Faculty of Computing & Engineering Sciences
Department of Computer Science
BS-MS-PhD

Admission start from: April 28, 2014
BS (Computer Science)

The Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST) is a fully Chartered Institute established through a Legislative Act of the Sindh Assembly (Sindh Act No. XI of 1995) and is approved and recognized by the Higher Education Commission (HEC), Pakistan, as a degree awarding institution. SZABIST has campuses in Karachi, Islamabad, Larkana, Hyderabad and Dubai (UAE). SZABIST is one of the highest ranked universities in the country.

SZABIST is a registered member of the International Association of Universities (IAU), Paris; Association of Commonwealth Universities (ACU), London; Association to Advance Collegiate Schools of Business (AACSB), Singapore; Federation of the Universities of Islamic World (FUIW), Rabat; Asia University Federation (AUF), Seoul; and Management Association of Pakistan, Karachi.


Asia Inc. a leading Asian Magazine, has ranked SZABIST among the top MBA Schools of South Asia in its Asia’s Best MBA Schools Survey for two consecutive years (2003, 2004). SZABIST is one of the top 15 business schools from South Asia ranked in Asia Inc.

Higher Education Commission (HEC), Pakistan has ranked SZABIST as one of the best business schools of Pakistan. The Chartered Inspection and Evaluation Committee (CIEC) has rated SZABIST as an “Outstanding” institution by awarding “6 Stars”.

"The Accreditation of BS(Computer Science) Program by the National Computing Accreditation Council (NCEAC) is in progress”.

SZABIST is also ranked among the best Science and Technology and MBA schools in Asia by the CNN-Time publication, Asiaweek. SZABIST is also listed in the CNN Executive Education Schools, 2009. SZABIST, thus, has the unparalleled honor of being the only Pakistani Institute to be recognized internationally by BusinessWeek, Asiaweek, Asia Inc. and CNN.

BS (Computer Science)

SZABIST offers a 4-year (8-semesters) BS (Computer Science) degree covering the wide range of subject in Software Engineering, Information Technology and Telecommunication.

The BS (Computer Science) program consists of 40 courses (5-courses per semester) with a total of 130 credit hours.

Admission Requirements

For admission to the BS (Computer Science) program, the candidate must have completed A-Level (minimum 3 passes)

Intermediate (minimum 50% marks), (including first year, no supplementary) or equivalent from an HEC recognized institution. Candidates with mathematical background will be preferred.

An entrance test and group discussion/interview will be given to all applicants at SZABIST.
BS (Computer Science)

Fee
Application Processing Fee : Rs. 1,500 (Pakistani nationals) / US$ 45 (Foreign nationals)
Admission Fee : Rs. 20,000 (Pakistani nationals) / US$ 500 (Foreign nationals)
Security Deposit (refundable) : Rs. 5,000 (Pakistani nationals) / US$ 165 (Foreign nationals)
Students Activity Charges : Rs. 500 per semester for Pakistani nationals; US$ 15 per semester for foreign nationals
Tuition Fee per semester : (Tentative) Rs. 72,000 for Pakistani nationals; US$ 1,680 per semester for foreign nationals (full load of five courses per semester)

SZABIST reserves the rights to revise the fees/withdraw of scholarship without any prior notice.

Scholarships
Info about Scholarships is available at the offer of External Relations and Financial Assistance dept. Applicants for Scholarships can be made after receiving admission and enrolling in the 1st semester.

Other programs at SZABIST
SZABIST also offers the following programs; BBA, BE Mechatronics, BS (Media Sciences), BS (Social Sciences), BS (Biosciences), MBA, MBA (Banking & Finance), MPM, Masters in T.V Production/Advertisement, MS (Media Studies), MS/PhD (Management Sciences and Social Sciences) and the University of London International Programmes of LLB and the BA (Hons) Business Studies (in affiliation with University of South Wales, UK). Separate brochures of these programs are available at the Admission Office.

Last Date to Apply : June 14, 2014
Admission Test : June 19-25, 2014
Interviews : July 1-11, 2014
Classes Commence : August 12, 2014

APPLY ONLINE:
Log on to: http://admissions.szabist.edu.pk.
Online applications can also be filled at SZABIST campus.
For further information please contact:
F-108, Clifton, Karachi, Pakistan, Tel: (021) 35821538-42. Ext: 111,108,112
Fax: (021) 35821537. E-mail: admissions@szabist.edu.pk, www.szabist.edu.pk

https://www.facebook.com/szabistofficial  https://twitter.com/SZABISTKarachi
### Curriculum

#### FIRST YEAR

**Fall Semester**
- English Composition and Comprehension
- Introduction to Computing
- Calculus and Analytical Geometry
- Islamiat & Pakistan Studies / Humanities
- Fundamentals of Programming

**Spring Semester**
- Object Oriented Programming
- Technical and Business Writing
- Physics
- Multivariate Calculus
- Discrete Mathematical Structures

#### SECOND YEAR

**Fall Semester**
- Communication & Presentation Skills
- Linear Algebra & Differential Equations
- Statistics & Probability
- Digital Logic Design
- Data Structures and Algorithms

**Spring Semester**
- Data Communications and Computer Networks
- Database Systems
- Computer Organization and Assembly Language
- Finite Automata Theory and Formal Languages
- Operating Systems

#### THIRD YEAR

**Fall Semester**
- Introduction to Software Development
- University Elective-1
- Software Engineering-I
- Computer Architecture
- Human Computer Interaction

**Spring Semester**
- CS Elective-1
- Design & Analysis of Algorithms
- CS Elective-2
- Numerical Computing
- Compiler Construction

#### FOURTH YEAR

**Fall Semester**
- Final Year Project-I
- Professional Practices
- Artificial Intelligence
- CS Elective-3
- CS Elective-4

**Spring Semester**
- Final Year Project-II
- University Elective-2
- CS Elective-5
- CS Elective-6
- CS Elective-7
MS (Computer Science)

SZABIST offers MS (Computer Science) degree in three tracks:
1- Core Computer Science
2- Specialization in Software Engineering
3- Specialization in Networks & Security

MS Program

The MS (Computer Science) program is an evening program only and consists of 33 credits including Thesis/Research Project.

- For students with a 4-year BS or MCS degree, the MS Program is a 2-years program. 9 MS courses and Thesis/Research Project/Course work (33 credits) are needed to graduate.

- For students with a 4-year professional degree (BE, MSc, etc), the MS Program is a 2-year program. Deficiency conversion courses, 9 MS courses and Thesis/Course work are needed to graduate.

- For students with a 3-year BCS degree, the MS Program is a 3-year program. One year of deficiency conversion courses, 9 MS courses and Thesis/Course work are needed to graduate.

Admission Requirements

For admission to the MS Program, the candidate must have 16 years of relevant education with minimum 55% marks/CGPA 2.50 from an HEC recognized university. GAT with Minimum 50% score.

An entrance test and group discussion/interview will be given to all applicants at SZABIST.

Fee

<table>
<thead>
<tr>
<th>Description</th>
<th>Pakistani nationals</th>
<th>Foreign nationals</th>
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</thead>
<tbody>
<tr>
<td>Application Processing Fee</td>
<td>Rs. 1,500</td>
<td>US$ 45</td>
</tr>
<tr>
<td>Admission Fee</td>
<td>Rs. 20,000</td>
<td>US$ 500</td>
</tr>
<tr>
<td>Security Deposit (refundable)</td>
<td>Rs. 5,000</td>
<td>US$ 165</td>
</tr>
<tr>
<td>Student Activity Charges</td>
<td>Rs. 500 per semester</td>
<td>US$ 15 per semester</td>
</tr>
<tr>
<td>Tuition Fee per semester</td>
<td>Rs. 72,600</td>
<td>US$ 1,680</td>
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Fees are applicable for full load of courses per semester. SZABIST reserves the right to revise the fees/withdraw scholarship without any prior notice.
PhD (Computer Science)

SZABIST offers a PhD Degree in Computer Sciences that can be completed during the evenings in three years after the MS degree. 6 PhD courses and dissertation are required to graduate. A total of 48 credit hours must be completed.

Specializations of Study


Research

SZABIST strongly encourages the publication of research findings of Independent Studies, Thesis and Dissertation in research journals and conferences. SZABIST also publishes its own research journals, the Journal of Independent Studies & Research and holds one National Research Conference and one International Conference annually.

Admission Requirements

For admission to the PhD Program, the candidate must have:

- 18 years of education in a related field with minimum 60% Marks/CGPA 3.00 from an HEC recognized institution.
- GAT Subject/GRE with minimum 60% score

An entrance test and group discussion/interview will be given to all applicants at SZABIST.

Fee

- Application Processing Fee: Rs. 1,500 (Pakistani nationals)/ US$ 45 (Foreign nationals)
- Admission Fee: Rs. 20,000 (Pakistani nationals)/ US$ 500 (Foreign nationals)
- Security Deposit (Refundable): Rs. 5,000 (Pakistani nationals)/ US$ 165 (Foreign nationals)
- Student Activity Charges: Rs. 500 per semester (Pakistani nationals)/ US$ 15 (Foreign nationals)
- Tuition Fee (Tentative): Rs. 18,150 per course for Pakistani nationals; US$ 420 per course for foreign nationals

SZABIST reserves the right to revise the fees/withdrawal of scholarship without any prior notice.

Scholarships

Financial Assistance in the form of Teaching/Research Assistant ship is available to eligible students.

Courses PhD (Computer Science)

COURSES

Following is a tentative list of course offerings for the PhD degree program at SZABIST.

Elective courses are offered from the specialized areas of study listed above, subject to minimum enrollment condition

Computer Science
- Independent Study I & II
- Electives-I, II, III, IV
- Dissertation

*(for Electives, see specialized courses)*