



# **St. Xavier's College, Kolkata**

**FIRST AUTONOMOUS COLLEGE UNDER CALCUTTA UNIVERSITY**

**NAAC ACCREDITED GRADE 'A'**

**COLLEGE OF EXCELLENCE & HERITAGE COLLEGE**



**M. Sc. in COMPUTER SCIENCE**

**Prospectus 2016 - 2018**

## 1. BRIEF HISTORY OF THE COLLEGE

Founded in 1860 by a small group of Jesuits under the leadership of Rev. Fr. H Depelchin S.J., St. Xavier's College was affiliated to Calcutta University in 1862. Founded by a Catholic Christian Minority Religious body, Society of Jesus, St. Xavier's College is a religious minority educational institution recognized by the State Government. While a certain preference is shown to the educational & cultural needs of the minority community, admission is open to all irrespective of caste and creed.

A multifaculty College, St. Xavier's offers Graduation in Arts, Science, Commerce and Business Administration; Post Graduation in Science and Commerce and B Ed. Course.

**M Sc Computer Science** was introduced from the academic session 2005-06. The PG was granted autonomy by CU from its inception. These students are now working in esteemed IT companies like Infosys, McKinsey, IBM, TCS, Infosys, Federal Bank, Food Corporation of India, Wipro, Accenture, Oracle, CTS to name a few.



St. Xavier's College has been offering 3 year **B Sc Computer Science** under the University of Calcutta since 1998. The College as a UG Institution was granted **AUTONOMY** by UGC and Calcutta University in March 2006. St. Xavier's College is the **first Affiliated College to be granted Autonomy** in the **State of West Bengal**.

## 2. M.SC COMPUTER SCIENCE DEPARTMENT



*"Contact with industrialists suggests senior managers often have advanced degrees, and at every level salaries are higher for people with postgraduate education."*

The **M Sc Computer Science** is a 2 year, 4 semester PG course, which draws upon a world-wide reputation of high-quality research, excellent teaching quality and facilities of the Computer Sc Dept. at St. Xavier's College. Industrial links enable our students to be professionally competitive.

This course is designed for students with a strong academic track record in computer science & mathematics at UG level. We have high academic expectations and the standard of our intake is correspondingly high.

The course has been designed in consultation with distinguished professionals and combines a wide range of subjects and papers that are of importance in the current IT scenario.

### 3. STAFF

#### Administrative

Rev. Dr. Dominic Savio, S.J.

Rev. Dr. J. Felix Raj, S.J.

Prof B Da Silva

Prof. Shalabh Agarwal

Prof. Romit S Beed

M.Sc, M.B.A(IT), PGCCCL

M.Sc, M.Tech

Rector

Principal

Vice Principal

Head of The Department (Computer Sc)

Coordinator (P.G. Computer Sc)

#### Faculty

Mr. Shalabh Agarwal

Dr. Pradip Kumar Chakrabarti

Dr. Asoke Nath

Prof. Sankar Das

Prof. Anal Acharya

Prof. Romit S Beed

M.Sc, M.B.A(IT), PGCCCL

M.Sc, Ph.D

M.Sc, Ph.D, M.C.A.

M.C.A, M.Tech

M.C.A, M.E.

M.Sc, M.Tech

Prof. Sonali Sen

Prof. Jayati Ghosh Dastidar

Prof. Siladitya Mukherjee

Prof. Debabrata Datta

Prof. Kaushik Goswami

M.Sc, M.Tech

B-Level, M.E.

M.C.A, M.Tech

M.C.A., M.Tech

B-Level

#### Support Staff

##### Technical and Laboratory Assistants:

Mr. Rana Biswas

Mr. Sujit Chandra

Mr. Totan Karmakar

Mr. Abhijit Karmakar

##### Office Staff:

Mr. Abhijit Das

Mr. Bifal Das (Shikari)

### 4. COURSE CONTENT

The Post Graduate programme aims to impart a sound understanding of the advanced principles of Computer Science. It provides sufficient depth & breadth of experience in up-to-date methodologies & an exhaustive treatment of selected, research-based topics, to significantly advance a student's career prospects within the IT industry, and/or equip him/her to undertake research in Computer Sc.

#### Semester I

Paper Code	Name	Full Marks	Credits
CMSM4121	Data Structure and Analysis of Algorithms	100	4
CMSM4122	Advanced Database Management System	100	4
CMSM4123	Computer Architecture	100	4
CMSM4124	Distributed Operating System	100	4
CMSM4156	Laboratory 1: PL/SQL and OS Programming Lab	100	3
CMSM4157	Laboratory 2: Object Oriented Programming Lab	100	3

#### Semester II

Paper Code	Name	Full Marks	Credits
CMSM4221	Software Engineering	100	4
CMSM4222	Computer Networking and Internet Technologies	100	4
CMSM4223	Microprocessors and Micro controllers	100	4
CMSM4224	Computer Graphics and Multimedia	100	4
CMSM4256	Laboratory 3: Socket Programming, Microprocessor and Microcontroller Lab	100	3
CMSM4257	Laboratory 4: Internet Technologies I Lab	100	3

### Semester III

Paper Code	Name	Full Marks	Credits
CMSM4321	Compiler Design	100	4
CMSM4322	Artificial Intelligence	100	4
CMSM4323	VLSI Design	100	4
CMSM4324	Cryptography and Network Security	100	4
CMSM4356	Laboratory 5: Internet Technologies II and Artificial Intelligence Lab	100	3
CMSM4357	Term Paper	50	2
CMSM4358	Project 1	50	2

### Semester IV

Paper Code	Name	Full Marks	Credits
CMSM4421	Image Processing and Pattern Recognition	100	4
CMSM4431	Mobile Communications (Elective)	100	4
CMSM4432	Data Mining and Data Warehousing (Elective)	100	4
CMSM4433	Object Oriented Technology (Elective)	100	4
CMSM4456	Project 2	200	8
CMSM4457	Seminar	100	3
CMSM4458	Grand Viva	100	4

## 5. USEFUL INFORMATION

**Class Timing:** 10:10 a.m. to 4:45 p.m.

**Attendance:** 75%

## 6. FEES

### At the time of Admission:

• Security Deposit	10,000.00
• Admission Fees	5,000.00
• Lab Fees	3,000.00
• Yearly Extras	4,500.00
• Cyber Fees	400.00
• Certificate Fee	500.00
• Registration Fee	300.00
• Exam Fees (1 <sup>st</sup> Semester)	1000.00
• 3 Months Tuition, Additional and Development fees	14,700.00

Total fees to be paid at the time of admission:

**39,400.00**

### Monthly:

• Tuition Fees	700.00
• Additional	3,000.00
• Development Fees	1,200.00

## **7. ADMISSION (2016-2017)**

### **ELIGIBILITY CRITERIA**

- B.Sc. in Computer Science or its equivalent like BIT/ BCA with a minimum of 55% marks (45% for reserved category) and having passed Mathematics (Business Mathematics not eligible) in 10+2 level.
- Those students who have completed their 2nd year University Examination in 2015 and awaiting 3rd year Examination Results are also eligible. Admission for such candidates will be provisional and it will be finalized subject to passing the qualifying examination with a minimum of 55% marks.

### **APPLICATION PROCEDURE**

**Online** Application forms are available on the College website - **[www.sxccal.edu](http://www.sxccal.edu)**

**Dates for filling in the online application forms:** 1<sup>st</sup> July, 2016 to 13<sup>th</sup> July, 2016, 12:30pm.

**Date of Written Examination:** 15th July, 2016 at 3:30 P.M.

**Date of Selection List:** 21<sup>st</sup> July, 2016 at 5:00 P.M.

**Format of Admission Test:** Multiple Choice questions on Computer Sc (B Sc Level). Duration: 1 hour.

**Inauguration:** 1<sup>st</sup> August, 2016 at 2:00 pm.

*Scholarship, in the form of waiver of tuition fee, will be provided to one student on the basis of academic performance in the 1<sup>st</sup> and 2<sup>nd</sup> Semester examinations of the College.*