

# 1 MS Plan Options

This program implements Plans A, B, and D. All options require a *minimum of 30* approved credits. The distribution of research credits and course work (classroom) credits differs between options.

## 1.1 Plan A – Thesis Option

This plan requires a research thesis prepared under the supervision of an advisor. A thesis describes a research investigation and its results. For this plan, the required 30 credits are partitioned as follows:

- 6-10 credits of thesis research (EE5990)
- 20-24 credits of course work, allocated as follows:
  - ◆ Depth:
    - A Maximum of 12 credits at 3000-4000 level
    - A Minimum of 12 credits at 5000-6000 level
  - ◆ Breadth:
    - A Minimum of 10 credits in the ECE Dept (at EE4000 or higher)
    - A Minimum of 6 credits in the CS Dept (at CS4000 or higher)

## 1.2 Plan B – Report Option

This requires a report describing the results of an independent project, whose original research content is not sufficient for a thesis. For this plan, the required 30 credits are partitioned as follows:

- 2-6 credits of project research (EE5991)
- 24-28 credits of course work, allocated as follows:
  - ◆ Depth:
    - A Maximum of 12 credits at 3000-4000 level
    - A Minimum of 12 credits at 5000-6000 level
  - ◆ Breadth:
    - A Minimum of 10 credits in the ECE Dept (at EE4000 or higher)
    - A Minimum of 6 credits in the CS Dept (at CS4000 or higher)

## 1.3 Plan D – Coursework Option

This plan requires the minimum of 30 credits be earned through course work. Research credits may not be counted as course-work credits. For this plan, the required 30 credits are partitioned as follows:

- 30 credits of course work, allocated as follows:
  - ◆ Depth:
    - A Maximum of 12 credits at 3000-4000 level
    - A Minimum of 18 credits at 5000-6000 level
  - ◆ Breadth:
    - A Minimum of 10 credits in the ECE Dept (at EE4000 or higher)
    - A Minimum of 6 credits in the CS Dept (at CS4000 or higher)

## 2 Admission Requirements

All applicants for full admission have completed courses in the set of prerequisite topics specified in Table 1. Applicants who have not completed all of the prerequisites may receive “provisional” admission and complete the missing topics at MTU. Those topics with an “MTU Equivalent” course at less than the 3,000 level may not be taken for MS degree credit, while those at or above the 3,000 level may count for degree credit within the constraints of all other applicable course distribution requirements.

**Table 1: Prerequisite Courses**

Prerequisite Topic	MTU Equivalent
Linear Algebra	MA-2321
Differential Equations	MA-3521
Probability and Statistics	MA-3710 or MA-3720 or EE-3180
Discrete Math or Discrete Structures	CS-2311
Data Structures	CS-2321
Computer Organization	CS-3421
Digital Logic	EE-2174
Electronics	EE-3131
Microcontroller Interfacing	EE-3171 or 3173

Given the prerequisite topics listed, students with a baccalaureate degree in Computer Engineering from an accredited college or university will generally be eligible for full admission to this program. Those with a degree in Computer Science, Electrical Engineering, or a closely related field, will usually be eligible for provisional admission. Applicants with degrees from other disciplines may be considered for provisional admission to the program on a case by case basis. The ECE department has an established program of admitting graduate students with extenuating circumstances at the discretion of the graduate program director under the provision that they perform well their first year; their performance is tracked by the graduate program director. Provisional students are not awarded GRAs or GTAs so that they may concentrate on their studies.