

## **Master of Science in Computer Science**

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The Master of Science in Computer Science was established to develop skills in conducting research and further studies at the doctoral level by giving professionals intensive training to undertake high-level research in Computer Science. It provides students with theoretical and underlying principles of computation on various areas of computer science. Candidates' understanding of these and their proficiency and style in written and oral communication are primarily attested to by the successful completion and defense of a master's thesis.

The program is designed for academics, computer scientists, and computer researchers working towards a doctorate degree.

### **Admission Requirements**

The program accepts applicants who have a Bachelor's degree in Computer Science or ITE allied fields (e.g. sciences, math and engineering). Other Bachelor's degrees may be considered on a case-to-case basis.

#### *Note:*

- Applicants may be required to take remedial courses depending on their degree or courses they have taken up during their Bachelor's degree.
- Since the program will be administered in English, students will be expected to demonstrate a strong grasp of the language.

### **Academic Program Components**

#### *Remedial Courses (24 units)*

- Logic Formulation using Java
- Object-Oriented Programming with Java
- Data Structures and Algorithms
- Software Engineering and Database Systems
- Operating Systems
- Computer Organization
- Theory of Computation
- Intelligent Systems

#### *Foundation Courses (18 units)*

- Advanced Operating Systems
- Advanced Computer Architecture
- Automata, Computability, and Formal Languages
- Theory of Programming Languages
- Design and Analysis of Algorithms
- Methods and Research for CS

#### *Electives Offered (12 units)*

- Human-Centric Computing
  - Empathic Computing
  - Natural Language Processing
  - Neural Networks
  - User Modelling
  - Man-machine Interaction
- Machine Learning
- Digital Signal Processing
- Image Processing

- Wireless Sensors
- Security

*Thesis (6 units)*

The final thesis provides a venue for the student to demonstrate mastery and application of learning. This requirement serves as summative expression of what the student has learned in the program.