

Syllabus for MS Applicants

All the applicants to the MS program in the CSE Department at IIT Madras will have to take a written test. Candidates who qualify the written test will have a round of technical interview.

Written Test: The written test shall comprise two parts. The candidate has to perform well in **BOTH** the parts to be shortlisted for interview.

Part A will be an objective question paper testing the Analytical Ability (Basic Engineering Mathematics, Probability and Statistics, Ratio and proportion, Combinatorics, Technical Comprehension), C-Programming and Basic Discrete Mathematics (Logic, Sets, Relations, Functions). Duration of this part of the test will be **60 Minutes**.

Part B will be a subjective paper with questions from the areas mentioned below. The candidate is expected to answer 50% to 60% of the questions of his/her choice from the whole set of questions (across the areas).

Area-1: Data Structures, Algorithms and Programming

Area-2: Digital Logic, Computer Organization and Operating Systems

Area-3: Formal Language and Automata Theory, Advanced Discrete Mathematics, Artificial Intelligence

Area-4: Data bases, Networking and Compilers

Area-5: Signal and Systems, Continuous Mathematics and Probability and Random Processes.

Duration of this part will be **120 Minutes**.

Interview

A typical interview lasts for 20 minutes. It will be on one of the fundamental topics of CSE as listed above. You can exercise your choice of the topic. Applicants with ECE background can choose to be interviewed on topics in signal processing, speech and image processing. Applicants may also be questioned on their undergraduate projects. Note that you **cannot** request the interview to be on specific programming languages (for example Java, PHP etc), platforms (J2EE etc) or technology (mobile programming, web programming etc.)