M.Tech. (Computational & Data Science) Admissions Brochure, 2021

About the M.Tech. (CDS) Program

Computational Science and Data Science are inter-disciplinary areas that bring together the domain-specific knowledge of science and engineering with relevant areas of computing systems and formal foundations. While computational science investigates scientific computing applications that require mathematical techniques and parallel computing, data science explores data-intensive applications that use scalable statistical and machine learning methods with Big Data and Cloud platforms.

The M.Tech. (Computational & Data Science) degree at CDS is designed as a course and project based program to be completed in 24 months. Students will take 40 credits of course work over 2-3 semesters. Courses are divided into hard core courses (13 credits), soft core (10 credits), and electives (17 credits). Students will also complete a dissertation project worth 24 credits over a 12 month period. These impart foundational and scalable systems skills for computational and data sciences, with advanced courses selected by students to allow specialization on methods, platforms and applications. More details are at: http://cds.iisc.ac.in/academics/mtechcds/

> ### Highlights of the Program
> - *First* degree program in India from a premier institution to train students as data scientists!
> - Top-notch & world renowned faculty
> - Curriculum prepares students for research & development in computational and data sciences.
> - One Year Dissertation Project to give comprehensive experience on applying computational and data sciences techniques
> - Develops soft skills of the students
> - 100% placements

The M.Tech. (CDS) Admission Process

- Students with a BE / B Tech or equivalent degree in any discipline (with a valid GATE) or M Sc or equivalent degree in any discipline (with a valid GATE) are eligible to apply. Eligible GATE papers are: AE/BT/CE/CH/CS/EC/EE/IN/MA/ME/MT/PH/ST. In all cases a strong mathematical and programming background is required.
- Details for the program are listed at https://iisc.ac.in/admissions/m-tech-m-des under "19 Computational and Data Science (CP)" section.
- Based on the application, the department will *short-list students* and notify them to **appear online** for a *Written Test* and *Oral Interview*.
- The interview process begins with a 90-minute written test conducted online using HackerEarth platform on a specified day and time. Candidates should have a laptop with internet connection and a webcam during the test. Further details about the test will be sent by email to shortlisted candidates.
- All applicants who appear for the online Written Test will be called for an online Oral Interview.
- The syllabus for the written test and the oral interview will be from:
  - Foundations: *Linear Algebra/Matrices, Probability and Combinatorics* at the undergraduate engineering mathematics level, in addition to basic *Calculus and Geometry*.
  - Programming: *Data Structures (arrays, matrices, etc.), and Basic Programming.*
- *Oral Interview* will be conducted online using Microsoft Teams, and evaluate your ability to think and solve problems interactively using pen and paper. For more details, visit https://cds.iisc.ac.in/admissions/course-degrees

Application Deadline: 31 March   Written Test: 15 April   Oral Interview: 19-23 April