INDRAPRASTHA INSTITUTE of INFORMATION TECHNOLOGY DELHI

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Regulations for MTech (Computer Science and Engineering (CSE))

1. Preamble

IIIT-Delhi subscribes to the view that a Masters degree is primarily industry-focused, though it can be used as a stepping stone for research as well. The decision whether the degree is to be pursued for skill and knowledge up-gradation or also for building research skills should rest with a student.

2. Program Educational Objectives

PEO 1: to undertake industry careers involving innovation and problem solving using software and other information technologies.

PEO 2: to undertake research careers in Computer Sciences and allied areas

PEO3: to contribute to society by becoming a model professional who can communicate effectively and observes ethical behavior

The Institute also feels that to address the needs of the industry, which today requires more specialized manpower as each field is getting more complex, it is desirable to provide specializations within Computer Science in the MTech program. For this, the Institute permits a student to do an "MTech in Computer Science and Engineering" or "MTech in Computer Science and Engineering with specialization in <area>".

3. General Requirements

1. MTech (CSE) may be done with a thesis, or without a thesis but with a scholarly paper. In both options, students have to do certain amount of course work. In addition, students doing MTech *with thesis* will have to do a thesis. Students with scholarly paper option have to do additional courses, and instead of a thesis will have to do a scholarly paper.

2. The overall credits requirement for the M.Tech. is 48 credits. Requirements for thesis and scholarly paper options are as follows

    a. **MTech with thesis.** 32 credits of course work + 16 credits of thesis. At most 4 credits may be earned by doing 300 and 400 level courses.

b. **MTech with Scholarly Paper** 40 or 44 credits of course work + 8 or 4 credits for a scholarly paper/Industry internship/Capstone project. At most 8 credits may be earned by doing 300 and 400 level courses.

3. For the thesis or the scholarly paper credits, the student has to register but need not be physically present and can do the work while being outside the Institute.

4. A student admitted to the MTech program will give his/her choice regarding whether he/she wants to pursue the thesis or without thesis option. However, this choice can be changed at any time during the program by suitably informing the PG Committee. Credits earned for scholarly paper or thesis may be counted towards thesis or scholarly paper respectively, if approved by the PGC.

5. Within the course work requirement, each MTech (CSE) student has to earn 12 credits of core courses by doing one course from each of the bucket of core courses:

Theory bucket	**Systems bucket**	**Software bucket**
Modern Algorithm Design (CSE 519).	Computer Architecture(CSE 511)	Program Analysis (CSE 503)
Randomized Algorithms (CSE 523)	Mobile Computing (CSE 535)	Information Retrieval (CSE 508)
Graduate Algorithms (CSE525)	Wireless Networks (CSE 638)	Compiler (CSE 601)

6. All other courses are electives. In electives, at most 4 credits of "Independent Study" and 4 credits of "Minor Project" can be taken.

4. Requirements for Specialization

1. For "MTech in Computer Science and Engineering with specialization in <area>", whereas an area refers to the areas in which specializations are offered by the Institute, the student must:

    a. Complete at least 16 credits of courses in the chosen area.
    b. Do his/her thesis/scholarly paper in that area. The advisor will certify this fact.

2. If a course is in the list of courses for a specialization, as well as in one of the buckets for core courses, that course can be used for satisfying both the core and specialization requirements. However, the overall course requirements remain unchanged.

3. The lists of courses for each specialization are specified separately.

4. For a specialization, the student's enrollment must be approved.

5. A student opting for specialization is required to do thesis/scholarly paper/industry internship/capstone project in the chosen area.

6. A student enrolled in a specialization can move to MTech(CSE) at any point by informing suitably. A student can move from MTech(CSE) to a specialization only if permitted by the PG Committee.

7. If a student enrolled in a specialization completes all requirements for the MTech, but not the requirements for specialization, he/she will be eligible for "MTech in Computer Science and Engineering".

5. Assistantship and Fee Waiver

1. Limited number of Assistantships will be available for MTech students. As specified in the Regulations for MTech/PhD Programs, a student who is offered an Assistantship will be required to do 10-15 hours of academic work per week in-lieu of the Assistantship.

2. Limited number of partial or full fee-waivers may be provided.

Change History:

Version 2.0 (Jan 2012). Changes made: Clarified that "sufficient core courses should be offered so a student can complete the core requirement in first two semesters", and some courses added to the three sets; The following regulation deleted: "Assistantship is available only for *with*-thesis option. A student on Assistantship will have a residency requirement of 4 semesters." Added that "Limited number of partial or full fee-waivers may be provided" (since fee waiver is now delinked from assistantship in the PG regulations).

July, 2013 (i) Minor change in the Preamble.

July, 2014: (i) Movement between specialization and without specialization clarified (ii) The scholarly paper credits changed from 8 to "4 or 8 (iii) Option for doing MTech with Thesis/ SP/ Industry Internship/Capstone project added.

July, 2015:

Following changes have been made in the main PG regulation:

i) Replacement upto 2 courses permitted anytime
ii) Fresh M.Tech. student's thesis guidance by Adjunct faculty allowed only with a co-supervisor

July, 2016:

(i) Core courses in the three buckets revised as shown in the table.
(ii) Some minor changes shown in the main PG regulations

July 2017

Program Educational Objectives added