

M.Tech.(CDS) Admissions 2018

Pre-interview Familiarization

8 May 18



Website has up to date Info.

- <http://cds.iisc.ac.in/admissions/course-degrees/>

The screenshot shows the website for the Department of Computational and Data Sciences at the Indian Institute of Science, Bangalore. The page is titled "Course Degree Admissions" and features a navigation bar with links to ACADEMICS, COURSES, RESEARCH, PEOPLE, ADMISSIONS, OPPORTUNITIES, and RESOURCES. A news ticker at the top mentions the Prime Minister's Research Fellowship (PMRF) scheme. The main content area is titled "M.Tech. (Computational & Data Science) Admissions, 2018" and includes links for the Program Flyer, Sponsored Fellowships Available, and Download Admissions Brochure [PDF]. A section for Important Dates lists the application opening on February 1, 2018, the application deadline on March 26, 2018, and the pre-interview familiarization session on May 8, 2018. The results of the oral interview are expected to be posted by May 14, 2018, and the oral interview itself is scheduled for May 15, 2018. A sidebar on the right contains a section for Recent News, mentioning the Pre-Interview Familiarization Program for Admissions, 2018, and the M.Tech. (Computational & Data Science) Admission Brochure - 2018.

Home > Admissions > Course Degree Admissions

Course Degree Admissions

M.Tech. (Computational & Data Science) Admissions, 2018

[Program Flyer](#)

[Sponsored Fellowships Available](#)

[Download Admissions Brochure \[PDF\]](#)

Important Dates:

- Applications Opening: **1 February, 2018** (Online at <http://www.iisc.ac.in/admissions/>)
- Application Deadline: **26 March, 2018** (Online at <http://www.iisc.ac.in/admissions/>)
- [Pre-Interview Familiarization/orientation towards MTech\(CDS\)](#): Optional session, open to everyone.
 - Date & Time:** May 8, 2018 (12 PM), **Venue:** Seminar Hall (102) of CDS, IISc, Bangalore.
- Written Test:** 14 May, 2018 (Time: 9:45 AM - 10:30 AM **Venue:** Central Lecture Hall Complex, IISc, Bangalore)
 - Results of candidates selected for Oral Interview to be posted in this webpage by **14 May, 2018, 6PM**
- Oral Interview:** 15 May, 2018 starting at 9AM at CDS, IISc, Bangalore
- Tentative Merit List will be posted here on 15 May, 2018, 10 PM**

RECENT NEWS

Pre-Interview Familiarization Program for Admissions, 2018

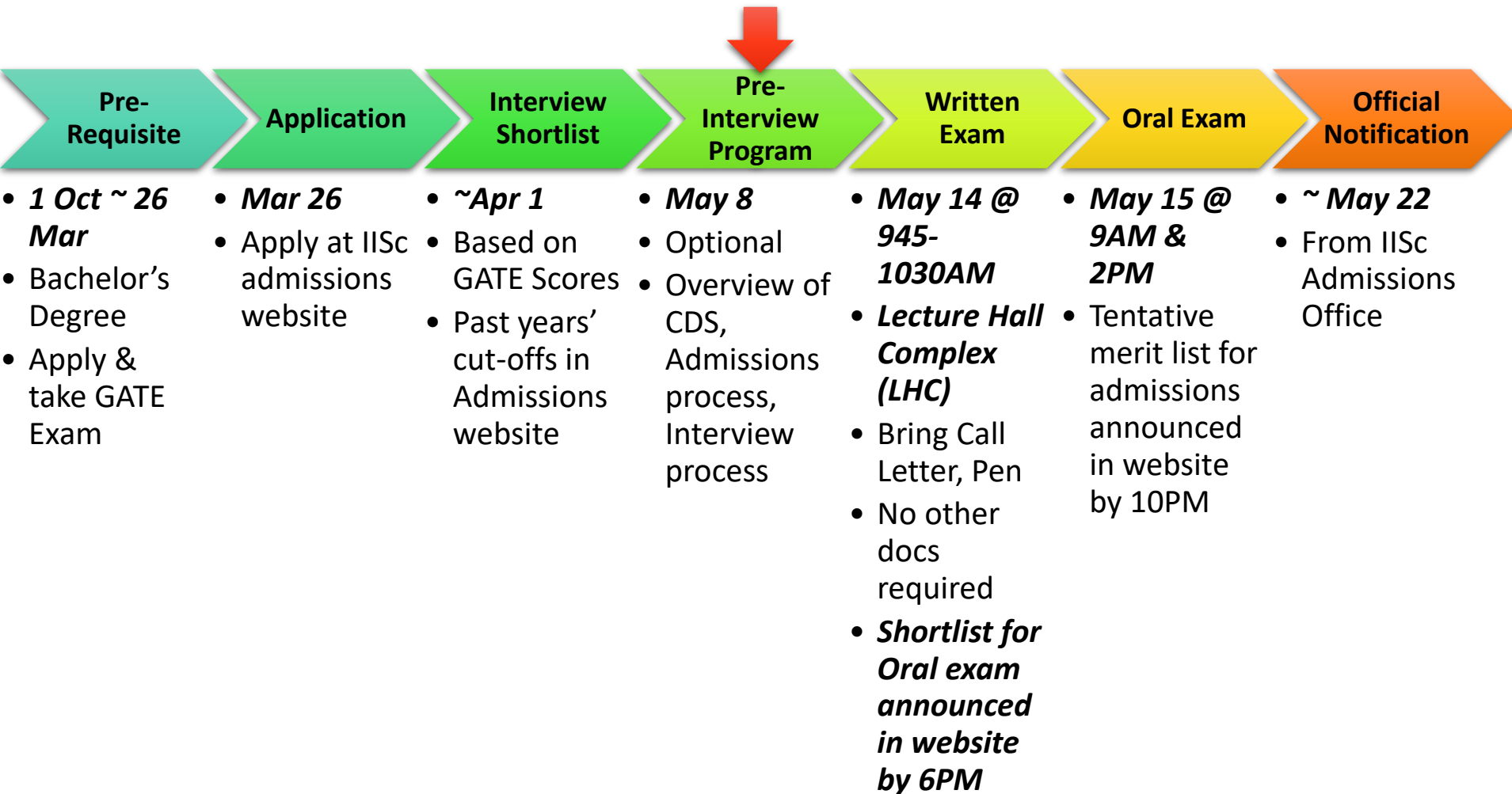
Interview call letters for those applied to CDS programs

M.Tech. (Computational & Data Science) Admission Brochure - 2018 (interview procedure/details)

CDS/Computational Science (CD) Research Admission

5/8/2018

Admissions Process





Written & Oral Exam Syllabus

- Tests ability to perform well in our inter-disciplinary degree program
- **Foundations**
 - ▶ Engineering Mathematics at Undergraduate level
 - *e.g. Calculus, Geometry, etc.*
 - ▶ Linear Algebra & Matrices
 - *e.g. Matrix operations, Eigen values, etc.*
 - ▶ Probability and Combinatorics
 - *e.g. Permutation & Combinations, Conditional Probability, etc.*
- **Programming**
 - ▶ Basic Programming
 - *e.g. Loops, Control flow, conditions, ordering, etc.*
 - ▶ Data Structures (arrays, matrices, etc.)
 - *e.g. Array and matrix operations, etc.*



Written Exam

- 10 questions, 45 minutes
- Short answer types
 - ▶ Brief final answers in front page
 - ▶ Rough work to be attached in separate sheets
- Bring your pen
- Use of Calculators, Phones, etc. not allowed



Written Exam

■ Sample Questions from Past

Combinatorics

A pair of friends attend a party with n people, where all of them sit around a round table for a dinner. Assuming that all seating configurations are equally likely, what is the probability that the friends sit adjacent to each other.

If the relationship of y with respect to x is $y = ax^3 + bx^2 + cx + d$, what are the values of a, b, c and d ?

Engineering
Math.

y	6	11	18	27	38
x	1	2	3	4	5

Given that the area of a triangle is $\sqrt{3}$, what is the minimum value of its perimeter?

Determine the expected output of the following part of a program operating on a square matrix A of dimension n .

```
for ( $i = 1, i++ , i \leq n$ ) do
for ( $j = 1, j++ , j \leq n$ ) do
A[i,j]=A[j,i];
end
end
```

Programming



Written Exam

- **Monday May 8**
- Reporting time **9:30AM**
- Venue: Central Lecture Hall Complex (LHC)
 - ▶ <https://goo.gl/maps/ps6WdtpcF542>
- Exam held between **9:30-10:45AM** for **45 mins**
- Written exam results posted on CDS M.Tech. admissions website by **6PM**

Oral Exam

- Students shortlisted for oral exam based on written exam performance
- Same syllabus as written exam, but more in-depth
- ***Also has questions from subjects in UG major***
 - ▶ E.g. Algorithms from Computer Science UG, Fluid Mechanics for Mechanical Engineering UG
- ~3-4 questions, ~15-25 mins
- Detailed *viva voce* in front of a faculty panel
 - ▶ Use whiteboard to explain your answers
 - ▶ Evaluates your ability to think, Not memorize!



Oral Exam

- **Tuesday May 15**
- **Two sessions**
 - ▶ Forenoon: **9AM-1PM**
 - ▶ Afternoon: **2PM-530PM**
 - ▶ Shortlisted students from written exam will be asked to report to **one** of these oral exam sessions
- **Two panels**
 - ▶ **CDS Room 308**
 - ▶ **CDS Room 309**
 - ▶ Shortlisted students will be asked to report to **one** of these panels
- **Tentative merit list for admissions posted by 6PM on website**

Takeaways

- Be curious, be pro-active
 - ▶ Post-graduate program
 - ▶ Self-learning, online resources
 - ▶ Talk to seniors, peers, discuss
- Think research
 - ▶ Top University in India! *Competitive!*
 - ▶ Pick project dissertation topic early
 - ▶ Consider upgrading to Ph.D. program