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Regulations for M.Tech. in Electronics and Communications Engineering (ECE)

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. And the decision whether the degree is to be pursued for skill and knowledge up-gradation or also for building research skills should rest with the student.

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 ECE in the MTech program. For specializations, the Institute will offer "MTech in Electronics and Communications Engineering with specialization in <area>", but will also have an option for the student to do an "MTech in Electronics and Communications Engineering" without any specialization. This note gives requirements for the MTech(ECE) – general requirements for MTech are given in Ordinances and Regulations for the MTech/PhD programs.

2. General Requirements

1. MTech(ECE) 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 in *scholarly paper* option will do instead of a thesis a scholarly paper, and will have to do additional courses.

2. The overall credit requirement for the MTech 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 or project/Capstone project. At most 8 credits may be earned through doing 300 and 400 level courses.

3. For the thesis or the scholarly paper credits, though the student has to register, he/she 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. Each MTech (ECE) student has to satisfy the core course requirement. For a specialization, this requirement is satisfied by completing all the core courses for that specialization. For MTech(ECE) without specialization, this can be satisfied by completing 12 credits from the core courses of any of the specializations.

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

3. Requirements for Specialization

1. For "MTech in ECE with specialization in < area>" the student must:

    a. Complete the core courses for the specialization area.
    b. Complete at least 20 credits of courses in the chosen specialization area, including the core courses (i.e. at least 8 credits more in the area)
    c. Do his/her thesis/scholarly paper in that specialization area. The advisor will certify this fact.

2. Core courses for the specialization "**Communication and Signal Processing**" are:
    a. Advanced Signal Processing,
    b. Digital Communications,
    c. Probability and Random Processes

3. Core courses for the specialization "**VLSI and Embedded Systems**" are:
    a. Digital VLSI Design,
    b. Analog CMOS Design
    c. Advance Embedded Logic Design

4. The lists of elective courses for each specialization will be specified separately.

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

6. A student may be enrolled in "MTech(ECE) with specialization in <area>" or "MTech (ECE)". Specialization areas are as notified/announced.

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

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

9. 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 Electronics and Communications Engineering."

4. 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:

July 2013. Minor change in the Preamble.

July 2014: Major changes made are:

(i) Bucket structure is replaced with core for each specialization; the core requirement regulation has been suitably enhanced.. (ii) The scholarly paper credits changed from 8 to "4 or 8" (iii) Regulations added to clarify about specialization and movement between specialization and without specialization. (iv) Requirements for specialization clarified.**(v)** Option for doing MTech with Thesis/ SP/ Industry Internship/Capstone project added and (vi) Rules for Assistantship and Fee waiver 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