

## **ORDINANCES FOR THE MTECH / PHD PROGRAMS**

For details please visit at the following link:  
<http://www.iiitd.ac.in/education/resources>

## REGULATIONS FOR THE MTECH / PHD PROGRAMS

### 1. General

- (1) This document gives the general regulations applicable to all MTech and PhD programs. Specific requirements for a particular MTech program (e.g. MTech in Computer Science and Engineering) are specified in regulations for that program. For PhD, special requirements for different disciplines (e.g. CSE, ECE, CB and Maths) are given at the end of this document – these special requirements have to be satisfied by PhD students in that discipline.
- (2) While the Senate is the main statutory body for all academic matters, the Postgraduate Committee (PGC), a standing committee of Senate, shall oversee matters related to the postgraduate program. The committee will comprise of a PhD coordinator for each of the disciplines, program coordinators for all MTech programs, the UG Committee Chair, and at least one student representative who will be a full time PG student of the Institute. The committee may coopt, with permission of Chairman, Senate, other Faculty members, Students, Research staff, and members of the Senate in PGC.
- (3) Any condition arising in the PG program and not covered in this manual shall be referred to the PG committee which may refer it to the academic senate.
- (4) Dean of Academic Affairs (DOAA) is the main functionary who ensures the smooth functioning of the academic programs as approved by the academic senate, executes the policies and decisions of the Senate and PGC, and maintains all records and files.

### 2. Academic Session and Calendar

- (1) There are two regular semesters and one summer term in a year. Most courses are taught in the regular semesters. The semester timeline shall be defined in the academic calendar and will be broadly the following.
  - a. **Semester I (Monsoon Semester).** Starts around in the first week of August and ends around the end of November.
  - b. **Semester II (Winter Semester).** Starts around the first week of January and ends around the last week of April.
  - c. **Summer Term:** Starts around the middle of May and ends around middle of July.

### 3. Categories of Students

#### (1) Sponsored and regular students

- a. **Sponsored** – This category comprises of students who are working professionals and are sponsored by their respective organizations by giving an undertaking (NOC). They

will not be entitled to any financial assistance from the Institute, fee waiver, and on-campus placement.

- b. **Regular** – This category of students are non-sponsored, normally registered as full time students.

**(2) Full-time and part-time students**

- a. Full Time Students – Students who are not holding regular work/employment and are primarily engaged in their academic program only. Full time students are expected to register for academic load of at least 12 credits in a semester.
- b. Part Time Students – Registered students who are engaged in regular work/employment elsewhere and are pursuing the program along with their regular employment. A part-time student is generally expected to register for at least 4 units each semester.

**(3) Migration among various categories**

- a. Migration from part time to full time (and vice versa) is permitted. In particular, a full time student may be permitted to become a part-time student towards the completion of the program. Migration from Regular to Sponsored and vice-versa is also permitted. All migrations have to be requested along with supporting documentation by the student for approval to the PGC.

**4. Admission**

**(1) Eligibility and Admission Criteria**

- a. For MTech, an applicant must have a BTech/BE/MCA/MSc in CS/IT/EE/ECE or other disciplines as may be announced, from a recognized university (including State Universities)/Institute.
- b. For M.Tech.(CB) an applicant must have
  1. B.Tech/BE in CS/IT/Math-and-Computing
  - or
  2. B.Tech/BE in any other discipline
  3. MCA
  4. MSc. (Physics, Chemistry, Mathematics , Computer Science, Biochemistry, Microbiology, Biotechnology, Biophysics, Bioinformatics, Biomedical sciences)
  5. B.Pharm
  6. MBBS

For Point 2, 3, 4, 5, 6 the applicants must have done the following either during their qualifying degree or from recognized institution / online education portal:

- at least one computer programming course, and
- at least two Mathematics courses

- c. For PhD, an applicant must have a BTech/BE/MCA/MSc or an MTech/ME/MS in CS/IT/EE/ECE or other disciplines as may be announced, from a recognized university/Institute.
- d. Other eligibility/admission criteria will be decided each year, and may be different for the different categories of students. Admission to the programs will be based on one or more of the following inputs:
  - (i) Past academic and professional record and recommendation letters
  - (ii) Performance in national/international tests for PG programs
  - (iii) Performance in the written & programming tests &/or interviews organized by IIT-Delhi
  - (iv) For Ph.D. program in Mathematics, the eligibility criteria will be same as for Ph.D. in CSE/ECE disciplines with one additional requirement as follow:

"Essential qualification (for Mathematics students)- JRF from either UGC or CSIR or NBHM or GATE qualified."

## **(2) Reservations**

- a. The reservation policy shall be decided by the Board of Governors of the Institute. Exact details about these shall be provided in admission prospectus each year.

## **(3) Fulfillment of admission requirements**

- a. On being selected for admission, candidate will be admitted if he/she:
  - (i) presents original documents fulfilling the eligibility criteria,
  - (ii) pays the required fee, and
  - (iii) completes the admission formalities.
  - (iv) A No Objection Certificate from his/her employer, if the candidate is employed somewhere.

## **(4) Non-Degree / Visiting students**

A non-degree/visiting student is one who is registered for a degree in a recognized university/institute in India or abroad and who is officially sponsored by that Institute/university to complete part of the academic requirements at IIT-Delhi. Such students may do courses or projects in IIT-Delhi, and will be given transcripts for the semesters spent in the Institute. They will be governed by rules, regulations, discipline of the Institute. Any credit earned by a non-degree student at IIT-Delhi cannot be applied towards any degree/diploma offered by IIT-Delhi at any time. The admission to non-degree status is decided on a case to case basis. The applications are received by the Dean, Academic Affairs.

## **5. Financial Assistance**

### **(1) Teaching and Research Assistantship**

- a. Financial assistantship is available for some PhD / MTech students in the form of Teaching Assistantship or Research Assistantship.
  - (i) **Teaching assistantship.** The students under this plan are expected to help the instructors in various courses for the smooth running of the course.
  - (ii) **Research assistantship.** The students under this plan are expected to help the faculty members in various research projects. They may be assigned limited academic duties.
- b. A student whose stipend is coming from a sponsored project or an external fellowship obtained through individual application (like TCS, IBM, Microsoft, Google etc.), will be considered RAs while they are getting support from these grants/fellowships. All other students will be considered TAs.
- c. Only full-time regular students are eligible for assistantships and scholarships. A PhD student is not eligible for teaching assistantship or scholarship after five years.
- d. The teaching/research assistantship for PhD students comprises sustenance stipend (25% of total), scholarship (25%), and remuneration for academic work (50%).
- e. There may a performance linked incentive each year, the quantum of which will be decided by PG Committee.
- f. Assistantship for MTech students will be viewed as remuneration for the academic work (teaching/research) being performed for the institute.
- g. Teaching Assistantship for M.Tech. and Ph.D. students will be a '0' credit course which will show up in Transcript. S or X grade will be allotted for the TA work.

### **(2) Other Financial Assistance**

- a. Certain other kinds of financial assistantship such as scholarships or Fellowships might also be available from sources other than the Institute.

### **(3) Withdrawal and reduction of financial assistantship**

- a. For PhD students, the financial support continuation shall be contingent upon the performance in academics and the assigned academic/administrative duties and will be reviewed every semester. The scholarship part of the Assistantship may be terminated if the student's academic performance is not as per standards (defined later). The remuneration part may be terminated or reduced if the student's performance in his/her assigned duties is not satisfactory. The sustenance part may not be terminated or reduced as long as the student remains a full time student of the Institute. The reduction/termination, if any, shall be decided by the PG committee each year, based on the performance of the student.
- b. For MTech students, the financial support continuation shall be based on academic performance and performance in assigned duties (teaching/research). Continuation/reduction/termination of financial support will be decided by the PGC every semester.

### **6. Change from One Program to Another**

- (1) A student can change his/her registration from one program to another. All such requests shall be made by the student along with the supporting documents. After evaluation of the requests, the PG committee may approve the change. The credits for the courses and thesis shall be transferred to the new program. The change shall not be permitted if the academic performance in the old program is not good enough for continuation in the new program. After the changes, the rules for the new program shall be applicable.
- (2) A PhD student can change his/her program to MTech. If this change is done by a student, he/she will be treated as being in the MTech program from the start of his/her program, and will have to refund the difference in fees and stipend between the PhD and MTech programs, if any.
- (3) If a PhD student fails his or her first two reviews, then the PGC may propose either that he or she leaves the institute; or enroll in the MTech program. If the latter, then usually full MTech fees would be payable by the student, along with any differences in stipends. In some cases, the stipend difference may be reduced, waived or deferred on case by case basis.

A warning letter will be issued by the Academic Section to students when they fail the first review which should also explain the above.

- (4) In special cases when a PhD thesis is not found suitable for PhD, the candidate can convert to MTech and resubmit the thesis with suitable enhancements for MTech (and ensure that other requirements are met). In such a case, repaying of difference in stipends and fees may be waived.
- (5) An MTech student can change his/her program, if permitted, to PhD and continue to do the course/research work to enable him/her to meet the requirements of the PhD degree. The student will be eligible for PhD stipends only from the time he/she is enrolled as PhD student. Such a student, for PhD credit requirement, may be treated as if he/she had joined the PhD program from the start of the PG program. The student may be granted an MTech also, provided he/she fulfils requirements for the same. Such a student may also be refunded his/her MTech tuition fee, if he/she successfully completes the PhD program.

## **7. PhD Student getting an MTech**

A student admitted in the PhD program after a BTech can get an MTech “on the way” provided he/she completes the requirements for the same. For this:

- Courses done for PhD can count towards the MTech degree.
- Work done in the Scholarly Paper or MTech thesis cannot be included in the PhD thesis.
- A PhD student can apply for an MTech degree only after completing the Comprehensive and after spending at least five semesters in the Institute.
- If a PhD student who gets an MTech and leaves the Institute without completing his/her PhD, he/she will be considered as having changed his program from PhD to MTech (and will have to refund the difference between stipends and fees as per rules.)

## **8. Registration**

### **(1) General**

- a. All Postgraduate students, full time as well as part time, are required to register each regular semester, unless they are on approved leave of absence. If a student is working outside the Institute (e.g. working with an external co-supervisor) must register through electronic means.
- b. Registration process has two parts: Academic, and administrative and both must be completed in order to complete the registration process. Academic registration includes filling the registration form and specifying the courses that the student plans to do in the semester and getting it approved. Administrative part includes paying all dues to the Institute. A student who is working outside the Institute may get this completed through a friend/adviser/etc,

- c. A student shall normally register for courses if their course requirement conditions are not fulfilled. A student may register for the courses and thesis simultaneously in a semester. Thesis/Scholarly Paper registration will be in multiple “courses” of 4 credits each (i.e. for 8 credits, a student will have to register for two thesis courses, each of 4 credits) and S/X grades will be assigned to each of these.

**(2) Pre-Registration of Courses**

Pre-registration is necessary part of the academic registration for non-first semester students. In case a student fails to do pre-registration of courses, a penalty may be imposed if the student does not register his/her preference within the stipulated period.

**(3) Late Registration**

- a. Late registration is permitted as per academic calendar on the payment of late registration fee. The late fee may be waived if the delay is due to an academic activity undertaken with prior permission. The number of days missed due to late arrival shall be treated as leave of absence. A fee for late academic registration may be imposed.

**(4) Adding or Dropping of Courses**

- a. A student can change the courses that he/she does in a semester by adding and dropping courses till the last date for add/drop as specified in the academic calendar. In addition, a student can drop, with permission from the PG Committee, some courses even beyond the last date for add/drop. The last date for the latter shall also be mentioned in the academic calendar.

**(5) Cancellation of registration**

- a. A student is solely responsible to ensure that all conditions for proper registration are satisfied, and there are no timetable clashes. The registration may be cancelled by DOAA for a course if any irregularity is found at a later stage. A student’s registration for the semester may be cancelled as part of disciplinary action. Leave beyond permissible limits may also result in cancellation of registration for a semester.

**(6) Summer term registration**

Registration in the summer term is optional. But if a PG student is doing some academic work, he/she is required to register. A PG student on financial plan of the Institute is expected to remain in the Institute and work during the summer term even if he/she is not registered, though he/she may take vacation as per rules. A student may register for up to 8 credits of which up to 4 credits may be for thesis work/IS.



## (7) Registration of an Audit Course

A PG/Ph.D. student can be allowed to take a course as Audit on the condition that it will count in the maximum course load for a semester but not in the calculation of CGPA. Further, the faculty teaching the course will specify the requirements including attendance and a minimum passing grade right in the beginning. The final grade for Audit course will, however, be 'S' or 'X'.

## 9. Leave Rules

The students may be granted leave of absence on application to the PG committee. The following leaves are applicable:

### (1) Vacation and casual leave

- a. A post graduate student on financial assistance plan from the Institute may be allowed vacation leave during any period of Institute's vacation or during the mid-semester recess up to a maximum of 15 days per semester (six months), subject to a maximum of 30 days at a time. Leave not availed in one semester may be carried over to the next semester.
- b. In addition, a student irrespective of the financial assistance may be allowed to go on casual leave for up to **8 working days in a calendar year**, with permission.

### (2) On-Duty leave

- a. A PhD student may be granted on-duty leave for attending seminars, conferences, traveling on project work, etc. For this leave, the candidate has to take approval from his/her supervisor as well as the PG Committee.

### (3) Summer leave

- a. A PG student who is on financial assistance may be granted leave during the summer vacation period for undertaking internships, projects etc. This will be "leave without pay" and during this period, the student will not get the assistantship/scholarship. Decision on such leave requests will be made by the PG committee, which may not grant this leave if it views that granting of the leave can hinder the completion of the PG program of the student. All students taking such leave, must report for registration the next semester, even if they do not have any course requirement next semester. Any relaxation of this guideline will be decided by the PG committee, and will be granted only on academic grounds (e.g. a student is attending a conference).

### (4) Semester leave

- a. Semester leave may be granted to students by the PG committee upon recommendations of the supervisor on various accounts, including medical, for up to a maximum of two semesters in the program. In the case of semester leave, the academic registration of the student shall be cancelled for that semester. The financial assistance to students shall also be not available during the period of semester leave.

- b. When the total days of absence is more than 20 days in a semester, the student may be required to take a semester leave.

**(5) Medical leave**

- a. A student can also take up to fifteen days of leave due to medical reasons. Competent authority can give up to six more days of leave under special circumstances. All medical leave requests must be supported by a medical certificate issued by a medical doctor.

**(6) Maternity and Paternity leave**

- a. As per GoI rules.

**(7) Unauthorized absence**

- a. Absence of a student without any sanctioned leave will result in the loss of financial assistance and may result in the termination of the student's program.

**(8) Leaving the program**

- a. If a student decides to leave the program, he/she has to leave the program at the end of the ongoing semester. The student has to inform the PGC and advisors in advance (at least one month), complete the teaching duties, if any, return all the equipments and data, and get signatures on the no-dues form

**10. Working with Collaborators outside IIIT-Delhi**

- (1) A PG student may interact and work with an approved external co-supervisor in a collaborating organization. Students shall require permission from the PGC to proceed to work with the external co-supervisor. All students working with the external co-supervisor shall be governed by the following guidelines during the period of absence from IIIT-Delhi.
  - a. Such students shall be required to register each semester as per the registration procedure of IIIT-Delhi
  - b. The students are expected to follow the rules of the collaborating institute but shall continue be governed by the rules and regulations of the IIIT-Delhi.
  - c. They shall be reporting to the external supervisor(s) for their research work on their thesis and shall be in constant touch with the supervisor(s) at IIIT-Delhi. This may be through a regular video/audio conferencing or through regular reporting.

- d. Such students are permitted to register as a non-degree/visiting student in an institute other than IIT-Delhi and may transfer the credit. Transfer of credits will be decided on a case-by-case basis by the PGC. The students can also take course on audit and submit the performance records for the consideration of waiver of course requirements if desired.
  - e. They shall not be provided any financial assistance from the Institute during the period they are with the external co-supervisor. Financial assistance during these periods shall be provided by the collaborating institute as per their norms, or some other sources like scholarships from agencies, etc.
- (2) When working with collaborators outside the Institute, the IP rights will be as decided between the supervisor(s), and the sponsoring agency, if any. Any such arrangement shall be done with the concurrence of the PG Committee, and shall not interfere with the ability of the student to write his/her thesis and publish results of the work.

## **11. Teaching and Evaluation**

### **(1) Teaching**

- a. As specified in the Regulations for BTech Program

### **(2) Continuous evaluation**

- a. As specified in the Regulations for BTech Program

### (3) Grading scheme

- a. One of the letter grades given in the following table shall be awarded to a student reflecting his/her overall performance in a course. Each letter grade carries certain points as given in the table, and these points are used in the computation of the SGPA/CGPA as explained later.

Letter Grade	Grade Points	Remarks
A+ (Outstanding)	10	Letter grades A+ to F and I are given only in the regular courses. This grading scheme is effectively A to F; A+ is only to recognize excellent performers in a course – it has same points as A.
A (Very Good)	10	
A(-)	9	
B (Good)	8	
B(-)	7	
C (Satisfactory)	6	
C(-)	5	
D (Marginal)	4	F Grade is not counted in the calculation of CGPA, however, it is counted in the calculation of SGPA.
F (Fail)	2	
I (Incomplete)	Nil	Incomplete (I grade) must be converted to one of the letter grades (A to F) as per the academic calendar
W(Withdrawn)	Nil	“W” grade shall be printed in the transcript of the students who do ‘Late Drop’
S (Satisfactory)	Nil	S and X are grades for only certain kinds of courses like Audit course. They are not incorporated in SGPA/CGPA calculation.
X (Unsatisfactory)	Nil	

- a. In the academic courses, the final grades awarded are A to F (A+ is a grade with same points as A, and is there to honor excellence).
- b. An I (Incomplete) grade may be awarded in cases when all the requirements for a course are not met by the student at the time of submission of grades, and essentially reflects an “incomplete” status in the course. This grade must be converted to a regular letter grade (A to F) within the two weeks from the last date of the submission of the grades as stipulated in the academic calendar. Only for the project works and independent study courses, an additional two weeks will be admissible for the change of I grade. All unconverted I grades get automatically converted to F after this period.
- c. All courses in which a student obtains an F grade must be repeated or replaced by another equivalent course.
- d. Thesis/Scholarly Paper registration will be in multiple “courses” of 4 credits each ( i.e. for 8 credits, a student will have to register for two thesis courses, each of 4 credits) and S/X grades will be assigned to each of these. Further, student’s advisor(s) also has(have) to submit a report for student’s progress to PGC.

#### (4) Performance Indicators – SGPA and CGPA

- a. The semester performance is indicated by a Semester Grade Point Average (SGPA) which is a weighted sum of all the points earned in the courses done in a semester. The SGPA is given for each semester and is computed using the following formula.

$$\text{SGPA} = (u_1.w_1 + u_2.w_2 + \dots + u_n.w_n) / (u_1 + u_2 + \dots + u_n),$$

where  $u_i$  is the number of units for the course  $i$  and  $w_i$  is the points earned through the letter grade in that course.

- b. While doing the computation of SGPA, the course/thesis units with grades S and X are ignored.
- c. The overall performance is indicated by a Cumulative Grade Point Average (CGPA) which is computed in the same manner as the computation of SGPA but for all the courses done in the program. While the F and X grades shall show on the grade sheet, the original grade of a course repeated/replaced is ignored in the computation of SGPA/CGPA.
- d. 'F' grade shall not be counted in the calculation of CGPA, however, it is counted in the calculation of SGPA.

### 12. Minimum Academic Performance Requirements

#### (1) M Tech program

- a. The minimum graduating CGPA is 6.5.
- b. The minimum CGPA for continuing in the program is 6.0. If the CGPA falls below this, the student may be placed under warning first, and if the performance does not improve, may be asked to leave the program.

#### (2) PhD program

- a. The minimum graduating CGPA is 7.5.
- b. The minimum continuing CGPA is 7.0. If the CGPA falls below this, he/she may be asked to shift to MTech program or leave.
- c. If the SGPA in the first semester falls below 7, the student concerned will be issued a warning by Academic Section.

### **13. Students under Warning**

- (1) A student who is under warning will normally not be entitled for two components of his stipend – scholarship and assistantship. He/she will get only the sustenance portion. The student will also not be allowed to be on any elected/nominated committee representing students of the Institute, and if he is on any committee he/she shall resign.

### **14. Requirements for the MTech Degree**

#### **(1) Per Semester Load Requirements**

A normal full time load is 12 credits to 20 credits. Students who are on assistantship can be given a relaxation of 4 credits. A student may be permitted an overload of at most 4 credits in a semester, with permission from the PG committee. The students who have completed the stipulated course requirements shall register for thesis or scholarly paper in multiple “courses” of 4 credits each ( i.e. for 8 credits, a student will have to register for two thesis courses, each of 4 credits) and S/X grades will be assigned to each of these. No overload shall be permitted in the thesis unit registration. Part time students may register for any number of credits lesser than the normal full-time load.

#### **(2) Course Work Requirements**

- a. A student may do an MTech with thesis or with scholarly paper. In with-thesis option, an MTech student must complete a minimum of 32 credits of course work. In the Scholarly Paper option, the student must complete 40 or 44 credits (depending on the credits of the Scholarly Paper). The supervisor or the PGC may advise the students with insufficient background to do additional course units. In addition, students may be required to do some “refresher” modules for strengthening their background. These modules will be reflected in the transcript.

For the students admitted in academic year 2016-17, except for summer refresher course, the grade obtained in Object Oriented Programming and Research Methods will be counted towards CGPA calculation without counting its credits towards degree requirements for M.Tech. This requirement will be waived for those students whose background does not have the deficiency. However, from academic year 2017-18 the above decision will be implemented for all refresher courses.

- b. An MTech student may be permitted to replace up to two courses done by him/her and in which s/he has obtained passing, but not good (e.g. C or lower), grade. The replacement will be permitted as and when the request is made by the concerned student

after publication of the result provided it does not result in underload. In this case, the earlier course will be listed in the transcript as having been taken on “Audit”. An MTech student may also be allowed to do extra courses. All such permissions shall be granted by the PG committee upon requests from the students

**c. Online Courses**

IIIT-Delhi has evolved a system for allowing students to take online courses. Students can take advantage of the increasing amount of such courses made available by reputed universities across the world to complement the courses offered in the institute.

M.Tech. students doing Online course under IP/IS will be awarded regular grade (A to F) by the concerned faculty supervisor

**(3) Thesis/Scholarly Paper credit and Total Credit requirements**

- a. For MTech with-thesis, a student has to complete a minimum of 16 credits of thesis. For MTech with scholarly paper instead of a thesis, he/she has to complete 4 or 8 credits of scholarly paper. The total minimum credit requirements for an MTech .degree is 48 credits (32+16 for M.Tech. with thesis, and 40+8 or 44+4 for M.Tech. with scholarly paper ).
- b. For the purpose of grading in the thesis/scholarly paper credits registered, the progress in the thesis/scholarly paper work shall be assessed by the thesis supervisor(s). For each semester, one S (if the performance is satisfactory) or one X (if the performance is not satisfactory) grade shall be awarded by the thesis supervisor(s) to each of the registered thesis courses of 4 credit each.

**(4) Thesis Option: Supervisor, Evaluation, and Defense**

- a. The MTech thesis shall be done under the guidance of thesis supervisor(s), who shall be faculty member(s) of the Institute. A thesis may also have co-supervisors, who may be Adjunct Faculty of the Institute, or external co-supervisors approved by the PG Committee.
- b. An M.Tech. thesis shall be evaluated by an evaluation committee which shall consist of the supervisor(s), including co-supervisors, and two other non-supervisor examiners. For a thesis, it is desirable to have one of the examiners from outside the Institute. The committee must be approved by the PG Committee.

- c. The MTEch thesis must be defended by the student in front of the thesis evaluation committee. The defense should be held no earlier than one-week after the thesis has been submitted (exceptions may be granted by PG Committee Chair). The thesis evaluation committee shall make its recommendation to the PGC.
- d. For Scholarly paper (including industrial project ) the evaluation committee consists of only the Supervisor (s).
- e. For Capstone project the evaluation committee consists of Supervisors which include supervisor from industry/research lab. The grades for members in a team will be decided by the supervisors of the project, based on their assessment of the work done by the members, and the extent to which they have been able to meet the deliverables

**(5) Scholarly Paper Option: Supervisor and Evaluation**

- a. A student doing MTEch with Scholarly Paper has multiple options for completing the scholarly paper requirement: a Regular Scholarly Paper, Industrial Project, and a Capstone Project.
- b. **Regular Scholarly Paper:** The regular scholarly paper shall be done under the guidance of a supervisor, who shall be a faculty member of the Institute. A scholarly paper may also have co-supervisors, who may be Adjunct Faculty of the Institute, or external co-supervisors approved by the PG Committee. For this scholarly paper, no defense is required. It will be evaluated and signed by the supervisor(s) and the result along with copy of Scholarly paper communicated to the Academic Administration.
- c. **Industrial Project:** Scholarly paper can also be done by doing an industrial project of 6 months or more in approved Industry/research lab./academic labs. The student doing the Industrial Project will have to submit a report at the end of the project, duly approved by the supervisor/mentor/manager in the company/research lab.
- d. **Capstone Project:** Scholarly paper can also be done through a capstone project. The projects are usually defined by one or more faculty members who will act as supervisors, but can include supervisors from industry or other academic institutions. Students can undertake to do a project singly or in a team. The deliverables of the project will be clearly specified by the supervisors, as will the grading scheme to be adopted in meeting these deliverables. The grades for the students in the team will be decided by the supervisors of the project, based on their assessment of the work done/deliverables, and the project report. The grades along with a copy of project report will be communicated to the Academic Administration.



## **(6) Award of degree**

Upon a satisfactory report from the Dean, Academic Affairs, the Academic Senate may recommend the award of the MTech degree to the student. While pending the actual award of the degree in a regular convocation of the Institute, the Dean of Academic Affairs may authorize the Registrar to issue a provisional certificate to a student who completes the requirements for graduation.

## **15. Requirements for the PhD Degree**

### **(1) General**

A student shall be considered for the award of PhD degree by the academic Senate only upon the completion of the requirements mentioned here. Per semester load requirements of PhD students is same as for MTech students. However, PhD students who are on assistantship may be given a relaxation of up to 8 units in the normal full time load.

### **(2) Course Work Requirement**

- a. The requirement of the course work for a PhD student is aimed at providing the basic academic preparation to carry out the research, and have sufficient breadth in the area. The minimum course requirement for a PhD student is normally 32 units for students whose highest degree is a BTech (or equivalent), and 16 for those who have an MTech (or equivalent). After the course work, the student is expected to have sufficient breadth in at least three of the main sub-areas of Computer Science. The PG committee may ask the students with insufficient background to do additional courses (in addition to 32/16 units).

Further, the following is the upper limit for Independent Study (IS)/ Independent project (IP) within the course credit requirement for Ph.D. degree:

- i) B.Tech. Degree holders (for Ph.D.in CSE/ECE/CB/Maths) - 1 IS and 1 IP (4 credits each)
- ii) M.Tech. Degree holders (for Ph.D.in CSE/ECE/CB/Maths) - 1 IS (4 credits)
- iii) M.Sc. Degree holders (for Ph.D.in Maths) - 1 IS (4 credits)

- b. In special cases, for students with advance standing by virtue of their academic preparedness and/or by virtue of their professional work experience, some of the course requirements may be waived. All such waivers shall be decided upon by the PG Committee and reported to the Senate.
- c. A PhD student may be permitted to replace up to two courses done by him/her and in which he/she has obtained passing, but not good, grade. The replacement will be permitted as and when the request is made by the concerned student after publication

of result provided it does not result in underload. In this case, the earlier course will be listed in the transcript as having been taken on “Audit”. He/She may also be permitted to do extra courses to improve the CGPA. All such permissions shall be granted by the PG committee upon requests from the students.

- d. RM5xx Research Methods a two credit course will be compulsory for all new PhD students

### **(3) Transfer of Credits for Courses done Outside**

- a. Students may be permitted to do academic work and courses in places of repute outside IIT-Delhi. Based on their performance/quantum of work done and the content of the course, the PG committee may consider them equivalent to some course credits, and waive credit requirements for similar courses/projects within IIT-Delhi. Institutions with which IIT-Delhi has arrangements/MOU/student exchange programs, transfer of credits may also be permitted. Any such waivers/transfer is permitted only if the courses being considered have not been counted for any other degree/diploma requirement.

### **(4) Thesis credit requirements**

- a. All PhD students irrespective of their entry category are expected to successfully complete a minimum of 56 units by thesis. In truly exceptional cases where the PhD candidate is ready with a thesis before he/she has accumulated these credits, the PG committee can consider waiving off some of these units. For the purpose of grading in the thesis units registered, the progress in the thesis work shall be assessed by the thesis supervisor(s). For each semester, one S (if the performance is satisfactory) or one X (if the performance is not satisfactory) grade shall be awarded by the thesis supervisor(s). The thesis grades shall be submitted by the thesis supervisor(s) at the end of the semester.

Ph.D. students on completion of 5 years of registration will continue to do online registration in the ERP and will present their progress of research work before the monitoring committee till they submit the final thesis for evaluation.

### **(5) Thesis Supervisor and External Co-supervisor**

- a. The thesis work shall be done under the guidance of the PhD supervisor, who shall be a faculty member of the Institute. An adjunct faculty can also be a supervisor, with permission of the PGC. There may be multiple supervisors. Normally, a student is expected to decide the supervisor(s) by the start of the second semester but can defer it till the end of second semester. This will be done by informing the PG Committee through a form/letter, which shall be signed by the supervisor(s). A student can change

the supervisor later – for this a formal request will have to be submitted to PG Committee and has to be signed by the old as well as the new supervisors.

- b. A student may also have external co-supervisors for the thesis. Such external co-supervisor shall be approved by the PG Committee upon a request by the student, duly approved and forwarded by the supervisor(s). The request must be accompanied by the CV/Bio or sufficient information about the proposed external co-supervisor which will allow the PGC to evaluate the suitability. Normally, the external co-supervisor should be finalized before the comprehensive and the PGC should be informed by the adviser and the student about the same.
- c. **Change of Supervisor at a late stage:** If the change of supervisor happens at a late stage when some research has been already done, the request should be considered as per guidelines for change of supervisor at a late stage approved by the Senate (32.19).

#### **(6) Monitoring Committee and Yearly Review / Yearly Seminar**

- a. The PG Committee shall form a monitoring committee for each candidate, whose task will be to independently monitor and report on the progress of the candidate. The committee should generally be formed before the end of the candidate's second semester in the program and should consist of at least three faculty members/experts.
- b. The monitoring committee shall submit its evaluation about the progress of the candidate, at least once a year. If the monitoring committee feels that the candidate is not making sufficient progress, it may recommend suitable actions to be taken, including recommending that the student leave the PhD program or migrate to MTech, as given in 6(3). This review may be done by requiring the PhD students to make presentations about their progress, or through some other method.

#### **(7) Comprehensive**

The aim of the comprehensive examination is to check the understanding of the PhD student about his/her area of research. (Though a comprehensive traditionally was meant to check that the student has sufficient breadth, the Institute feels that this type of breadth requirement should be fulfilled through courses, and the comprehensive should be used to test the “comprehension” of the candidate about his/her main area of research.) For the comprehensive, the student shall present a complete literature survey (much on the lines of papers in ACM Surveys), research proposal and research plan on his/her area of work. The survey report will be submitted to the committee formed for the comprehensive exam by the PG Committee. The student will present a seminar on the above. The seminar should be open for all to attend. After the seminar, the committee may examine the student further and will submit its report regarding the

outcome of the comprehensive to the PG Committee. If the student fails the examination, he/she is allowed an additional half a semester ( i.e. 3 months) to retry.

A student is expected to complete his/her comprehensive examination as per the following timeline:

Sl. Category of Ph.D.students Time limit for completion of Comprehensive

1.	PhD students admitted directly from a BTech	5 semesters
2.	PhD students after completing MTech	3 semesters
3.	PhD students migrating from MTech	3 semesters from the date of joining PhD

#### **(8) Regular Seminars / Yearly Review**

This requirement for regular seminar or a yearly review is moved to item (6).

#### **(9) Teaching Requirements**

- a. One of the potential career options for the research students is academics. The PhD program at IIT-Delhi aims to develop suitable teaching skills among the research students through teaching requirements. Towards this, it requires all students on financial assistantship plan of the Institute are required to take part in the teaching activities.
- b. All PhD students must be TA for at least two semesters to satisfy the teaching requirements for a PhD degree. Students on research assistantship will also be required to complete this requirement, though they may be assigned lighter load each semester. The feedback received from the course students on the TA work will be part of the PhD student record, and will be an input in evaluation.
- c. Students will be assigned their TA duties towards the end of a regular semester for courses in the next semester. During the break, they should prepare themselves for the course, and with help from the instructor, design the assignments, develop the solutions and grading of the assignments. They will also be involved in the grading of the exam papers and developing the solutions to the exam papers. Senior students are also encouraged to be a tutor as well as take part in the class room teaching, along with the corresponding instructors. Such arrangements are to be worked out between the instructor in-charge of the course and the student. It is expected that the load of TA

work in a semester will be similar to that of a course, that is, approximately 10 hours per week.

- d. The teaching requirement may be waived for part-time and/or sponsored candidates (as their professional goals are likely to be already defined.)

#### **(10) Thesis submission, Evaluation and Defense**

Each PhD student is expected to write a thesis report on the PhD work. The thesis has to be submitted by the student for evaluation. Guidelines for Ph.D. thesis evaluation are given separately.

#### **(11) Award of degree**

- a. Upon acceptance of the revised thesis by the PG committee, the Chairman, Senate may recommend the award of the PhD degree to the student. While pending the actual award of the degree in a regular convocation of the Institute, the Chairman, Senate may also authorize the Registrar to issue a provisional certificate to a student who completes the requirements for graduation.

- (1) The date on the degree shall be as follows:

- May 21 for the students who finish their requirements during the winter semester (e.g. 8th semester of BTech)
- Aug 21 for those who finish the requirements during summer term.
- Dec 21 for those who finish the requirement during the Monsoon semester

### **16. Prizes and Medals/Awards at Graduation**

- a. The academic Senate of the institute can set up awards, prizes, medals etc. to be given to deserving students at graduation time.
- b. Under exceptional circumstances, where gross violation of the conditions of the awards/recognition or academic misconduct is detected at a later stage, the Senate may recommend to the Board of Governors to withdraw the award and recognition

## **17. Disciplinary Action Framework**

IIT-Delhi maintains global academic standards in its own education system. Therefore, it does not tolerate any form of indiscipline/ academic dishonesty. Action will be taken against students found engaging in acts of indiscipline/ academic dishonesty by Disciplinary Action Committee (DAC) constituted by the Director. The disciplinary action may result in semester/year/two year drop or even expulsion from the Institute. Separate rules and regulations have been formulated to handle the cases of violations.

## **18. Migration from BTech to Dual Degree Program**

A B.Tech student can opt to migrate to dual degree program of the institute anytime before the last date of Add/Drop of his/her 7th semester of the BTech program. Eligibility criteria for this and regulations for the dual degree program are given separately.

## **19. Special Discipline-Specific Requirements for PhD**

### **(1) Special Requirements for CSE**

None

### **(2) Special Requirements for ECE**

a) The first yearly review will be done through a viva-voce, in a manner as specified and notified by the PhD coordinator for ECE.

b) Students joining the PhD program with MTech degree will need to do at least 20 credits of course work.

### **(3) Special Requirement for CB**

None

### **(4) Special requirements for Mathematics**

a) The minimum course requirement for a PhD student is 24 units for a student whose highest degree is MSc (Mathematics), and 16 units for those who have an MPhil (Mathematics).

b) For the comprehensive examination, the student shall present a complete literature survey (much on the lines of papers in EMS Surveys in Mathematical Sciences/Expositions Mathematicae), research proposal and research plan on his/her area of work.

c) Timeline for completion of comprehensive examination for a candidate with M.Sc. (Mathematics) and M.Phil(Mathematics) the timeline will be 4 and 3 semesters respectively.

## 20. Power to Modify

Notwithstanding all that has been stated above, the Senate has the right to modify any of the above regulations from time to time.

### Change History

**Version 1.1 (Jan 2012):** Some changes were to simplify the explanation. Changes to rectify some observed deficiencies are:

- 1 (1). Clarified that in Senate there will be *at least* one student representative....
- 3 (2) Full time and Part-time student is now defined directly as student working full or part time for his/her studies. Further, “a full time student is expected to register for at least 12 credits in a semester”. Minimum credits for which a part-time student must register changed to 4.
- 3(3) Clarified, that a full time student may be permitted to become a part-time student towards the completion of the program.
- 5 (1) b. Clarified that a PhD student is not eligible for *teaching* assistantship or scholarship after five years.
- 5 (1) c. Simplified description of Assistantship as sustenance stipend (25% of total), scholarship (25%), and remuneration for academic work (50%).
- 6(2) Clarified that if a student changes his/her programme from PhD to MTech then difference in stipends, including difference in tuition fees, will have to be refunded. However, if it is done on the recommendation of PGC, then the student is treated as MTech student from the time of transfer and this refund is not necessary, and the student may be given preference for MTech. Assistantship.
- 6 (4) Migration from MTech to Phd, added: “Such a student, for PhD credit requirement, may be treated as if he/she had joined the PhD program from the start of the PG program. The student may be granted an MTech also, provided he/she fulfils requirements for the same”.
- 7 Clarified that registration for student working with an external co-supervisor may register through electronic means.
- 11 Minimum continuing CGPA of 6.0 in MTech program is made uniformly applicable to all students irrespective of TA/non-TA ship., if the CGPA falls below this, then the student may be placed under warning first, and if the performance does not improve, may be asked to leave the program.
- 11 (2) The minimum continuing CGPA in PhD program is 7.0. If the CGPA falls below this, or the student is not progressing well in his/her research, then based on the recommendations of the adviser, he/she may be placed under warning or may be asked to shift to MTech program or leave.

- 13 (1) Normal per semester load for MTech is relaxed to 12 to 20 credits instead of 16 or 20 credits specified earlier.
- 14 (5) b. The following has been added: “Normally, the external co-supervisor should be finalized before the comprehensive and the PGC should be informed by the adviser and the student about the same.”
- 14(7) Comprehensive. Clarified that operational details will be informed by the PGC.

Version 1.2 (July,2013): include changes:

- Enabler to Ordinances
- 3(2) Full time students
- 8(2) Pre-registration
- 8(3) .b Penalty for late registration
- 11(3).a Grading scheme table
- 12(1) MTechprogramme requirements
- 12(2) PhD programme requirements
- 14(1) Normal full time MTech load
- 16 Prizes and Medals/Awards
- 17 Disciplinary Action Framework
- 18 Migration from BTech to Dual Degree Program
- 19 Power to Modify

**Version July,2014 Main Changes made are:**

- i) From Winter Semester 2014 TA to be treated as a ‘0’ credit course
- ii) Options for Scholarly paper/ industry internship/Capstone project added.
- iii) Regulation 6 regarding change from Ph.D. to M.Tech. modified
- iv) Procedure to award degree to students who complete requirements in December added
- v) Registration of Online courses added
- vi) Revised CGPA calculation added

**Version August, 2014 Main Change made is:**

Change in Comprehensive examination and timeline for completion of comprehensive

**Version July, 2015**

- i) Replacement upto 2 courses permitted anytime
- ii) Fresh M.Tech. student’s thesis guidance by Adjunct faculty allowed only with a co-supervisor
- iii) Revision of timeline for Ph.D. comprehensive examination
- iv) Revision of Ph.D. thesis evaluation guidelines



- v) Issue of Ph.D. provisional certificate by Registrar

**Version July, 2016**

- (i) Starting of Ph.D. program in Mathematics
- (ii) Minor changes in Grading table

**Version January,2017**

- (i) Structural changes for PGC
- (ii) Regulations for handling special requirements for different disciplines

**Version July 2017**

- (i) Eligibility criteria for admission to M.Tech.(CB)
- (ii) Research Methods course compulsory for all new Ph.D. students