

In order to ensure that this academic program at SZABIST conforms to standards of internationally recognized universities, the curriculum has been designed with the guidance of academics and professionals specializing in Mechatronic Engineering.

First Year		Third Year	
Fall Semester		Fall Semester	
ME 1101 Communication and Presentation Skills (2, 0)	ME 1102 Electric Circuits (3, 1)	ME 1109 Engineering Drawing-I (0, 2)	ME 1104 Engineering Mathematics-I: Calculus and Analytical Geometry (3, 0)
ME 1106 Islamic Studies (2, 0)	ME 1203 Engineering Physics (2, 1)	Spring Semester	
Spring Semester		ME 1201 Electronic Devices and Circuits (3, 1)	ME 1202 Engineering Mathematics-II: Linear Algebra and ODEs (3, 0)
ME 1204 Engineering Statics (3, 0)	ME 2301 Computer Programming (2, 1)	ME 1207 Engineering Workshop (0, 2)	ME 2306 Pakistan Studies (2, 0)
Second Year		Fourth Year	
Fall Semester		Fall Semester	
ME 2307 Data Structures and Object Oriented Programming (2, 1)	ME 2302 Digital Logic Design (2, 1)	ME 4xxx Elective-I (Engineering) (3, 0)	ME 4702 Engineering Economics and Project Management (3, 0)
ME 2303 Engineering Dynamics (3, 0)	ME 2304 Engineering Mathematics-III: 3D Geometry and Vector Calculus (3, 0)	ME 4802 Robotics (3, 1)	ME 4704 Mechanical Vibrations (2, 0)
ME 2305 Network Analysis (3, 0)	ME 2309 Engineering Drawing-II (0, 1)	ME 4706 Professional Practices (2, 0)	ME 4709 Final Year Project* (0, 3)
Spring Semester		Spring Semester	
ME 2401 Electronics Circuit Design (3, 1)	ME 2402 Electro-Mechanical Systems (3, 1)	ME 4801 Industrial Automation (2, 1)	ME 4xxx Elective-II (Engineering) (3, 0)
ME 2403 Engineering Mathematics-IV: Transformation Techniques (3, 0)	ME 2406 Strength of Materials (3, 1)	ME 4xxx Elective-III (Management Sciences) (3, 0)	ME 4703 Heat Transfer (2, 1)
ME 2405 Thermodynamics (2, 1)		ME 4809 Final Year Project (0, 3)	
ELECTIVES			
Engineering Electives		Management Sciences Electives	
1- Digital Signal Processing	2- Simulation and Modeling	1. Engineering Management	2- Entrepreneurship
3- Digital Image Processing	4- Digital Control Systems	3- Research Methodology	4- Leadership and Motivation Techniques
5- Embedded Systems	6- Artificial Intelligence and Computer Vision	5- Organizational Behavior	
INTERNSHIP			
The internship is scheduled for summer at the end of the third year. At the end of the 6-weeks internship, all students are required to submit a comprehensive report, giving details of their experience and learning.			
All courses may not necessarily be offered every year. Alternate courses may be substituted as and when needed. Full time academic load during first semester is six courses. All students are required to register for full load in the first semester.			

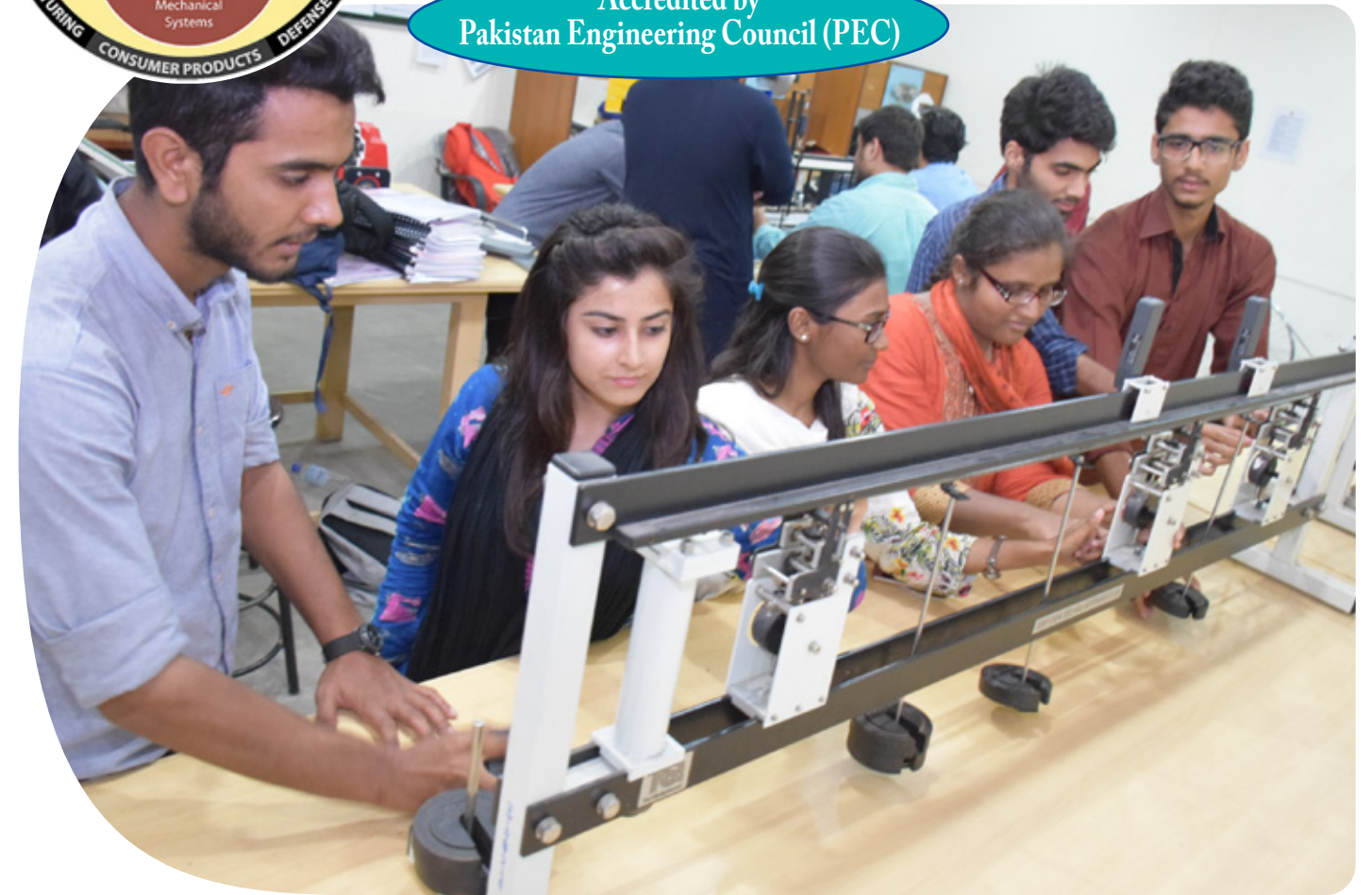
Departmental Labs

- Industrial Automation lab
- Robotics & Control lab
- Thermo Fluids lab
- Mechanics lab
- Engineering Workshop
- Design and Simulation lab
- Engineering Drawing lab
- Electronics lab
- Physics lab



Incepting New Dimensions... BE (Mechatronic Engineering)

Accredited by
Pakistan Engineering Council (PEC)



Mechatronics Philosophy

Mechatronics is a multidisciplinary field of engineering; it refers to an efficient and effective integration of mechanical and electronic systems.

A mechatronic engineer unites the principles of mechanics, electronics, and computing to generate a simpler, more economical, reliable and versatile system.

Faculty

Dean (Computing & Engineering Sciences)

Dr. M Altaf Mukati

Ph.D (Computer Engg.), Boston/Hamdard University.

Head of Department

Dr. Faraz Junejo

Ph.D (Mechatronics Engg.), Loughborough University, UK.

Assistant Professor

Dr. Raza Akbar

PhD (Aeronautical Engg.), Rensselaer Polytechnic Institute, USA.

Assistant Professor

Dr. Tahir Abdul Hussain

PhD (Mechanical Engg.), American University of Sharjah, U.A.E.

Assistant Professor

Engr. Humera Rafique

MS (Telecommunication Engg.), SSUET, Karachi.

Assistant Professor

Engr. Aneel Ahmed

PhD Candidate (RFID), SZABIST, Karachi.

MS (Telecommunication Engg.), NUCES-FAST Lahore

Assistant Professor

Engr. Abdul H Saeed

MS (Electrical Engg.), Texas Tech University, USA

Assistant Professor

Engr. Tanzila Younas

MS (Industrial Manufacturing Engineering & Management), NUST, Karachi.

Lecturer

Engr. Khurram Amjad

ME (Mechanical Engg.), Sheffield University, UK

Lecturer

Engr. Nasreen Bano

ME (Micro System Design), NED University, Karachi.

Lecturer

Engr. Moez Ul Hassan

MS (Control Engg.), NUST, Karachi.

Lecturer

Engr. Sarmad Hameed

MS (Industrial Control & Automation), UIT, Karachi.

Lab Engineer

Engr. Ismail Mansoor

MS (Control Engineering: In Progress), NUST, Karachi.

Lab Engineer

Engr. Syeda Maria

BE (Mechatronics), SZABIST, Karachi

Lab Engineer

Engr. Muhammad Shan

BE (Industrial Electronics), NED University, Karachi.

Lab Engineer

Engr. M. Atif Saeed

BE (Mechatronics), SZABIST, Karachi

Lab Engineer

Engr. Farhan Mumtaz

BS (Electronics Engg.), SSUT, Karachi

Lab Engineer

Engr. Ahmar Hayat Khan

BE (Mechatronics), SZABIST, Karachi

Mechatronics at SZABIST

This program in Mechatronics provides a structured hands-on approach to understand microcomputer and control technology, coupled with engineering design integration applied to products. For this purpose, the department offers a program that includes various engineering science courses from the relevant fields in addition to a strong foundation in basic sciences and mathematics.

Furthermore, state-of-the-art scientific and technological research laboratories with campus licensing of wide range of commercial developmental software provides an environment unrivaled by majority of reputed universities in Pakistan.

The Chartered Inspection and Evaluation Committee (CIEC) has rated SZABIST as an "Outstanding" institution by awarding "6 Stars". Mechatronics department has been rated as 7 Stars i.e. "World Class". Whereas, other five departments, namely Management Sciences, Computing, Social Sciences, Media Sciences and Biosciences are individually rated as 6 Stars i.e. "Outstanding".

Program Objectives

The objectives of the program are to provide a broad and basic education in multiple disciplines comprised of Mechanical, Electronics, and Computer Engineering, and to ensure that all students in the program are exposed to a wide spectrum of engineering knowledge and practice.

The goal is to educate and train engineers who are proficient in the state-of-the-art as well as emerging technologies in all key areas of the discipline. The students will acquire engineering problems. An important objective of the program is to offer a curriculum that evolves to keep pace with the rapid growth of technology in various areas of Mechanical and Electronics engineering.

Employment Opportunities

Graduates with a Mechatronic degree can take up careers in a wide spectrum of industries including:

- Robotics
- Aerospace
- Chemical
- Defense
- Automotive and Manufacturing
- Health, Medical and many more

As well as in businesses that requires extensive computer support, such as banking and commerce.

Contributions can be made to these industries in a variety of roles including design engineer, software engineer, project planner, product designer and project manager.



Admission Schedule

<https://www.facebook.com/szabistofficial>

BE (Mechatronics Engineering) Program

SZABIST offers a four year (eight semesters) BE (Mechatronics). The BE Program is essentially a day program and consists of 46 courses (generally five or six courses per semester) with a total of 140 credit hours, and an internship. The maximum time limit to complete the BE degree is seven years.

Admission Requirements

- The candidate must have completed intermediate (Pre Engineering)/O Levels (minimum 8 passes) & A levels (minimum 3 passes)/equivalent qualification with a combination of (Mathematics, Physics and Chemistry) with minimum 60% marks (those waiting for result can also apply).

Equivalency of grades for the candidates having Cambridge High School Certificate with Mathematics, Physics and Chemistry subjects are obtained as follows:

A-Level Grade	Equivalent Intermediate %
A	85
B	75
C	65
D	55
E	45

- Candidates with DAE (Mechanical/Electronics/Electrical/ Instrumentation/Automation) having at least 60% aggregate marks from an institute recognized by the Government.
- Minimum 60% aggregate marks each in matriculation and in Intermediate/equivalent exams.
- Please note that no deviation in this regard is allowed.
- 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:

Admission Fees:

For Pakistani Nationals

Rs. 20,000

Security Deposit (refundable):

Rs. 5,000

Student Activity Charges:

Rs. 1000

Tuition Fees per Course:

Rs. 14,400

Foreign Nationals

US\$ 500

US\$ 165

US\$ 30

US\$ 330

Note: SZABIST reserves the rights to revise the fee/withdraw of scholarship without any prior notice. *3 Credit Hour fee.

Admissions starting : May 02, 2017

Last Date to Apply : July 17, 2017

Admission Test : July 21-31, 2017

Interviews : August 7-12, 2017

Classes commence : September 4, 2017

Discover Yourself

Scholarships and Financial Assistance

SZABIST Funded Scholarships

- SZABIST Need-Based Scholarship
- SZABIST Merit-Based Scholarship

External Donor Funded Scholarships

- Sindh Endowment Fund Scholarship
- Balochistan Endowment Fund Scholarship
- Prime Minister's NICT R&D Fund Scholarship
- National Grassroots ICT Research Initiative
- Khairpur District Scholarship
- Minority Scholarships
- Ihsan Trust Qarz-e-Hasna Facility
- Other Communities Scholarship

Other Programs at SZABIST

SZABIST also offers the following programs; BBA, BS (A&F), BS (Entrepreneurship), BS (Media Science), BS (Social Sciences), BS (Computer Science), BS (Biosciences), BBS, MBA, MBA (Banking & Finance), MHRM, EMBA, Masters in Project Management (MPM), Master of Advertising, MA (Education), Master of Public Health (MPH), MS (Project Management), MS (Media Studies), MS (Biosciences), MS/PhD (Management Sciences, Computer Science, Social Sciences and Education Leadership & Management) and the University of London International Programme of LLB and the BA (Hons) Business Studies (in affiliation with Coventry University, UK). Separate brochures of these programs are available at the Admission Office.



APPLY ONLINE:

Log on to : <http://admissions.szabist.edu.pk>
Online applications can also be filled at SZABIST campus

For further information please contact:

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Tel: 021-35823433 (Ext:148-147-104). Fax: 021-358 21537. www.szabist.edu.pk

<https://twitter.com/SZABISTKarachi>