX category students) till the completion of their programme.

7. Students will not be eligible for hostel accommodation on conversion to External Category.

11. Vacation /Leave Rules

1. Students are entitled for a maximum of 30 days leave (in addition to public holidays) per year of the programme.
2. In addition, Special Leave to attend Seminars/Conferences in India/abroad with regard to their project work / to present research papers, is admissible as follows.

Event	Duration	Stipend	Sanctioning Authority
Conference / Seminar*	5 working days per semester	Yes	Head of the Academic Unit

* Academic leave in excess of above shall be considered by the Dean (AP) on the recommendation of the Convener, DPGC.

12. Glossary

PGPC	- Postgraduate Programmes Committee.
DPGC	- Departmental Postgraduate Committee.
PGAPEC	- Postgraduate Academic Performance Evaluation Committee.
SPI	- Semester Performance Index, which is obtained by dividing the Semester Grade Points by the Semester credits.
CPI	- Cumulative Performance Index which is obtained by dividing the Cumulative Grade Points by the Cumulative Credits.

13. Annexure 1: List of M.Tech. Programmes

Sr. No.	M.Tech. Programme	Host Department
1.	M.Tech. in Data Science and AI (DSAI)	Department of Computer Science and Engineering
2.	M.Tech. in Mechanical Engineering	Department of Mechanical Materials and Aerospace Engineering
3.	M.Tech. in Sustainable and Smart Mobility	Department of Electrical Engineering