St. Xavier’s College, Kolkata

FIRST AUTONOMOUS COLLEGE UNDER CALCUTTA UNIVERSITY

NAAC ACCREDITED GRADE ‘A’

AWARDED COLLEGE OF EXCELLENCE BY UGC

M. Sc. in COMPUTER SCIENCE

Prospectus 2015 - 2017
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. Rector
Rev. Dr. J. Felix Raj, S.J. Principal
Prof B Da Silva Vice Principal
Dr. Pradip Kumar Chakrabarti M Sc, Ph.D Dean of P.G.
Mr. Shalabh Agarwal MSc, M.B.A(IT), PGCL Head of The Department (Computer Sc)
Mr. Romit S Beed M.Sc, M.Tech Coordinator (P.G. Computer Sc)

Faculty
Mr. Shalabh Agarwal M.Sc, M.B.A(IT), PGCL Ms Sonali Sen M.Sc, M.Tech
Dr. Pradip Kumar Chakrabarti M Sc, Ph.D Ms.Jayati Ghosh Dastidar B-Level, M.E.
Dr. Asoke Nath M.Sc, Ph.D, M.C.A. Mr. Siladitya Mukherjee M.C.A, M.Tech
Mr. Sankar Das M.C.A, M.Tech Mr. Debrabrata Datta M.C.A., M.Tech
Mr. Anal Acharya M.C.A, M.E. Mr. Kaushik Goswami B-Level
Mr. Romit S Beed M.Sc, M.Tech

Support Staff
Mr. Rana Biswas (Tech. Asst.) Mr. Sujit Chandra Mr. Totan Karmakar Mr. Abhijit Karmakar

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

<table>
<thead>
<tr>
<th>Paper Code</th>
<th>Name</th>
<th>Full Marks</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CMSM4121</td>
<td>Data Structure and Analysis of Algorithms</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4122</td>
<td>Advanced Database Management System</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4123</td>
<td>Computer Architecture</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4124</td>
<td>Distributed Operating System</td>
<td>100</td>
<td>4</td>
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<tr>
<td>CMSM4156</td>
<td>Laboratory 1: PL/SQL and OS Programming Lab</td>
<td>100</td>
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<tr>
<td>CMSM4157</td>
<td>Laboratory 2: Object Oriented Programming Lab</td>
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Semester II

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<td>Software Engineering</td>
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<tr>
<td>CMSM4222</td>
<td>Computer Networking and Internet Technologies</td>
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<td>4</td>
</tr>
<tr>
<td>CMSM4223</td>
<td>Microprocessors and Micro controllers</td>
<td>100</td>
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<td>CMSM4224</td>
<td>Computer Graphics and Multimedia</td>
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<td>CMSM4256</td>
<td>Laboratory 3: Socket Programming, Microprocessor and Microcontroller Lab</td>
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<td>CMSM4257</td>
<td>Laboratory 4: Internet Technologies I Lab</td>
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Semester III

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<th>Name</th>
<th>Full Marks</th>
<th>Credits</th>
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<tbody>
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<td>CMSM4321</td>
<td>Compiler Design</td>
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<tr>
<td>CMSM4322</td>
<td>Artificial Intelligence</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4323</td>
<td>VLSI Design</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4324</td>
<td>Cryptography and Network Security</td>
<td>100</td>
<td>4</td>
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<tr>
<td>CMSM4356</td>
<td>Laboratory 5: Internet Technologies II and Artificial Intelligence Lab</td>
<td>100</td>
<td>3</td>
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<td>CMSM4357</td>
<td>Term Paper</td>
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<td>CMSM4358</td>
<td>Project 1</td>
<td>50</td>
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Semester IV

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<th>Credits</th>
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<td>CMSM4421</td>
<td>Image Processing and Pattern Recognition</td>
<td>100</td>
<td>4</td>
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<tr>
<td>CMSM4431</td>
<td>Mobile Communications (Elective)</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4432</td>
<td>Data Mining and Data Warehousing (Elective)</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>CMSM4433</td>
<td>Object Oriented Technology (Elective)</td>
<td>100</td>
<td>4</td>
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<tr>
<td>CMSM4456</td>
<td>Project 2</td>
<td>200</td>
<td>8</td>
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<tr>
<td>CMSM4457</td>
<td>Seminar</td>
<td>100</td>
<td>3</td>
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<tr>
<td>CMSM4458</td>
<td>Grand Viva</td>
<td>100</td>
<td>4</td>
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</table>

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 (1st Semester): 900.00
- 3 Months Tuition, Additional and Development fees: 14,700.00

Total fees to be paid at the time of admission: 39,300.00

Monthly:

- Tuition Fees: 700.00
- Additional: 3,000.00
- Development Fees: 1,200.00
7. ADMISSION (2015-2016)

ELIGIBILITY CRITERIA

- B.Sc. in Computer Science or its equivalent like BIT/BCA with a minimum of 55% marks and having passed Mathematics (Business Mathematics not eligible) in 10+2 level.

- Those students who have completed their 2nd year University Examination in 2014 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

Step 1: Application forms are available on the College website - www.sxccal.edu

Step 2: Download the prospectus and application form. Print the form and fill up the relevant details.

Step 3: Completed Application forms are to be submitted along with an application fee of Rs 500/- and attested photocopies of Class X, Class XII, B Sc Examination Mark sheet, University Registration Certificate, Proof of Date of Birth to the Post Graduate Office, Third Floor, St. Xavier’s College on working days.

Dates of submission of duly filled application forms: 1st July, 2015 to 14th July, 2015
(Monday to Friday from 10am to 2pm and Saturday from 10am to 12:30pm)

Date of Written Examination: 16th July, 2015 at 3:30 P.M.

Date of Selection List: 22nd July, 2015 at 5:00 P.M.

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

Inauguration: 1st August, 2015.
RULES AND REGULATIONS

1. Candidates are required to find their allotted seats and shall take their seats 15 minutes before the time of commencement of the examination.

2. Candidates are warned that any attempt to use any unfair means at the examination, or any breach of any of the examination rules will render them to penalties as the authority may determine.

3. If during and/or after the examination it is found that the candidate does not fulfill all or any of the rules and Regulations governing the examination, his/her examination is liable to be cancelled.

4. Candidates without admit cards will not be allowed to sit for the examination.
St. Xavier's College, Kolkata
AUTONOMOUS

APPLICATION FORM FOR ADMISSION TO M. Sc. (COMPUTER SCIENCE) UNDER UNIVERSITY OF CALCUTTA

2015 - 2016

1. Name of the applicant (in block letters) .............................................................................

2. Present Address ......................................................................................................................

..................................................................................................................................................

Phone : .................................. Mobile : .................................. Email : ..................................

3. Permanent Address ..................................................................................................................

..................................................................................................................................................

4. Date of Birth: ........................................ Blood Group: ..............................................

5. Name and Occupation of Father ..........................................................................................

6. Name and Occupation of Mother ..........................................................................................

7. Guardian’s Name, Relationship and Occupation .................................................................

8. Income of the Family per Month .........................................................................................

9. Whether belonging to Catholic /XTIAN/ SC/ST/OBC (if yes attach all attested copy of necessary certificates)
   CATHOLIC   CHRISTIAN   SC   ST   OBC

10. Achievements (if any please specify): Academic Co-curricular Games Cultural

11. Whether physically handicapped
    (if yes attach all attested copy of necessary certificate)
    Yes  No

12. Are you enjoying any scholarship or stipend?
    Yes  No

13. Are you employed at present?
    Yes  No

Serial No. ............................

For Office Use
Recommended for admission

Affix Passport Photo

Recommended for admission
### 14. Details of academic qualifications:

<table>
<thead>
<tr>
<th>Examination Passed</th>
<th>Madhyamik or equivalent</th>
<th>Higher Secondary or equivalent</th>
<th>BSc / BIT / BCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of Passing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of School &amp; Board / College &amp; University</td>
<td></td>
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<tr>
<td>Subjects Taken</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rank/Division/Class &amp; Percentage of Marks</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 15. Statement of Marks in the qualifying examination:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Roll No.</th>
<th>Honours / Major Subject*</th>
<th>General / Pass / Ancillary Subject-I</th>
<th>General / Pass / Ancillary Subject-II</th>
<th>Total Hons / Major Marks</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART-I / YEAR-1</td>
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<td>Theo</td>
<td>Prac</td>
<td>Theo</td>
<td>Prac</td>
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<tr>
<td>PART-II / YEAR-2</td>
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<tr>
<td>PART-III / YEAR-3</td>
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</tr>
</tbody>
</table>

**DECLARATION / UNDERTAKING**

I declare / undertake that:

1. The statements made above by me are true.
2. If any error/misinformation is detected after my provisional admission, my admission shall be treated as cancelled.
3. I have not taken admission to any other course.
4. I am not employed anywhere.
5. If I am admitted I will be a full time student of the College.
6. If I remain absent from the classes continuously for fifteen days at a stretch or for a total of thirty days (interrupted) during the first two months of my admission to the course of studies without a reason acceptable to the College my studentship will terminate and my name shall be automatically struck off the rolls.

Endorsed

Signature of the applicant

Signature of Parent/Guardian

Date ………………… ……

**N.B.**

1. Application must be supported by attested copies of X, XII and Graduation (Part I, II and III) mark sheets.
2. Incomplete forms are liable to be rejected.
3. Selection list will be displayed on the notice board.
4. Original mark sheet must be shown at the time of admission.