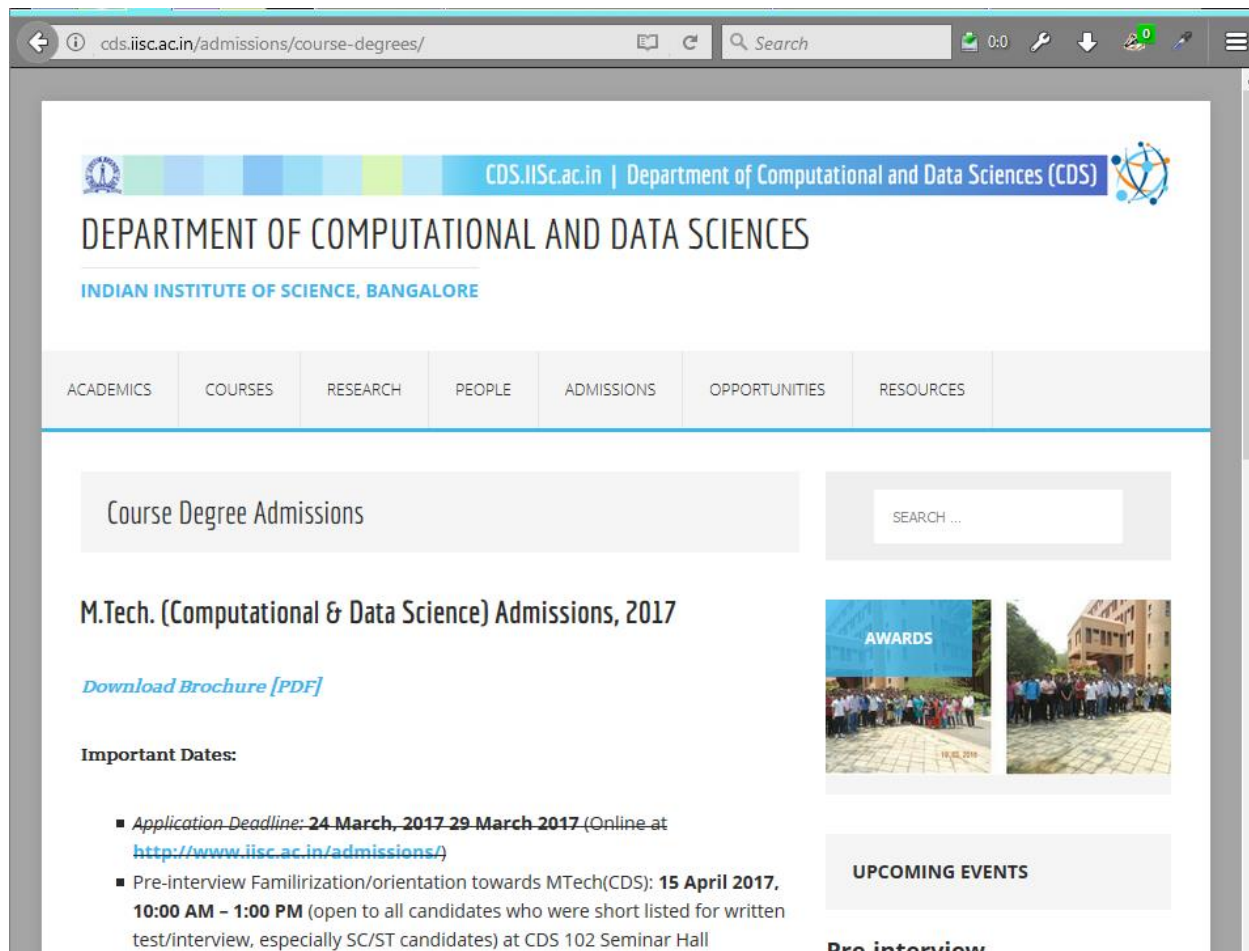


# M.Tech.(CDS) Admissions 2017

# Website has up to date Info.

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

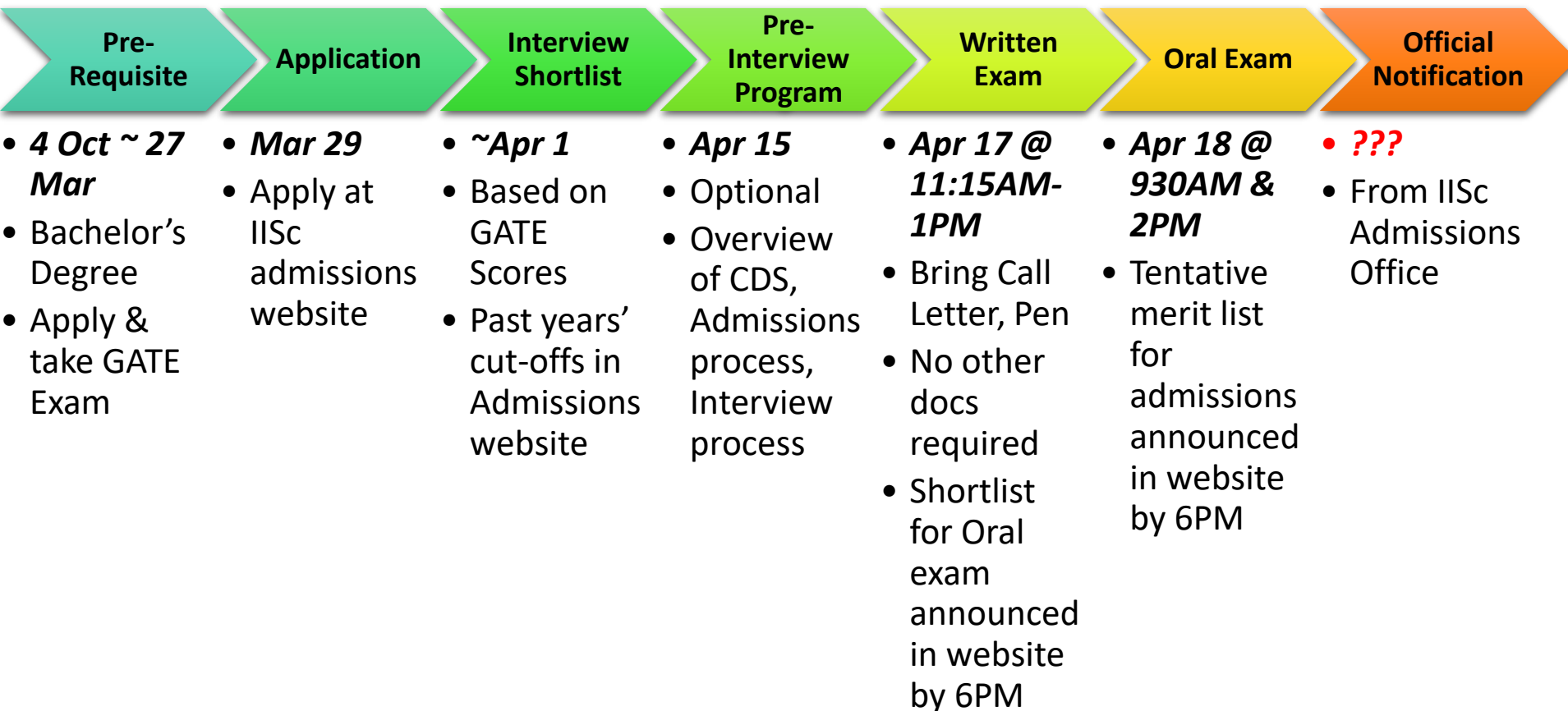


The screenshot shows a web browser displaying the URL [cds.iisc.ac.in/admissions/course-degrees/](http://cds.iisc.ac.in/admissions/course-degrees/). The page header includes the IISc logo and the text "CDS.IISc.ac.in | Department of Computational and Data Sciences (CDS)". Below the header, the text "DEPARTMENT OF COMPUTATIONAL AND DATA SCIENCES" and "INDIAN INSTITUTE OF SCIENCE, BANGALORE" is displayed. A navigation bar contains links for ACADEMICS, COURSES, RESEARCH, PEOPLE, ADMISSIONS, OPPORTUNITIES, and RESOURCES. The main content area is titled "Course Degree Admissions" and features a search bar. Below the search bar, the text "M.Tech. (Computational & Data Science) Admissions, 2017" is shown, followed by a link to "Download Brochure [PDF]". Under the heading "Important Dates:", there are two bullet points: "Application Deadline: 24 March, 2017 29 March 2017 (Online at <http://www.iisc.ac.in/admissions/>)" and "Pre-interview Familiarization/orientation towards MTech(CDS): 15 April 2017, 10:00 AM – 1:00 PM (open to all candidates who were short listed for written test/interview, especially SC/ST candidates) at CDS 102 Seminar Hall". To the right of the text, there are two images: one labeled "AWARDS" showing a group of people on a stage, and another showing a building. Below these images, the text "UPCOMING EVENTS" is displayed, followed by the text "Pre-interview".

# Pre-requisites

- B.E./B.Tech./M.Sc./MCA/Four year B.S. or equivalent
- Any science/engineering discipline
- Valid GATE Score
- A strong background in Mathematics and Programming is required
- Apply through *IISc Admissions* website
- **<http://www.iisc.ac.in/admissions>**

# 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

- 5 questions, 30 minutes
  - *3 required* questions to be answered
  - Choice of *2 out of 4 questions* to be answered
- 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 April 17**
- Reporting time **11:15AM**
- Exam complete before **1PM**
- Students with GATE(Computer Science) paper: **MRC Auditorium** (*opposite CDS building*)
- Students with other GATE papers: **CDS 102**
- 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
- ~3-4 questions, ~15-25 mins
- Detailed *viva voce* in front of a faculty panel
  - Use whiteboard to explain your answers



# Oral Exam

- **Tuesday April 18**
- **Two sessions**
  - Forenoon: **930AM-1PM**
  - Afternoon: **2PM-530PM**
  - Shortlisted students will be asked to report to **one** of these sessions
- **Two panels**
  - GATE(CS) Panel: **CDS 308**
  - GATE(Other) Panel: **CDS 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 dissertation topic early
  - Consider switching to Ph.D. program