

PhD (Computing)

PhD (Computing)

SZABIST offers a PhD Degree in Computing 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

Specialized areas include Database Engineering, Data Warehousing & Mining, Networking & Communication, Business Intelligence, Process Modeling, Telecommunication, Mobile Communication, Mobile Computing, Artificial Intelligence, Software Engineering, Agent Systems, Multimedia & HCI Systems, Speech Recognition, e-Business and Technology Management, Intelligent Systems, Mechatronics, Machine Vision Image Processing, MIS and any other area which falls within the purview of Computer Science/Computing.

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.

Admission Requirements

For admission in the PhD program, the candidate must have a 17.5 years of education in a relevant field with minimum 60% marks/ CGPA 3.00 from an HEC recognized institution. GRE/GAT (subject) with minimum 60% score is also required. Last Degree verification from Higher Education Commission (HEC) is required.

Fee Structure*

	Pakistani Nationals	Foreign Nationals
Application Processing Fee :	Rs. 1,500/-	US\$ 45
Admission Fee :	Rs. 20,000/-	US\$ 500
Security Deposit (refundable) :	Rs. 10,000/-	US\$ 330
Student Activity Charges :	Rs. 1000/-	US\$ 30
Tuition Fee (per semester) :	Rs. 69,300/-	US\$ 1575
	(full load of three courses per semester)	

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

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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

Independent Research Study
Electives-I, II, III, IV
Dissertation
(for Electives, see specialized courses)



SZABIST

Discover Yourself

COMPUTER SCIENCE

Shaheed Zulfikar Ali Bhutto Institute of Science & Technology

90 & 100 Clifton, Karachi, Pakistan, Tel: (021)111 922 478, Fax: (021) 35830446, E-mail: info@szabist.edu.pk, www.szabist.edu.pk

About SZABIST

Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST) is highly ranked and fully chartered institute of Pakistan established through a Legislative Act of Sindh Assembly (Sindh Act No. XI of 1995). It is approved and recognized by the Higher Education Commission (HEC) Pakistan as a degree awarding institution. All the programs offered at SZABIST are consistent with the guidelines laid by HEC and other regulatory bodies, for example, National Business Education Accreditation Council (NBEAC), National Computing Education Accreditation Council (NCEAC), National Accreditation Council for Teacher Education (NACTE), and Pakistan Engineering Council (PEC).

Vision

SZABIST aims to be a globally recognized institute for excellence in education, research, development, and distinction in service.

Mission

SZABIST is committed to produce highly qualified professionals to:

- Meet national and global contemporary needs;
- Conduct cutting edge research and development;
- Provide hi-tech scientific and technological expertise;
- Meet current and future socio-economic challenges;
- Meet global citizenship responsibility.

HEC & CIEC Ranking

SZABIST is ranked as one of the most reputed university by Higher Education Commission (HEC) and Chartered Inspection and Evaluation Committee (CIEC) Sindh. All programs of SZABIST are conducted under strict compliance of the relevant regulator bodies such as NBEAC, NCEAC, NACTE, PEC and KHDA Dubai. Since 2012, the SZABIST-QEC has been awarded more than 91% in the quantitative assessment by Quality Assurance Agency (QAA) HEC, Pakistan.

International Linkages

SZABIST is a registered member of the following international and national associations: International Association of Universities (IAU), Paris; Association of Commonwealth Universities (ACU), London; The Association to Advance Collegiate School of Business (AACSB), Singapore; Asia University Federation (AUF), Seoul; Asia-Pacific Quality Network (APQN), People's Republic of China; Association of Quality Assurance Agencies of the Islamic World (AQAAIW), Malaysia; The Talloires Network, USA; The Chartered Institute of Logistics and Transport (CILT), UK; Management Association of Pakistan (MAP), Karachi; Marketing Association of Pakistan (MAP), Karachi, Human Resource Development Network (HRDN), Islamabad.

Research

SZABIST strongly encourages research. SZABIST published research journals in various disciplines including Computing i.e. the Journal of Independent Studies and Research (JISR-C). SZABIST also conducts various conferences and seminars our academic year.

BS (Computer Science)

BS (Computer Science)

SZABIST offers a four-year (eight semesters) BS Computer Science degree program which is accredited by National Computing Education & Accreditation Council, (NCEAC). The program covers a wide range of courses in core computer science, information technology and software engineering. The program is essentially a day program and consists of 40 courses (five courses per semester) with a total of 130 credit hours. The complete course plan includes 8 technical electives and 4 university electives. These 8 technical electives provide intensive learning in the diversified areas of computer science and allied disciplines. Internship opportunities are provided to complete degree requirement. The maximum time limit to complete the degree program is six years.

Admission Requirements

The candidate must have completed O-Levels (minimum 8 subjects including 5 compulsory subjects; English, Urdu, Maths, Islamiat & Pakistan Studies) and A-levels (minimum 3 Subjects)/12th Grade/Intermediate with minimum 50% marks or equivalent from a recognized institution. Mathematical background will be preferred for BS-Computer Science program. Inter Board Committee of Chairmen (IBCC) equivalency is required for O & A Levels/IB Diploma/High School Diploma or equivalent. General Paper (A Levels) will not be counted.

Fee Structure*

	Pakistani Nationals	Foreign Nationals
Application Processing Fee :	Rs. 1,500/-	US\$ 45
Admission Fee :	Rs. 20,000/-	US\$ 500
Security Deposit (refundable) :	Rs. 10,000/-	US\$ 330
Student Activity Charges :	Rs. 1000/-	US\$ 30
Tuition Fee (per semester) :	Rs. 102,400/-	US\$ 2,320
After 5% Subsidy:	Rs. 97,280/-	US\$ 2204

(full load of five courses per semester & 16 credit hours)

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BS (Computer Science)

FIRST YEAR	Discrete Mathematical Structures	Computer Networks and Data Communications
Fall Semester	Professional Practices	CS Elective-1
Introduction to Computer Science	CS Supporting-1	CS Elective-2
Fundamentals of Programming	Spring Semester	Technical and Business Writing
English Composition and Comprehension	Design and Analysis of Algorithms	FOURTH YEAR
Calculus and Analytical Geometry	Finite Automata Theory and Formal Languages	Fall Semester
Applied Physics	Database Systems	CS Elective-3
Spring Semester	Linear Algebra	CS Elective-4
Digital Logic Design	University Elective-2	Final Year Project-I
Object Oriented Programming Techniques	THIRD YEAR	University Elective-3
Communication and Presentation Skills	Fall Semester	Parallel and Distributed Computing
Statistics and Probability	Compiler Construction	Spring Semester
University Elective-1	CS Supporting-2	CS Elective-5
SECOND YEAR	Operating Systems	University Elective-4
Fall Semester	Software Engineering	Final Year Project-II
Computer Organization and Assembly Language	CS Supporting-3	Information Security
Data Structures and Algorithms	Spring Semester	Pakistan and Islamic Studies/Humanities
	Artificial Intelligence	

Mathematics deficiency course will be offered to those students who have limited mathematical background. (if deemed necessary by PM/HoD)

MS (Computer Science)

MS (Computer Science)

SZABIST offers MS (CS) degree in three domains: Core Computer Science area and in two specialization tracks, i.e., Software Engineering (SE) and Networks and Security (N&S). Students are required to complete 3 focused courses in any specific domain.

The program is of 2-year duration and is offered in the evening. It requires 33 credit hours to complete. Student has the option to complete MS through course work only or with research. If student opts for course work only, he/she is required to complete 11 courses of 3 credit hours each. Else, the student is required to complete 9 Courses (27 credit hours) and Two Independent Research Study (6 credit hours) OR One Thesis (6 credit hours). The maximum time limit to complete the MS degree is four years.

Admission Requirements

For admission in the MSCS program, the candidates must possess 16 years of relevant education with minimum 60% marks/2.00 CGPA from a university recognized by HEC. The candidates with a 4-year professional degree (BE, MSc, etc.) may also apply but will require to complete deficiency conversion courses (upto 18 credit hours courses to be determined in consultation with Program Manager). GAT (General) or HAT relevant is mandatory for MS students with minimum 50% score.

Last Degree verification from Higher Education Commission (HEC) is required.

Fee Structure*

	Pakistani Nationals	Foreign Nationals
Application Processing Fee :	Rs. 1,500/-	US\$ 45
Admission Fee :	Rs. 20,000/-	US\$ 500
Security Deposit (refundable) :	Rs. 10,000/-	US\$ 330
Student Activity Charges :	Rs. 1000/-	US\$ 30
Tuition Fee (per semester) :	Rs. 63,000/-	US\$ 1440
After 5% Subsidy:	Rs. 59,850/-	US\$ 1368
	(full load of three courses per semester) OR	
Tuition Fee (per semester) :	Rs. 84,000/-	US\$ 1920
After 5% Subsidy:	Rs. 79,800/-	US\$ 1824
	(full load of four courses per semester)	

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Master of Science in Computer Science

Core Courses

Research Methodology
Advanced Algorithms Analysis
Theory of Computation
Advanced Operating Systems
Advanced Computer Architecture

Courses for Specialization Computer Science (CS)

Real-Time Systems
Digital Image Processing
Machine Learning
Data Mining
Operation Research
Expert System

Software Engineering (SE)

Software Requirement Engineering
Software System Architecture
Software System Quality
Advanced Software Engineering

Networks & Security (N&S)

Advanced Computer Networks
Network Security
Applied Cryptography
Information Security
Wireless Sensor Networks

Admission Schedule

Admissions Start	: April 29, 2019
Last Date to Apply	: June 24, 2019
Admission Test	: June 26 to July 02, 2019
Interviews	: July 08-13, 2019
Classes Commence	: September 02, 2019

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-153, Clifton, Block-5, Karachi, Pakistan. UAN: 111-922-478,
Tel: 021-35823433 (Ext:148-147-104). Fax: 021-358 21537. www.szabist.edu.pk