

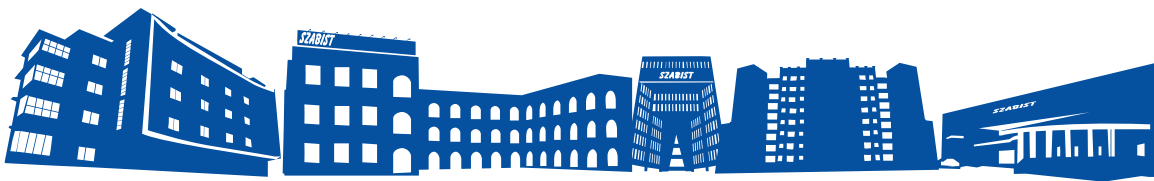


**SZABIST**  
Discover  
Yourself



**PROSPECTUS  
2019**  
[www.szabist.edu.pk](http://www.szabist.edu.pk)

**We just Don't Work Hard  
We Work Smart**



# SHAHEED ZULFIKAR ALI BHUTTO INSTITUTE OF SCIENCE & TECHNOLOGY

## THE VISION

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

## THE 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.

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# SHAHEED ZULFIKAR ALI BHUTTO



**January 5, 1928 - April 4, 1979**  
**Former Prime Minister of Pakistan**

"We will give science and technology requirements the highest priority and our attention. To implement any program of scientific and technological development, the country needs to train scientific manpower. In this, the schools, colleges and universities have to play their role. I desire that vast number of people of Pakistan should acquire technological skills. I want first-class science in Pakistan because nothing less is acceptable. And I wish Pakistan to be increasingly self-reliant in all aspects of technology."

*Address at the Inauguration Ceremony of Karachi Nuclear Power Plant, Karachi, Pakistan, November 28, 1972.*

# SHAHEED MOHTARMA BENAZIR BHUTTO



**June 21, 1953 - December 27, 2007**  
**Former Prime Minister of Pakistan,**  
**Founding Chancellor SZABIST**

"Technology and Communication have changed our world and are influencing a global culture. The ability to google information from anywhere in the world puts technology into the hands of even the most isolated rural communities in the developing world. The more people learn, the more they want to learn. The more they interact, the less likely they will be to fear the unknown. Just as democracy and educational exchange promote peace, the free flow of modern technology and communication promote peace."

*Reconciliation: Islam, Democracy and the West, 2008.*



# CHANCELLOR'S MESSAGE



I welcome you to join the Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST), one of the most prestigious higher education institutions of Pakistan.

At SZABIST, we believe that innovative thoughts and high ideals teach the values of hard work and diligence. We prepare our students for professional careers, therefore, we offer a wide variety of humanities, science and technological programs including Management Sciences, Computer Sciences, Social Sciences, Media Sciences, Mechatronics Engineering, Biosciences, Education, Public Health and Law. The curriculum of each traditional and emerging program is approved by the Higher Education Commission (HEC), Pakistan

and is taught by highly qualified and competent faculty members.

To achieve the mission of our founding Chancellor Shaheed Mohtarma Benazir Bhutto i.e. providing opportunity for high quality tertiary education and research to the youth in different areas of Pakistan, SZABIST, now has four campuses in Pakistan-Karachi, Islamabad, Larkana and Hyderabad, and an overseas campus in Dubai, UAE.

At SZABIST, you will become part of a community that believes research is an integral part of academic excellence. We encourage participation in research and extra-curricular activities enabling you to realize and nurture your true intellectual and professional potential.

SZABIST also offers numerous scholarships and financial assistance to make education accessible and affordable for all of its students. In order to augment student's learning experience and continuously improve the standard of education, the Institutional Research Department/Quality Enhancement Cell periodically assesses all programs to monitor and enhance the quality of education being imparted.

SZABIST is investing considerable resources for renovation and upgradation of its infrastructure and acquisition of additional physical facilities for its campus. A "Library Hub" is being established to fulfill emerging research and academic requirements.

As I welcome the new students, I encourage them to strive for excellence, develop freedom of thought and speech, and while they equip themselves with marketable skills, they should actively work to free our beloved country from bigotry and ignorance.

The motto of SZABIST is to provide students the opportunity to experience university life in a way that helps them to discover themselves whilst focusing on their professional goals. So I wish you success in your years at SZABIST.

**Dr. Azra Fazal Pechuho**  
Chancellor  
SZABIST



# PRESIDENT'S MESSAGE



It is my pleasure to welcome prospective students to Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST), a tertiary education institute known for its high quality and broad range of undergraduate and postgraduate programs and premium learning environment. SZABIST believes in encouraging students to discover their talent and strengths, and achieve their educational, professional, and personal aspirations.

Over the past 21 years, SZABIST's national and international market reputation has been significantly enhanced. This is evident from the increased enrollment of about 11,000 students in its five campuses-Karachi, Larkana, Hyderabad, Islamabad, and Dubai (UAE).

SZABIST, guided by the vision of its Founding Chancellor, Shaheed Mohtarma Benazir Bhutto, is today a leading higher education institution for the youth of Pakistan aspiring for a high quality, relevant education. Our diversified academic portfolio offers a range of courses in 8 Bachelors, 13 Masters and 4 Doctoral level programs in the field of Management, Computing, Social Sciences, Media, Engineering, Biosciences, Public Health, Education and Law. This prospectus provides you with comprehensive information about our programs. The Institute, in compliance with the requirements of Higher Education Commission, has developed curricula which not only relates to prevailing market demand but also prepares students with the knowledge and skills for the future needs of Pakistan's growing economy.

We are proud of our competent faculty and professionals who teach according to rigorous academic standards, evolving market requirements and provide a supportive environment for personal development. In addition to a wide spectrum of disciplines as presented in this Prospectus, SZABIST also offers exciting opportunities for co-curricular activities. Our Student societies organize debates, drama, sports competitions, guest speaker sessions, workshops, and build networks with the Alumni and renowned companies for assistance in job placements.

Moreover, at 94% SZABIST has one of the highest ranking Quality Enhancement Cells (QECs) amongst Pakistani universities. Quality assurance measures are rigorously applied through tools such as Program Self-Assessment Reports, feedback of relevant stakeholders, publications and fulfilling documentary requirements of the regulatory authorities.

We hope you will become part of the SZABIST community of students and graduates and ultimately the global network of SZABIST alumni.

**Shahnaz Wazir Ali**  
President  
SZABIST

# VICE PRESIDENT'S (ACADEMICS) MESSAGE



Welcome and thank you for your interest in SZABIST, which is a recognized degree awarding institution and enjoys a high reputation within academia. The founding mission of this institution was to provide a high-quality education to students of great promise, and today we remain resolute in our obligation. As you visit our website, you will discover an institution committed to preparing students in diversified areas of learning, such as Management Sciences, Computer Science, Media Sciences, Biosciences, Education & Social Sciences, Mechatronic Engineering and Law. SZABIST programs under each department are in compliance with HEC recommended course plans and are accredited by respective regulatory bodies such as NBEAC, NCEAC, PEC and CIEC.

Our students, called SZABISTIANS, feel pride belonging to a community of professionals. Our strength is our ERP implemented through our own software house ZABSOLUTIONS. We utilize modern IT tools in teaching and managing all our academics and campus activities to ensure efficient working environment. We follow all prescribed quality education standards through ongoing and systematic assessments round the year. We have been continuously getting more than 90% score during the last five years by QEC/HEC.

We do not merely believe on traditional classroom studies but go beyond by providing numerous opportunities to our students to engage them in various co-curricular and extra-curricular activities. We strongly believe in developing their personalities which we ensure through conducting seminars and guest lectures frequently by eminent personalities through our student societies.

The learning outcomes of the programs have been carefully designed to compel the students for critical & creative thinking, to acquire problem-solving skills and to professionally handle all pedagogical tools. We are fully aware that a University without Research is like a "Body" without "Soul"; therefore, we give high priority to all types of research activities.

Being an academician, I know the significance of providing "Counseling" to the students at every step in their academic career which helps in setting their directions as I believe "Direction" is more important than "Speed".

Finally, I welcome you once again and wish you success. Selecting SZABIST as your career-building institution, I assure you that you will be groomed and nurtured for meeting your future career challenges after completion of your academic degree program.

**Prof. Dr. M. Altaf Mukati**  
Vice President (Academics)  
SZABIST

# VICE PRESIDENT DEVELOPMENT AND FINANCE MESSAGE



Welcome to the 2019-2020 academic year at SZABIST!

SZABIST established by Shaheed Mohtarma Benazir Bhutto and run under the guidance of its Chancellor Dr. Azra Fazal Pechuho has emerged into a leading higher education institution that plays a pivotal role as a center of education recognized for its excellence in producing highly qualified graduates.

Here you will be provided an academically and professionally rewarding experience that aims at ensuring harmonious development of your mind and body to enable a creative, ethical, smart and holistic personality.

As the new academic year starts you are encouraged to take advantage of the wide range of services and facilities available, the student events, programs, seminars and festivals that will make your life at SZABIST interesting. Get involved to make the most of your time and gain the experience that makes you the smart individual that can meet the future challenges.

We are here to support you in every way and welcome you to a fulfilling and interesting academic year.

**Nasreen Haque**

Vice President (Development and Finance)  
SZABIST

# INTRODUCTION

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).

SZABIST comprises five campuses located in Karachi, Hyderabad, Larkana, Islamabad and Dubai with a current student population of over 11,000. SZABIST has proudly awarded degrees to over 14,500 talented graduates. Our alumni are sought by national and multinational organizations and hold key positions in several reputable firms at national and international level.

SZABIST offers undergraduate, graduate and post graduate degrees in 6 different disciplines: Management Sciences, Computer Sciences, Media Sciences, Education & Social Sciences, Mechatronic Engineering and Biosciences. In addition, SZABIST offers LLB program and BABS program as external programs in affiliation with University of London and Coventry University, UK respectively. In order to further diversify SZABIST's portfolio, MS and PhD programs in Educational Leadership & Management have been introduced in Fall-2015.

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.

The Institute has signed MoUs' with various reputable and distinguished organizations and institutions such as Istanbul Medipol University, Turkey; University of London, UK; ICRC, Aman Foundation and JS Bank.

SZABIST Karachi Campus is situated in the prime location of Clifton Block 5 (campus units: 79, 90, 100, 153, 154, 172/1, 172/2). Plans are underway for the construction of a purpose-built campus for Management Sciences, Computer Science, Education & Social Sciences, Media Sciences, Mechatronic Engineering, and Biosciences departments. Moreover, the construction of a permanent engineering campus spread over 300 acres at the Education City in Malir (about 20 km from the Karachi Toll Plaza and 36 km east of Karachi Airport) and a Medical and Agricultural Complex over 5000 acres at Gharo (about 30 km away from the Education City) are also in the planning phase.

SZABIST is proud to offer education par excellence in the areas that are crucial for Pakistan's socioeconomic development.



# INTRODUCTION



# PROGRAMS & CURRICULA

## DEGREES OFFERED

All five campuses of SZABIST offer various degree programs in different discipline please refer page 79 for details.

### Bachelor of Science in Computer Science (BS CS)

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.

### Bachelor of Engineering in Mechatronic Engineering (BE ME)

SZABIST offers a four-year (eight semesters) BE Mechatronic Engineering degree program which is accredited by Pakistan Engineering Council (PEC). This program has received 7-Stars i.e., World Class rating by Chartered Inspection & Evaluation Committee (CIEC) Sindh. SZABIST is a pioneer university to offer this program at undergraduate level in the province of Sindh. The program is essentially a day program and consists of 48 courses with a total of 140 credit hours (all electives and certain courses may be offered in the evening). The program is supported through well-equipped state-of-the-art laboratories. Internship opportunities are provided to meet degree requirement. The maximum time limit to complete the BE-ME degree program is six years.

### Bachelor of Science in Media Sciences (BS MS)

The Faculty of Media Sciences at SZABIST offers a comprehensive 4-year Bachelor of Sciences in Media Sciences degree with majors in Film and Television production, Advertising Strategy & Design, and Journalism. To earn an undergraduate degree, students must enroll in and successfully complete a total of 135 credit hours which include 43 courses, a 6-credit hours thesis, and an internship (Forty-three courses include: 33 core courses, 7 major requirements in Film and Television production, or Advertising Strategy & Design, or Journalism and 3 open electives). All students must complete their degree within six years.

### Bachelor of Science in Social Sciences (BS SS)

SZABIST offers a four-year (eight semesters) BS Social Sciences degree with majors in Psychology, Sindh Studies, Sociology, Economics, and International Relations. BS Program is essentially a day program and consists of 46 courses (six courses per semester) including research project with a total of 144 credit hours. The maximum time limit to complete the BS degree is six years.

### Bachelor of Science in Biosciences (BS Bio)

BS Biosciences at SZABIST is a four-year program spreaded over eight semesters and consists of 135 credit hours of teaching (43 courses), an internship of at least six weeks, and a 6 credit hours research project. The maximum time limit to complete the BS degree is six years.

### Bachelor of Science in Biotechnology (BS Biotech)

BS Biotechnology at SZABIST is a four-year program spreaded over eight semesters and consists of 135 credit hours of teaching (44 courses), an internship of at least six weeks, and a research project. The maximum time limit to complete the BS degree is six years.

### Bachelor of Education 1.5 Years (Secondary)

B.Ed (Secondary) is a 1.5 years degree program offered to pre-service and in-service teachers. This program is offered to facilitate those students who want to get enrolled in MS/ MPhil (Education) in future. It is a 54 credit hours program with 12 core courses (3 credit hours each), 4 content specialized courses (3 credit hours each), 3 credit hours pedagogy and 3 credit hours research project. The maximum time limit to complete the B.Ed degree is four years.

### Master of Advertising (MoA)

The Faculty of Media Sciences at SZABIST offers an evening, 18 months Master's degree program in Advertising providing students with a comprehensive training through courses that prepare them to engage in various career options in the advertising industry. To be awarded a Master of Advertising degree, students are required to complete a total of 30 credit hours which includes 8 courses and a 6-credit hours research project (8 courses include: 5 core courses and 3 electives). All students must complete their degree within four years.



# PROGRAMS & CURRICULA

## Master of Education (MA Edu)

MA Education is a 2 years degree program offered to candidates who wish to pursue teaching as their career. It is a 63 credit hour program with 13 compulsory courses (3 credit hours each), 2 content specialization and Pedagogy related courses (3 credit hours each), 4 electives (3 credit hours each), Teaching practice (3 credit hours) and Thesis (3 credit hours). The candidates will have the opportunity to specialize in the fields of Teacher Education, Educational Leadership & Management or Early Childhood Education.

## Master of Science in Social Sciences (MS SS)

SZABIST's Department of Social Sciences offers MS Social Sciences degree with specializations including International Relations, Economics, Psychology and Sociology.

It is an evening program only and consists of 10 courses and/or a Thesis/Independent Research Studies of 30 credit hours. The maximum time limit to complete the MS degree is four years.

There are two streams available for MS. One stream is course work based stream and other one is research based stream. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In the Research Based Stream, the student is required to complete 8 Courses (24 Credit Hours) and two IRS (6 Credit Hours) OR one thesis (6 Credit Hours). In both streams, 30 Credit hours to be completed. The time limit to earn an MS degree is from 1.5 to 4 years. As per HEC guidelines, all MS students are required to clear GRE or GAT General test or HAT relevant with minimum 50% score.

## Master of Science in Public Health (MSPH)

MSPH at SZABIST is a two year program distributed into two streams i.e., MSPH (36 credit hours) and MSPH (60 credit hours). For MSPH (36 credit hours), the curriculum includes 10 courses of 3 credit hours each and a research project (thesis) of 6 credit hours or 2 IRS. For MSPH (60 credit hours), the curriculum includes 18 courses of 3 credit hours each and a research project (thesis) of 6 credit hours or 2 IRS. The maximum time limit to complete the MSPH degree is four years. All MSPH student (36 & 60) are required to clear GRE or GAT General/HAT relevant test with minimum 50% score.

## Master of Science in Biosciences (MS Bio)

MS Biosciences at SZABIST is a two-year program spread over four semesters and consists 30 credit hours of course-work. The curriculum includes 8 courses of 3 credit hours each and research project (Thesis) of six

credit hours or 2 IRS. Students can also take two additional courses in lieu of Thesis in order to complete total credit hours. The maximum time limit to complete the MS degree is four years. All MS Bio students are required to clear GRE or GAT General/HAT relevant test with minimum 50% score.

## Master of Science in Computer Science (MS CS)

SZABIST offers MS (CS) degree in three domains: Core Computer Science area and in two specialization tracks, i.e., Software Engineering (SE) and Networks & 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).

Eligibility for this program is a 4-year BS (CS) or 2-year MCS degree from a recognized institution. The candidates with a 4-year professional degree (BE, MSc, etc.) may also apply but will require to complete deficiency conversion courses (up to 18 credit hours courses) to be determined in consultation with Program Manager). The programs such as BSCS, BSIT, BSSE, BSCE & BSCSE shall not require any extra courses. As per HEC guidelines, all MS students are required to clear GRE or GAT General test or HAT relevant with minimum 50% score. The maximum time limit to complete the MS degree is four years.

## Master of Science in Mechatronic Engineering (MS ME)

SZABIST offers MS (Mechatronic Engineering) degree with two specializations namely: Robotics & Industrial automation and Smart Electromechanical Systems. The program is of 2-year duration and is offered in the evening. In addition to five core courses, students are required to complete 3 elective courses of their choice of specialization. Although students are encouraged to undertake Thesis/Research Project of 6 credit hours but they also have an option to undertake two elective courses in lieu of the Thesis/Research Project in their choice of specialization. The maximum time limit to complete the MS degree is four years. As per HEC guidelines, all MS students are required to clear GRE or GAT General/HAT relevant test with minimum 50% score.

# PROGRAMS & CURRICULA

## Master of Science in Educational Leadership and Management (MS ELM)

The MS in Educational Leadership & Management is a 1.5-2 years program. It is a 30 Credit hours program. There are two streams available for MS. One Stream is Course Work Based Stream and other one is research based stream. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In the Research Based Stream, the student is required to complete 8 Courses (24 Credit Hours) and Two Independent Research Study (6 Credit Hours) OR one thesis (6 Credit Hours). In both the streams, 30 Credit hours to be completed. The time limit to earn MS degree is from 1.5 to 4 years. The program is accredited by National Accreditation Council for Teacher Education (NACTE).

The students will have the opportunity to specialize in the fields of: School Administration/ Educational Leadership, Sociology of Education, Educational Policy, Testing and Evaluation, Teacher Education, Professional Development, Guidance & Counseling, Curriculum development, Technology Integration in Education. All MS ELM Students are required to clear GRE or GAT General/HAT relevant test with minimum 50% score.

## Master of Science in Media Studies (MS MD)

Faculty of Media Sciences offers a two year MS in Media Sciences program. Students enrolling in this program will be offered to select any one of the 3 streams of specialization; General Entertainment Content – GEC primarily for media professionals already engaged in leading creative teams of their respective media houses and are interested in polishing their cognitive as well as computer generated information skills; Production stream is for students engaged in middle management cadre in production houses as part of their creative teams in varied capacities and are hampered in their careers because of lack of knowledge and understanding of production technique skills; Journalism stream is offered for all who want to develop an in depth understanding of journalistic practices and are interested in specializing in analytical skills related to both print and electronic media.

To be awarded a MS Media Sciences degree, students are required to complete 30 credit hours. All students must complete their degree within four years.

## Doctor of Philosophy

SZABIST offers PhD degree in Computing, Educational Leadership and Management, Social Science and Biosciences in strict adherence to the HEC guidelines.

The admission requirement for PhD is minimum 17.5 years of education, GAT Subject 60% or above and fulfilling the admission requirements of SZABIST. After admission, the student is required to complete the course work of 18 credit hours that includes five courses and one Independent Research Study. Maximum course load during semester is 9 credit hours. After course work, the student is required pass comprehensive examination in two attempts. The dissertation carrying a weight of 30 credit hours is required to be complete. Prior to submitting the dissertation, the student is required to publish a research paper in HEC recognized journal. The dissertation is sent for evaluation to two external evaluators in technologically advanced countries. The time limit to earn a PhD degree is from 3 to 8 years.

PhD Computing can be done in various specialized areas related to pure or applied Computer Sciences. The specializations include but not limited to Database Management Systems, Management Information Systems, Data Warehousing, Data Mining, Networking & Communication, Business Intelligence, Process Modeling, Telecommunication, Mobile Communication, Mobile Computing, Technology Management, Artificial Intelligence, Software Engineering, Agent Systems, Speech Recognition, Multimedia Systems, HCI, E-Business, Mechatronic, Machine Vision, Image Processing and any other area which falls in the purview of computer sciences or computing.

In Social Sciences, specializations include International Relations, Economics, Psychology and Sociology.

In Educational Leadership and Management, specializations may include: School Administration/ Educational Leadership, Sociology of Education, Educational Policy, Testing and Evaluation, Teacher Education, Professional Development, Guidance & Counseling, Educational Psychology, Curriculum development, Technology Integration in Education.

# PROGRAMS & CURRICULA

## Grading Plan

The following Letter Grade Plan is followed at SZABIST:

Letter	Range	Grade Point	Degree Requirement
A+	90 – 100	4.00	
A	85 – 89	3.75	
A-	80 – 84	3.50	
B+	75 – 79	3.25	
B	70 – 74	3.00	PhD Degree Requirement
B-	66 – 69	2.75	MS Degree Requirement
C+	63 – 65	2.50	Master's Degree Requirement
C	60 – 62	2.00	Undergraduate Degree Requirement
C-	55 – 59	1.50	
F	< 55	0.00	





# ADMISSION REQUIREMENTS

## NOTE:

- All applicants will be required to appear in an entrance test and interview/group discussion held by SZABIST.
- 2 "E" grades in A-Level exam will not be entertained for accredited programs. i.e. BBA, BSCS, etc.
- Equivalency from Inter Board Committee of Chairmen (IBCC) is mandatory for O & A Levels/High School Diploma/IB Diploma or equivalent.
- High School Diploma or International Baccalaureate (IB) students appearing for examination from Pakistan shall have to pass Islamiat, Pakistan Studies & Urdu.
- Verification of last degree from Higher Education Commission of Pakistan (HEC) is mandatory for all Masters, MS, & PhD students.
- Equivalency of international degrees from Higher Education Commission of Pakistan (HEC) is mandatory for all Masters, MS, & PhD students.
- Students waiting for results can also apply.
- Admission of Foreign students are subject to clearance from the relevant Agencies/NoC from HEC.

## BACHELOR DEGREE PROGRAMS

### BS Programs

For admission in the BS programs, 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)/12<sup>th</sup> Grade/Intermediate with minimum 50% marks or equivalent from a recognized institution.

For BS Computer Science, candidates with mathematical background will be preferred.

### BS Biosciences & BS Biotechnology

Candidates are required to have 45% marks in Intermediate (FSc) or O-Levels (minimum 8 subjects including 5 compulsory subjects; English, Urdu, Maths, Islamiat & Pakistan Studies) and A-levels (minimum 3 subjects in at least two subjects; Biology, Chemistry, and Physics).

### BE Mechatronic

The candidate must have completed Intermediate (Pre-Engineering)/O-Levels (minimum 8 subjects including 5 compulsory subjects; English, Urdu, Maths, Islamiat & Pakistan Studies) and A-levels (minimum 3 subjects) or equivalent with a combination of (Physics, Chemistry and Mathematics) with minimum 60% marks.

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 can also apply.

Minimum 60% aggregate marks each in Matriculation and in Intermediate/equivalent exams.

### B.Ed (1.5 Years) Secondary

For admission in the B.Ed program, the candidate must possess 16 years of Education (MA, M.Sc., M.Com. or equivalent) in any discipline like Sciences, Social Sciences, Humanities and others with at least Second Division/2.0 CGPA from a university recognized by HEC.

## MASTER DEGREE PROGRAMS

### MA in Education (MA Edu)

The candidate must have 14 years of education with minimum second division/2.0 CGPA from a university recognized by HEC.

### Master of Advertising (MoA)

Students with a 4-year undergraduate degree or 16 years of education with minimum 55% marks/2.5 CGPA from a university recognized by the HEC are eligible to apply.

### Master of Science - Educational Leadership and Management (MS ELM)

For admission in the MS ELM program, the candidate must possess a 16 years of education in the discipline of Education or Master's degree/BS (honors) in disciplines other than Education along with M.Ed. / B.Ed.\* (1 year or 1.5 year) with minimum second division/2.0 CGPA from a university recognized by the HEC. GAT General/HAT relevant with minimum 50% score is also required.

**Note:** \*Candidates applying with a 1-year B.Ed. Degree are required to complete 6 bridging courses of 18 credits at SZABIST.

# ADMISSION REQUIREMENTS

## Master of Science in Public Health (MSPH)

For admissions in the MSPH program, the candidate must have 16 years of education with minimum 50% marks/2.5 CGPA from a university recognized by HEC.

*Following Candidates will be eligible to take MSPH Program of 36 credit hours:*

MBBS/BDS/MD/BSc Nursing 4 Years/DVM/BSc Paramedics-4 years/BSPH/Pharm D/BS Physiotherapy and BS Biological & Life Sciences/Equivalent.

*Following degree holders will be eligible to take MSPH of 60 credit hours:*

Masters in Environmental Sciences/Business Administration/Nutrition and Social Sciences (Sociology/Psychology/Anthropology)/Equivalent.

GAT General/HAT relevant is mandatory for MS PH students with minimum 50% score.

## Master of Science in Biosciences (MS Bio)

For admissions in the MS Biosciences program, candidates must possess 16 years of education in any field of life/biological sciences with minimum 50% marks/2.5 CGPA from a university recognized by HEC. GAT General/HAT relevant is mandatory for MS students with minimum 50% score.

## Master of Science - Media Studies (MS MD)

For admission into MSMD Program candidates must possess 16 years of education with minimum 2<sup>nd</sup> division /2.00 CGPA from an HEC recognized university. Candidates with 4-year non media related discipline degree (BBA, BSCS, MSc., MCom., MA etc.) may apply but will require to complete deficiency conversion courses (Up to 18 credit hours to be determined in consultation with Admission Committee). GAT (General) or HAT relevant is mandatory for all MS candidates with a minimum score of 50%.

## Master of Science - Mechatronic Engineering

For admissions in the MS Mechatronic Engineering program, candidates must possess BE in Mechatronics/ Mechanical/ Electronics/Electrical/Telecommunication/Industrial/Manufacturing/ Aerospace/ Avionics with minimum 55% marks/2.0 CGPA from a university recognized by HEC. Bachelor of Engineering Degree must be accredited by PEC. GAT (General) or HAT relevant is mandatory for MS students with minimum 50% score.

## Master of Science in Computer Science

For admission to MSCS program, candidates must possess 16 years of relevant education with minimum 60% marks/2.0 CGPA from a university recognized by HEC. GAT (General) or HAT relevant is mandatory for MS students with minimum 50% score.

## MS SS (International Relations, Economics, Psychology & Sociology)

For admission in MS SS (International Relations, Economics, Psychology & Sociology) program, candidates must possess 16 years of relevant education with minimum 2<sup>nd</sup> Division/2.0 CGPA from a university recognized by HEC.

GAT (General)/HAT relevant is mandatory for MS students with minimum 50% score.



# ADMISSION REQUIREMENTS

## DOCTORAL DEGREE PROGRAMS

### Admission Requirements

A candidate with MA/MS/MBA/MPhil or any other equivalent degree with minimum 17.5 years of formal education in the relevant field from HEC recognized local or foreign university may apply for direct admission in a PhD program. To apply for admission in PhD program, the candidate must have obtained minimum of 3.0 CGPA, cleared the admission test and interview, and have passed GRE/ GAT (subject) with minimum 60% score.

A student may be asked to complete other pre-requisite /deficiency courses/thesis before taking the required courses. The decision on number of pre-requisite courses is taken by the Admissions Committee of relevant department. For non-relevant degrees, the candidate will be required to register for additional Masters level courses as pre-requisites as per the guidance provided by the Admissions Committee.

### Degree Requirements

For completion of the PhD degree, the student must complete a total of 48 credit hours (18 credit hours course work and 30 credit hours dissertation) for Social Sciences, Educational Leadership and Management, Computing, and Biosciences.

Following is the step by step procedure for PhD:

### PhD Degree Milestones

- Clearing admission requirements of HEC and SZABIST
- Completing course work with required CGPA
- Passing comprehensive examination
- Clearing proposal defense
- Completing dissertation
- Completing publication requirements
- Clearing progress seminar(s)
- Satisfactory reports from foreign evaluators
- Dissertation Defense (Open Seminar)

Two interdisciplinary courses can be allowed with the approval of both relevant Program Managers subject to the relevancy of courses.

### Comprehensive Examination

After completion of the required course work that includes 5 courses and one IRS, all PhD students must pass the PhD Comprehensive Examination within two years from the date of admission as per HEC requirement. Failure to pass comprehensive examination within two years from the date of admission will result in cancellation of admission. Maximum Course Load allowed in each semester is nine credit hours. A student must clear the comprehensive examination in maximum two attempts. After successfully passing it, the candidate will get PhD Candidacy and he/she will be assigned a research supervisor.

### Research Proposal

The candidate shall prepare a research proposal under the guidance of research supervisor. The first registration in dissertation will be of six credit hours in which the student will work on Proposal. These six credits will be included in 30 credit hours of dissertation. The PhD research proposal must be presented before the Evaluation Committee.

### Dissertation

A student may register for 3, 6, 9 or 12 credit hours in regular semesters (Spring or Fall). However, for registration in 12 Credit Hours, approval from Program Manager is required. No registration is allowed in Summer. The dissertation is expected to be completed in two years time after the completion of one year course work. The time frame for PhD Degree is minimum three years and maximum eight Years.

### Publication Requirements

All PhD candidates are required to write at least one research paper in the area of their research and submit it for publication in the required category of HEC recognized journal. The paper must be published before sending the dissertation to two foreign evaluators.

### Progress Seminar(s)

Before sending the dissertation to two foreign evaluators belonging to technologically advanced countries, the candidate has to demonstrate his or her work in front of a panel of experts for the necessary changes if deemed necessary.

### Final Defense

After receiving minimum two satisfactory evaluation reports from the external evaluators, the candidate is required to appear for PhD final defense. A formal presentation of dissertation is required to be produced before Evaluation Committee in an open seminar along with viva voce exam.

## Admission Test Alternates

### For Bachelors Programs

Applicants may submit a minimum 1100/1600\* score of SAT 1.

The scoring of SAT 1 will be considered as follows;

SAT score	Test Marks
1500 – 1600	60
1400 – 1499	50
1300 – 1399	40
1200 – 1299	30
1100 – 1199	20

\*Candidates securing 100% marks in SZABIST's admission test will be equivalent to 60.



# ADMISSION REQUIREMENTS

## For Masters Programs

50% score of GMAT for Master Programs

## For MS Programs

GAT (General)/GRE/HAT relevant with minimum 50% score

## For Phd Programs

GAT (Subject) with minimum 60% score

GAT General or HAT relevant is mandatory for MS with minimum 50% score. GAT Subject is mandatory for PhD with minimum 60 % score.

## Transfer Policies

Transfer into SZABIST can only be accepted for candidates who have studied or are currently studying at HEC recognized universities. Transferring credits must have a minimum letter grade of B or above (or 80% marks). The request for transfers must be made at the time of admission.

Candidates will be required to clear all SZABIST admission requirements.

## Bachelor Course Transfer

A maximum of up to 50% credits may be considered for transfer into BS/BE programs.

## MA Education Course Transfer

A maximum of up to 25% credits may be considered for transfer into MA Education program.

## MoA & B.Ed Course Transfer

A maximum of up to 6 credits may be considered for transfer into the Master of Advertising and Bachelor of Education programs.

## MS Course Transfer

Up to 50% of total course work completed at an HEC recognized university can be allowed for transfer at SZABIST MS program.

## PhD Course Transfer

Transfer of courses up to 6 credit hours from an HEC recognized university may be allowed in special cases by making a petition to the Doctoral Committee before formal acceptance into the PhD Program. The student may be required to take additional courses as recommended by the relevant program manager.

## SZABIST Inter-Campus Transfer

For inter-campus transfer, the candidate must fulfill the admission requirements of the given program at the local campus as per applicable transfer policy.

All courses/grades are transferable. A transfer fee will be payable by students transferring from any other SZABIST campus.

## Certificate Course Transfer

For transfer candidates from the SZABIST Certificate Programs, transferability of certificate courses is as follows:

- Maximum 05 courses are transferable in under graduate program.
- 2/3 courses are transferable in Masters or MS program.
- Maximum 02 courses are transferable in PhD program.

The minimum letter grade of Certificate courses from SZABIST which are transferable to regular degree program within a time span of one year are: for PhD its B and above, for MS its B- and above, for all master's program its C+ and above and for bachelor's programs its C and above.

## Financial Assistance

SZABIST provides a wide range of financial assistance to eligible and deserving students. For Instance:

- SZABIST Need-Based Scholarship
- SZABIST Merit-Based Scholarship
- Chief Minister's – SZABIST Merit and Need-Based Scholarship
- Sindh Education Endowment Fund Scholarship
- Balochistan Education Endowment Fund Scholarship
- USAID Funded Merit and Need-Based Scholarship
- HEC-Indigenous PhD 5000 Fellowship Program
- Ihsan Trust Interest Free Loan Facility
- Sindh Police Scholarship
- Mitsubishi Corporation Scholarship
- ACCA Accelerate Scholarship
- Ministry of Harmony and Interfaith Minority Scholarships
- Khairpur Poverty cum Merit Scholarships
- Various community-based scholarships

All scholarships cover tuitions fee. However, in some cases, scholarships also cover books, boarding, transportation, monthly stipend and admission fee.

Financial assistance is also available in the form of adjunct faculty positions to qualified and eligible PhD candidates.

# LIFE AT SZABIST

## FACILITIES

### Video Conferencing

SZABIST is the first educational institute in Pakistan that introduced multi-point interactive Video Conferencing (VC) technology in 2001. SZABIST regularly uses VC technology in interactive learning sessions among Dubai, Islamabad, Larkana, Hyderabad and Karachi Campuses as well as in conducting seminars, lectures and presentations with foreign universities. Video Conferencing has been the most effective mode at SZABIST in bringing in live and interactive guest lecturers from national and international experts. Video Conferencing technology opens the door to exciting and valuable learning experiences. By allowing access to and interaction with resources that might have otherwise been too inconvenient or expensive, Video Conferencing ensures a highly enriched learning environment. By taking the lead in opening this field in educational practices, SZABIST also lead in creating the most advantageous nexus between cutting-edge technology and effective learning.

### Conferences/Forums/Seminars/Guest Lectures

To increase awareness and understanding of information technology and business-related issues, many conferences, forums, seminars and guest lectures are organized regularly. These seminars and lectures are in continuation of the Institute's policy towards entrepreneurship development and networking. Seminars are conducted and attended by the leading figures from business and industry as these sessions address various business practices.

### Professional Development Courses

The Institute also offers several productivity-based certificate courses as part of its continuing education program. The courses are developed jointly by the faculty, specialists and certified trainers in specific subject areas. The aim of these courses have been to initiate discussion and modeling of practical problems, business opportunities and to improve understanding of current issues in Information Technology, Business and Management. These courses include topics such as e-Commerce, New Programming Languages & Tools, Business & Entrepreneurship Management, Selling Skills, Conflict Resolution, Effective Leadership, and Productivity, Quality-Related Issues, Brand Management and Digital Marketing.

In addition to business productivity courses, the institute arranges study groups, mentor workshops and courses for students for removing deficiencies, if any. These courses include Business Communication, Technical Writing, Public Speaking, Personality Grooming, Interviewing Techniques and learning of Statistical Package for Social Sciences (SPSS).

### Classrooms/Labs/Libraries

Classroom sessions at SZABIST are quite different from other professional university setups. Teachers pay individual attention to the limited number of candidates selected purely on merit. Instructors encourage participation instead of a monologue. Students utilize various visual aids for presentations and are always on alert because of the regular unannounced quizzes, assignments and the mid-term exams. All classrooms are air-conditioned and are equipped with multimedia projectors, wall mounted screens and white boards. All classrooms are equipped with computers along with broadband intranet and internet connectivity with electricity backup through UPS.

SZABIST computer laboratories are revamped with brand new labs space, furniture and latest machines with giga bite network connectivity to cater students requirements. "Campus licensing" of latest software, including development tools, and operating systems provide an unmatched environment compared to majority of well-reputed universities of Pakistan.

SZABIST has computing facilities supported with 24x7 broadband connectivity of 228 Mbps committed bandwidth to the internet and intranet. SZABIST is Wi-Fi enabled since 2002. Two new computer labs are added to the existing labs infrastructure. Students with 802.11x capable devices (such as laptops, tablets, cellphones, etc.) can access all network resources wirelessly. SZABIST has acquired Microsoft IT academy and Oracle Academic Alliance program.

SZABIST library hold a rich collection of books, Journals, Magazines and a large number of digital libraries and online databases. SZABIST Library has six work stations through which students can access unlimited number of journals and magazines. This facility is further extended to registered students through SZABIST network on demand. SZABIST library provides comfortable physical spaces and furniture with peaceful environment. Moreover, SZABIST has its own Research Centers i.e., Centre of Renewable Energy Research (CRER), and Sustainable Development Research Centre (SDRC) with their own specialized library for reference and general reading.

SZABIST established Smart Lab equipped with tremendous high speed 7<sup>th</sup> generation laptops for students. These laptops are connected with SZABIST network through WiFi. A state of the art Smart screen is also available for teacher and students. They can interact to each other in more effective and robust way.

# LIFE AT SZABIST

## Research Committee (RC)

SZABIST places high emphasis on research & development and devotes conscious efforts to promote research culture among faculty and students alike. In this regard, a Research Committee (RC) is constituted to coordinate, record, and formalize diverse research activities across different departments and campuses to bring harmony and create an impact for national and international recognition of the university. Research publications produced by faculty and students are given a handsome remuneration depending on the level and merit of publications, vetted by RC. All sorts of participations in national and international conferences by the faculty & staff are approved by the RC. This may also propose a change in research policy for the university to BASR.

## Doctoral Committee (DC)

The Doctoral Committee has a key function to monitor the progress of all MS and PhD students. The committee conducts its meetings regularly and discuss and recommends the individual cases of all such students pertaining to approval of their work, selection of supervisors, co-supervisors, examiners, evaluators (national and foreign), provide approval for conduction of progress seminars & final defense, and all other related activities. The DC also ensures the research work carries its value to the society and is free from any un-ethical matters. In this regard, Institutional Ethics Review Board (IERB) work under DC.

## Board of Advanced Studies and Research (BASR)

SZABIST has also constituted a Board of Advanced Studies and Research (BASR) which holds its meetings twice a year to discuss and approve/disapprove, the recommendations sent by Doctoral and Research Committees. This is chaired by the President of SZABIST and co-chaired by the Vice President (Academics). The board further considers and reports to the authorities on the award of research degrees proposes by-laws and policies regarding MS/PhD programs (across all campuses) and the initiation, execution, and award of research degrees; provides approvals on appointments of supervisors for postgraduate research students and approves titles and synopses for their theses or dissertations, as recommended by DC. The decisions taken in BASR are ratified in the Academic Council.

## Academic Council

It is the highest academic statutory body of the university. Its meetings are held twice a year after completion of Board of Studies (BOS) meetings, Board of Faculty (BOF) meetings and Board of Advanced Studies & Research (BASR) meetings.

All the recommendations related to academic programs, introduction of new programs, changes in the existing programs, changes in the course outlines, etc. approved by BOF are sent to Academic Council for further discussion and approval. The meeting is chaired by the President and co-chaired by the Vice President (Academics) and is participated by the members of Academic Council from all campuses of SZABIST and as well as external members from Academia and Corporate Sectors.

## Office of Research Innovation and Commercialization (ORIC)

The ORIC office at SZABIST has been established to provide end-to-end services for all matters pertaining to research & development, innovation, inventions, commercialization, patents, collaborations, arranging seminars/ colloquia/ symposium/ conferences/ workshops & etc.

ORIC is helping its researchers to do high quality research to help shape better future. ORIC intends to provide support to the faculty in solving real-life problems, change policies and influence practice, all to the benefit of the people of Pakistan.

ORIC welcomes opportunities to collaborate and partner with like-minded researchers, research managers and administrators, and our doors are open to postgraduate students seeking a research home where quality counts. The ORIC is trying to establish good working relationship with other higher learning institutions, industries and donor agencies especially HEC, PSF and other universities in Pakistan in the activities that can enhance entrepreneurship, academic and research excellence.

### What is ORIC?

In recent millennium, global knowledge economy has strengthened the need for strategic partnerships that go beyond their traditional roles as collaborators. World-class research universities are at the forefront of pioneering such partnerships. They are intended to run longer, invest more, look beyond and sharpen the competitiveness of industries, universities and regions. Keeping in view of these challenges, the Office of the Research, Innovation and Commercialization has been initiated at SZABIST, Karachi.

The mission of ORIC as outlined by HEC is "Transforming Pakistani universities to drive high impact innovation, applied research and entrepreneurship". The ORIC's vision is to enable and lead Pakistan's transformation to a knowledge-based economy dependent upon innovation and

# LIFE AT SZABIST

entrepreneurship. The Office of Research Innovation and Commercialization is being established to link research and commercialization from SZABIST with emerging and existing firms across Pakistan and around the world. As an umbrella, ORIC is meant to work closely with the researchers and on campus Incubators and S&T Park. The ORIC office also serves as a conduit to local, regional and federal partners to ensure research results aid the growth of Pakistan's economy. The office of ORIC is meant to work on commercialization of research and helping startups to incubate, grow, create new jobs, products, services, markets, carry out innovation and bring in funding. The following are the prime activities of ORIC at SZABIST.

- Fund raising for research.
- Provide information to faculty about various available research grants.
- Link faculty and students with relevant industry.
- Help and guide on patent filing and licensing.
- Interface between faculty and the commercial sector.
- Work with patent counsel to assess patentability/licensing.
- Evaluate markets for commercialization of inventions.
- Identify potential licensees.
- Negotiate terms of licenses.
- Assist with negotiating problematic sponsored research agreements.
- Help faculty start companies.

## ORIC in 2019

ORIC is striving hard to strengthen the research culture in all disciplines of the SZABIST to bring it at par with other institutions of higher learning within the country and abroad. It maintains the highest standards of research of both students and faculty. The ORIC has positively set the pace to match up to the challenges in the field of research and commercialization.

The ORIC Office is looking forward to improve the Human Resource Development Program and explore funding for establishment of Research Labs at SZABIST in its various departments. Special emphases will be given to strengthen international linkages in near future particularly with foreign universities based on joint research proposals for international funding. ORIC will be arranging regular scientific seminars, colloquia, symposium etc. to promote the culture of interaction and sharing of scientific knowledge with researchers around the world.

ORIC will work hard in promoting entrepreneurship, technology-transfer and commercialization activities that energize and support the local and national economy and promoting and enhancing crosscutting and multi-disciplinary research initiatives. Learn more about SZABIST ORIC at [oric.szabist.edu.pk](http://oric.szabist.edu.pk).

## Executive Development Center (EDC)

The Executive Development Center (EDC) at SZABIST Karachi facilitates students in completing their degree requirements, professional development, and job/internship placements.

Throughout academic tenure, the students are encouraged to attend customized trainings, personal development programs and presentations by industry experts who share their experiences to help them understand the transition from campus to the corporate world.

EDC compile students' profiles and publishes the annual graduate directory in order to provide SZABIST graduates to credible organizations.

EDC engages with the Alumni for relationship building, corporate networking and profile update. Its latest initiative is the launch of SZABIST Alumni Global Association (SAGA).

## Job & Internship Placements

In collaboration with the industry, EDC arranges on-campus recruitment drives and management trainee programs by reputable national and multinational companies. EDC facilitates students for internships and job openings in the corporate sector throughout the year.

An annual "Career Fair" is held in the beginning of every year at the campus in which leading companies are invited to discuss their recruitment policies and procedures, their current resource requirements and future vacancies. The students receive an opportunity to interact with company representatives directly.

To bridge the gap between classroom and market, SZABIST has instituted a mandatory internship program. Apart from enabling students to get the feel of an office environment, internships expose them to potential employers for possible recruitment.



# LIFE AT SZABIST

## Eligibility for Internship

- Masters Degree students with at least two semesters completed at SZABIST.
- Bachelors degree students with at least six semesters completed at SZABIST.
- Minimum duration of internship is six weeks.
- Preference is given to those students who are about to graduate and need an internship as a pre-requisite for their degree completion.

## Data Centre

The Data Center has been designed with the Telecommunication Industry Association's (TIA-942) Tier-II international infrastructure standards including raised flooring, redundant HVAC precision units, fire detection, alarm & suppression system, precision UPS & power system, CCTV and access control system for remote monitoring. The Data Center is responsible for providing LAN & WAN connectivity, Web Services, Video Conferencing, hosting Server Farm (including **Domain Controllers, Proxy, Email, Web, Network Management, Electronic Bulletin Board, ZABDESK ERP** and many more) and other related services.

## Computing Resources

Computing resources of the datacentre is comprising of 11.88 TFLOPS of processing speed with high performance and reliable 50 Tera Bytes of storage capacity. The datacentre is equipped with UPS backup and 12-ton precision cooling system for reliability of datacentre and protected by FM-200 based Automatic Fire Detection and Suppression System and manual fire extinguishers. CCTV Cameras and Access Control systems are intact for effective surveillance and restricting unauthorized access to the facility.

## Campus Network Infrastructure

Campus network is based on n-tier architecture which includes security, core, distribution and access layers. The backbone comprises three upper layers i.e. security, core and distribution as well as primary & backup fibre optic link connectivity for all buildings. In Data Center, redundant Chassis-based routers, core and distribution switches and firewalls with high transmission rate are commissioned, where device and link redundancy has been maintained at every level to ensure un-interrupted ICT services to users. Gigabit Access Network has also been commissioned to ensure high-speed computing at user end, where access switches of high switching capacity are installed to handle

data and multimedia traffic, efficiently. Proper NMS server installed to monitor and manage the whole network, which can send alert on any fault, performance bottleneck and/or security issues.

## Wireless Mesh Network

A secured Wi-Fi mesh network has been implemented throughout the campus. Wireless indoor and outdoor Access Points (APs) have been installed to give internet/intranet access to students, faculty and staff employs latest wireless protocol 802.11n with each AP providing a bandwidth up to 300 Mbps to the users.

## ZABSolutions

SZABIST has its own software house which fulfills the software needs of the SZABIST. The state-of-the-art applications that ZABSolutions has developed and evolved are successfully supporting and fueling the complete academic lifecycle of the SZABIST. The complete academic process of a student, right from the filling of the online admission form till the printing of the final transcript and the degree, runs on the integrated solutions developed by ZABSolutions.

Several educational institutions in Pakistan have shown their interest in ZABSolutions products. Academic lifecycle of several institutions will soon be migrated to the integrated paperless campus solutions developed by ZABSolutions.

The ZABSolutions incubator helps computer science students to foster their software skills. Students can access ZABSolutions resources and knowledge to develop skills and competencies which are important to compete in the market. Following are the objectives of the incubator:

1. Provide a practical framework for knowledge and technology transfer to the students
2. Develop the confidence and competencies for building e-firms
3. Involve students in software research and development
4. Enhance partnership between industry and academia
5. Provide faculty and the students with innovative support facilities

# LIFE AT SZABIST

## ZABFM 106.6

ZABFM 106.6 is an in house FM broadcasting station, an initiative taken by Shaheed Zulifkar Ali Bhutto Institute of Science & Technology and it was a substantive step into the field of education. It is an honor for the nation as we are producing the talented and most efficient candidates in the form of great speakers to the nation along with the responsibility of spreading education, awareness, skill & aesthetic approach through the airwaves.

ZABFM 106.6 was the first educational radio station with the allotted frequency 106.6 MHz by Pakistan Electronic Media Regulatory Authority (PEMRA) since 18<sup>th</sup> June, 2007 and is performing 24/7 till date.

It is a non-commercial radio broadcast station exclusively to impart and disseminate education to the students.

The 24/7 programming schedule covers various subjects of life like, Career Counseling, Planning & Development, Education, Infotainment, Awareness, Research, Documentaries, Talk Shows, Sports, Travel, Science & Technology, Media, Culture & Society, Technology & Inventions, Info tech and social order, etc.

## SZABIST Student Council (SSC)

The SZABIST Student Council (SSC) since its inception in 2009 has been a body of hardworking, ambitious and talented individuals who are elected under the supervision of the Election Commission of SZABIST with members of its work force also selected by means of an entrance test and screening process all on an annual basis to form the student government at the institute. For almost a decade, the philosophy of the student council has been one in congruence with the values espoused in the ideology of SZABIST, those of leadership, art & creativity and tolerance and scientific thought along with serving the community through social work.

Trained to stand by the principles of labour, knowledge and integrity, the SSC membership cutting across all degree programs of the institute aims at helping to explore the talents of all students whilst also playing an intermediary role between the administration/management and student body at large, working towards adding value to student life at SZABIST.

At SZABIST, students are offered a range of activities under the pillars of Leadership, Sports, Community Services, Art and Culture and Technical and the institute is fortunate to have a diverse student body, one that boasts a proud history of achievements in the realms of public speaking, sports, entrepreneurship, music and theatre.

All student associations, clubs and student societies are placed under the above mentioned thematic pillars, formed as per a prescribed procedure and work under the aegis of the SZABIST Student Council to conduct a wide range of activities to do with sports, entrepreneurship, performing arts like theatre and music, photography, culture, literature, public speaking, science and technology, engineering and computing, model United Nations, social welfare, leadership workshops and field trips.

SSC also hosts entertainment events, produces seasonal SSC merchandise (such as shirts, mugs, banners, or any other promotional material) at times, and guides fellow students in addressing issues related to their campus life acting as a forum that becomes the voice of the student body of the institute. Furthermore, it acts as a parent body to its chapters in other campuses of SZABIST namely, SSC-Hyderabad Chapter, SSC-Islamabad Chapter and SSC-Larkana Chapter and SSC-Dubai Chapter.

The SSC and all its student associations and clubs fall under the purview of and are registered with, the Office of Student Advisory once they are formed. To ensure that democratic norms are adhered to, every year proper elections are held for the various offices of these student societies under the supervision of Student Council/Student Advisor/SZABIST Election Commission.

## The following clubs/societies are currently active on Campus:

<b>ACM</b>	Association of Computing Machinery (SZABIST Karachi, ACM Chapter)
<b>AIESEC</b>	Student Exchange Program Facilitation
<b>ASME</b>	American Society of Mechanical Engineers
<b>SCS</b>	SZABIST Cultural Society
<b>IEEE-SSB</b>	Institute of Electrical and Electronics Engineers-SZABIST Student Branch
<b>KSCLC</b>	Karachi SZABIST Campus Lions Club
<b>RCoSKM</b>	Rotaract Club of SZABIST Karachi Midcity
<b>SBS</b>	SZABIST Biosciences Society
<b>SES</b>	SZABIST Entrepreneurial Society
<b>SLS</b>	SZABIST Law Society
<b>SDS</b>	SZABIST Debating Society
<b>SSSS</b>	SZABIST Social Sciences Society
<b>SSS</b>	SZABIST Sports Society
<b>ZABLITS</b>	SZABIST Literary Society
<b>ZABMUN</b>	Zulfiqar Ali Bhutto Model United Nations
<b>ZABPAS</b>	SZABIST Performing Arts Society



# LIFE AT SZABIST

## Newsletters

SZABIST publishes Newsletter on regular intervals from all its campuses to update about the activities taking place at the campuses.

## National and International Linkages and Collaborations

SZABIST is a registered member of the following international and national associations:

1. International Association of Universities (IAU), Paris
2. Association of Commonwealth Universities (ACU), London
3. The Association to Advance Collegiate School of Business (AACSB), Singapore
4. Asia University Federation (AUF), Seoul
5. Asia-Pacific Quality Network (APQN), People's Republic of China
6. Association of Quality Assurance Agencies of the Islamic World (AQAAIW), Malaysia
7. The Talloires Network, USA
8. The Chartered Institute of Logistics and Transport (CILT), UK
9. Management Association of Pakistan (MAP), Karachi
10. Marketing Association of Pakistan (MAP), Karachi
11. Human Resource Development Network (HRDN), Islamabad

Moreover, SZABIST has signed MoUs' articulation and collaboration agreements with the following national and international universities and institutions:

### 1. JS Bank Limited

JS Bank would extend financing to the students and alumni of SZABIST to establish/expand their respective business through the Prime Minister's Youth Business Loan (PMYBL) Scheme.

### 2. Aman Health Care Services

Through this collaboration, SZABIST students will be engaged in producing additional four short documentaries on various themes of family planning.

### 3. Mitsubishi Corporation

Mitsubishi Corporation through this MoU would be awarding scholarship to two students enrolled in the BBA program.

### 4. Istanbul Medipol University, Turkey

This MoU will present numerous opportunities to SZABIST for initiating mutually-rewarding R&D projects, and student & faculty exchange programs. On August 30, 2018 an agreement was signed between the institutions.

Through this agreement, Istanbul Medipol University would provide scholarships to five undergraduate programs and ten MS/PhD Programs of studies.

### 5. Project Management Institute Karachi Pakistan Chapter

This MoU is aimed at creating a mutually beneficial partnership to promote project management awareness in the community, and to initiate and enhance collaboration between academia and industry to nourish young professionals as well as to create and implement best project management practices.

### 6. Planet N Group – 10xC and Feedience

SZABIST in collaboration with Planet N Group has signed MoUs with 10xC and Feedience Pvt. Limited for promoting entrepreneurship activities and deploying funding & incubation opportunities for innovative products and softwares. On the other hand, alliance with Feedience for media content generation will incentivize students in generating ideas for media houses.

### 7. The Chartered Institute of Logistics and Transport (CILT), UK

SZABIST has signed a MoA with CILT for introducing certification in logistics and transport. To attain this certification, a total of three mandatory courses will have to be completed.

### 8. Sindh Judicial Academy

SZABIST Rule of Law Center and Sindh Judicial Academy agree to cooperate for capacity building of judges, lawyers, salis notified by High Court of Sindh in mechanism of alternative dispute resolution.

### 9. Pak-China International Education System

This MoU is aimed at offering Chinese Language course to SZABIST undergraduate students.

### 10. ASER – Alliance Pakistan (AAP)

This is a technical-advocacy alliance for benchmarking, and assessment of data sets for research and development.

### 11. Coventry University

Through this MoU, SZABIST students enrolled in Bachelors of Arts in Business Studies (BABS) will be conferred Coventry University degree on completing two years of education at SZABIST and one year at Coventry University, UK.

# LIFE AT SZABIST

## 12. The Citizen Foundation

As part of social responsibility, SZABIST and TCF have collaborated to facilitate TCF students with admission fee waiver, and scholarship opportunities to study in any of SZABIST degree programs.

## 13. CISCO Networking Academy

SZABIST Karachi Campus is an authorized CISCO Network Academy to conduct IT-essentials, CCNA routing & switching, and CCNA security certifications.

## 14. Sindh Police

This MoU is aimed at providing complete tuition fee waiver to the children of Shaheed police officers who successfully secure admission in SZABIST.

## 15. Ihsan Trust

The MoU with Ihsan Trust is aimed at provision of Qarz-e-Hasna (Interest-free Loan) facility up to 100 % of tuition fee to SZABIST students.

## 16. University of London

SZABIST is a registered center of University of London for giving tuitions for its LLB program.



# FACULTY OF COMPUTING & ENGINEERING SCIENCES

BS (Computer Science) program is offered by the Department of Computer Science which runs under the Faculty of Computing and Engineering Sciences. The department offers MS & PhD programs in Computer Science as well. The objective of the BS (Computer Science) program is to inculcate a broad-based rudimentary education in Computer Science. The students would acquire sufficient fundamental knowledge to adapt quickly to the changes that are occurring and will continue to occur during their professional careers. The program involves analysis, development and implementation of mathematical algorithms to solve computational problems, understanding computer electronics, study of operating systems, languages, compilers, data communication and networks, solving complex computing problems, designing man-to-machine interfaces, security, mobile computing and so on.

SZABIST believes in conceptual learning. It has developed an organizational network of reputable multinational and national enterprises for collaboration in Computing. SZABIST runs its own software house, which facilitates students to meet the desired objectives and learning outcomes.





# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## BS Computer Science

The program is offered through a well-trained foreign qualified faculty. It consists of 40 courses (five courses per semester) with a total of 130 credit hours. BSCS Program is accredited by NCEAC. The maximum time to complete the degree is six years.

### BS (Computer Science) COURSE PLAN (ROADMAP)

Sem.	Codes	Course Title	Cr.Hrs.		Pre-Req.
First Year					
Fall Semester					
	CSC 1108	Introduction to Computer Science	2, 0	2	
	CSCL 1108	Lab : Introduction to Computer Science	0, 1	1	
	CSC 1103	Fundamentals of Programming	3, 0	3	
	CSCL 1103	Lab : Fundamentals of Programming	0, 1	1	
	CSC 1102	English Composition and Comprehension	3, 0	3	
	CSC 1101	Calculus and Analytical Geometry	3, 0	3	
	CSC 1107	Applied Physics	2, 0	2	
	CSCL 1107	Lab : Applied Physics	0, 1	1	
16					
Spring Semester					
	CSC 2103	Digital Logic Design	3, 0	3	CSC 1107
	CSCL 2103	Lab: Digital Logic Design	0, 1	1	
	CSC 1208	Object Oriented Programming Techniques	3, 0	3	CSC 1103
	CSCL 1208	Lab: Object Oriented Programming Techniques	0, 1	1	
	CSC 2101	Communication and Presentation Skills	3, 0	3	CSC 1102
	CSC 2105	Statistics and Probability	3, 0	3	
	CSC xxxx	University Elective-1	3, 0	3	
17					
Second Year					
Fall Semester					
	CSC 2201	Computer Organization and Assembly Language	3, 0	3	
	CSCL 2201	Lab: Computer Organization and Assembly Language	0, 1	1	
	CSC 2102	Data Structures and Algorithms	3, 0	3	CSC 1208
	CSCL 2102	Lab: Data Structures and Algorithms	0, 1	1	
	CSC 1201	Discrete Mathematical Structures	3, 0	3	
	CSC 4102	Professional Practices	3, 0	3	
	CSC xxxx	CS Supporting-1	3, 0	3	
17					
Spring Semester					
	CSC 3202	Design and Analysis of Algorithms	3, 0	3	CSC 2102
	CSC 2204	Finite Automata Theory and Formal Languages	3, 0	3	
	CSC 2203	Database Systems	3, 0	3	CSC 2102
	CSCL 2203	Lab: Database Systems	0, 1	1	
	CSC 2206	Linear Algebra	3, 0	3	
	CSC xxxx	University Elective-2	3, 0	3	
16					

# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## Third Year

### Fall Semester

CSC 3201	Compiler Construction	3, 0	3	CSC 2204
CSC xxxx	CS Supporting-2	3, 0	3	
CSC 2205	Operating Systems	3, 0	3	CSC 2102
CSCL 2205	Lab: Operating Systems	0, 1	1	
CSC 3109	Software Engineering	3, 0	3	
CSC xxxx	CS Supporting-3	3, 0	3	
		<b>16</b>		

### Spring Semester

CSC 4101	Artificial Intelligence	3, 0	3	CSC 1201
CSCL 4101	Lab: Artificial Intelligence	0, 1	1	
CSC 3205	Computer Networks and Data Communications	3, 0	3	
CSCL 3205	Lab: Computer Networks and Data Communications	0, 1	1	
CSC 4xxx	CS Elective-1	3, 0	3	
CSC 4xxx	CS Elective-2	3, 0	3	
CSC 1205	Technical and Business Writing	3, 0	3	
		<b>17</b>		

## Fourth Year

### Fall Semester

CSC 4xxx	CS Elective-3	3, 0	3	
CSC 4xxx	CS Elective-4	3, 0	3	
CSC 4105	Final Year Project-I	0, 3	3	
CSC xxxx	University Elective-3	3, 0	3	
CSC 4106	Parallel and Distributed Computing	3, 0	3	CSC 2205
		<b>15</b>		

### Spring Semester

CSC 4xxx	CS Elective-5	3, 0	3	
CSC xxxx	University Elective-4	3, 0	3	
CSC 4205	Final Year Project-II	0, 3	3	
CSC 4201	Information Security	3, 0	3	
CSC 4202	Pakistan and Islamic Studies/Humanities	4, 0	4	
		<b>16</b>		
		<b>130</b>		

\*\*A CSC xxxx Mathematics deficiency course will be offered to those students who have limited mathematical background (if deemed necessary by relevant PM/HOD).



# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## CS ELECTIVES

CSC 4802	Android Application Development
CSC 4703	Applied Data Mining
CSC 4803	Auditing Information Systems
CSC 4804	Business Process Re-engineering
CSC 4705	Control Systems
CSC 4805	Data and Network Security
CSC 4504	Organizational Behavior
CSC 4604	Research Report
CSC 4505	Systems Administration
CSC 4807	Embedded Programming
CSC 4708	Enterprise Resource Planning
CSC 4808	Ethical Hacking
CSC 4709	Internet Business Models
CSC 4809	iOS Development
CSC 4712	IT Innovations
CSC 4713	Managing Data-Center Projects
CSC 4812	Mechatronics
CSC 4813	Modeling and Simulation
CSC 4714	Network Security and Encryption
CSC 4815	Software Engineering-II
CSC 4814	Software Project Management
CSC 4716	Switching and Routing
CSC 4816	Technopreneurship
CSC 4717	Web Technologies-I
CSC 4817	Web Technologies-II
CSC 4718	Wireless and Mobile Technologies
CSC 4823	Interaction Design
CSC 4719	Game Development
CSC 4721	Introduction to Cloud Computing
CSC 4822	Software Engineering Economics
CSC 4818	Data Sciences
CSC 4824	Embedded Systems
CSC 4825	Computer Graphics

## UNIVERSITY ELECTIVES

Each campus may offer university electives as per convenience and availability of resources. The Electives being offered at Karachi Campus as are as follows:

CSC 4501	Business and Technology Ethics
CSC 4606	Psychology
CSC 4605	Sociology
CSC 4601	Foreign Languages
CSC 4502	Design and Creativity
CSC 4602	History of Scientific Ideas
CSC 4503	Introduction to Accounting
CSC 4603	Management Principles
CSC 4504	Organizational Behavior
CSC 4604	Research Report
CSC 4505	Systems Administration

## COMPUTER SCIENCE SUPPORTING COURSES

Coverage of relevant pre-requisite will be ensured while allowing any of the following courses from this category:

CSC xxxx	Differential Equations
CSC xxxx	Multi-variate Calculus
CSC xxxx	Graph Theory
CSC xxxx	Theory of Programming Languages
CSC xxxx	Numerical Computing

## DISTRIBUTION OF CREDIT HOURS

Course Group		Cr. Hrs.	%
Computing	Core Courses	39	30%
	Supporting Areas	12	9%
	General Education	19	15%
Computer Science	Core Courses	24	18%
	Electives	15	12%
	Supporting Courses	9	7%
University Electives		12	9%
Total		130	100%

## Internship

The internship is scheduled for summer at the end of third year. After completion of the six-week internship, all students are required to submit a comprehensive report giving details of their experience and learning.





# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## MS Computer Science

SZABIST offers MSCS degree in three domains: Core Computer Science area and in two specialization tracks, i.e., Software Engineering (SE) and Networks and Security (N&S) in order to cater the market needs. Students have 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. Although the institutional administration emphasize and encourage students to undertake research, they can take two courses in lieu of research in specific domains. 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 4 years.

## Master of Science in Computer Science (In Core Computer Science)

### First Year

#### First Semester

CSC 5105 Research Methodology  
CSC 5101 Advanced Algorithms Analysis  
CSC 5102 Theory of Computation

#### Second Semester

CSC 5201 Advanced Operating Systems  
CSC 5202 Advanced Computer Architecture  
CSC 5xxx Elective-I (from CS Stream-I)

### Second Year

#### Third Semester

CSC 5xxx Thesis/Independent Research Study-I  
OR Course Work (from CS-Stream-II)  
CSC 5xxx Elective-II (from CS-Stream-I)  
CSC 5xxx Elective-III (from CS-Stream-I)

#### Fourth Semester

CSC 5xxx Thesis/Independent Research Study-II  
OR Course Work (from CS-Stream-II)  
CSC 5xxx Elective-IV (from CS-Stream-I)

## Master of Science in Computer Science (With Specialization in Software Engineering)

### First Year

#### First Semester

CSC 5105 Research Methodology  
CSC 5101 Advanced Algorithms Analysis  
CSC 5102 Theory of Computation

#### Second Semester

CSC 5201 Advanced Operating Systems  
CSC 5202 Advanced Computer Architecture  
SEC 5xxx Elective-I (from SE Stream-I)

### Second Year

#### Third Semester

CSC/SEC 5xxx Thesis/Independent Research  
Study I OR Course Work (from CS  
Stream-II or from SE-Stream-II)  
SEC 5xxx Elective-II (from SE-Stream-I)  
SEC 5xxx Elective-III (from SE-Stream-I)

#### Fourth Semester

CSC/SEC 5xxx Thesis/Independent Research  
Study II OR Course Work (from  
CS Stream-II or from SE-Stream-II)  
SEC 5xxx Elective-IV (from SE-Stream-I)

# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## Master of Science in Computer Science (With Specialization in Networks & Security)

### First Year

#### First Semester

CSC 5105 Research Methodology  
CSC 5101 Advanced Algorithms Analysis  
CSC 5102 Theory of Computation

#### Second Semester

CSC 5201 Advanced Operating Systems  
CSC 5202 Advanced Computer Architecture  
NSC 5xxx Elective-I (from N&S Stream-I)

### Second Year

#### Third Semester

CSC/NSC 5xxx Thesis/Independent Research  
Study I OR Course Work (from  
CS Stream-II or from  
N&S-Stream-II)  
NSC 5xxx Elective-II (from N&S-Stream-I)  
NSC 5xxx Elective-III (from N&S-Stream-I)

#### Fourth Semester

CSC/NSC 5xxx Thesis/Independent Research  
Study II OR Course Work (from  
CS Stream-II or from  
N&S-Stream-II)  
NSC 5xxx Elective-IV (from N&S-Stream-I)

### CS-Stream-I

CSC 5164 Real-Time Systems  
CSC 5162 Digital Image Processing  
CSC 5161 Machine Learning  
CSC 5163 Data Mining  
CSC 5166 Operation Research  
CSC 5264 Expert Systems

### CS-Stream-II

CSC 5267 Reverse Engineering  
CSC 5266 Digital Forensics and Malware  
Analysis  
CSC 5263 Advanced Resource Sharing  
Architecture  
CSC 5262 Computer Vision  
CSC 5268 Robotics  
CSC 5261 Advanced Database Design  
CSC 5265 Distributed Computing  
CSC 5269 Systems and Network Programming

### SE-Stream-I

SEC 5163 Software Requirement Engineering  
SEC 5161 Software System Architecture  
SEC 5164 Software System Quality  
SEC 5162 Advanced Software Engineering

### SE-Stream-II

SEC 5261 Software Analysis and Testing  
SEC 5263 Web Engineering  
SEC 5262 Software Project Management

### N&S-Stream-I

NSC 5161 Advanced Computer Networks  
NSC 5163 Network Security  
NSC 5164 Applied Cryptography  
NSC 5162 Information Security  
NSC 5261 Wireless Sensor Networks

### N&S-Stream-II

NSC 5264 Telecom Policies and Regulations  
NSC 5263 Mobile Ad-hoc Networks  
NSC 5262 Advanced Data Communications

### Pre-Requisites:

- For any advanced course, pre-requisite course must have been taken before.
- For each track, the following courses must have been done prior to admission.

### MS (CS) (In Core Computer Science)

Artificial Intelligence  
Finite Automata Theory  
Digital Logic Design

### MS (CS) with SE-Specialization

Artificial Intelligence  
Finite Automata Theory  
Digital Logic Design  
Software Engineering-I

### MS (CS) with N&S-Specialization

Data Communication and Computer  
Networks  
Finite Automata Theory  
Digital Logic Design

Full time academic load is three courses. All students are required to register for full load in the first semester.

# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## PhD (Computing)

The PhD program requires students to complete 48 credit hours. Course work of 18 credits (6 courses) is needed which includes core courses, electives and Independent Research Study. Dissertation of 30 credits is also required to complete. The maximum time limit to complete the PhD degree is 8 years.

### First Year

#### Fall Semester

CSC 6101 Research Methodology\*  
CSC 6xxx Elective-I  
CSC 6xxx Elective-II

#### Spring Semester

CSC 6xxx Independent Research Study  
CSC 6xxx Elective-III  
CSC 6xxx Elective-IV

### Second Year

#### Fall Semester

CSC 6xxx Dissertation

#### Spring Semester

CSC 6xxx Dissertation

Elective courses are listed under different streams in MS Computer Science program.

Followed by successful completion of the course work, Comprehensive Examination is required to pass in order to acquire PhD Candidacy after which research period starts. The entire research work is carried out under the supervision of the PhD supervisor which is assigned and approved as per the university procedure. The complete research work is required to be submitted in the form of a "Dissertation" after a minimum period of two years.

PhD course work credits may be implemented via selection of a particular mode of course execution (as recommended by the BASR).

\*The course of Research Methodology is compulsory if not done in Masters.

### Third Year

#### Fall Semester

CSC 6xxx Dissertation

#### Spring Semester

CSC 6xxx Dissertation



# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## Department of Mechatronic Engineering

### **Mechatronic Engineering**

Mechatronics is a multidisciplinary field of engineering. It refers to an efficient and effective integration of mechanical systems and electronics. A mechatronic engineer unites the principles of mechanics, electronics and computing to generate a simpler, economical, reliable, and versatile system. Examples of mechatronic systems include aircraft, motor vehicles, automated manufacturing plants, robots of all types, medical and surgical devices and many others.

### **Mechatronics at SZABIST**

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. 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 Mechatronics. The program has been accredited by Pakistan Engineering Council. The program has received 7 stars (Highest Ranking) by the Chartered of Inspection & Evaluation Committee, Sindh.





# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## BE Mechatronic Engineering

### Program Objectives

The objective of the program is to provide a broad and basic education in multiple disciplines comprised of Mechanical, Electronics, and Computer Engineering to ensure that students in the program are exposed to a wide spectrum of engineering knowledge and practice. Upon completion of their degree, the Bachelor of Engineering (Mechatronics) graduates will:

- Be competent mechatronic engineers who are knowledgeable, skillful and able to solve complex engineering problems.
- Have inclination towards research and lifelong learning and be able to promote entrepreneurial ideas.
- Be effective engineers with leadership qualities and high morals & professional ethics.

### First Year

#### Fall Semester

ME 1101	Communication and Presentation Skills (2, 0)
ME 1111	Electric Circuits (2, 1)
ME 1104	Engineering Mathematics-I: Calculus and Analytical Geometry (3, 0)
ME 1106	Islamic Studies (2, 0)
ME 1109	Engineering Drawing-I (0, 2)
ME 1203	Engineering Physics (2, 1)

#### 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 1207	Engineering Workshop (0, 2)
ME 1209	Computer Programming (0, 2)
ME 2306	Pakistan Studies (2, 0)
ME 2xxx	Social Sciences Elective (2, 0)

### Second Year

#### Fall Semester

ME 2302	Digital Logic Design (2, 1)
ME 2303	Engineering Dynamics (3, 0)
ME 2304	Engineering Mathematics-III: 3D Geometry and Vector Calculus (3, 0)
ME 2311	Network Analysis (2, 0)
ME 2312	Data Structures and Object Oriented Programming (0, 2)
ME 2309	Engineering Drawing-II (0, 1)
ME 2405	Thermodynamics (2, 1)

#### Spring Semester

ME 2401	Electronics Circuit Design (3, 1)
ME 2403	Engineering Mathematics-IV: Transformation Techniques (3, 0)
ME 2405	Thermodynamics (2, 1)
ME 2406	Strength of Materials (3, 1)
ME 2407	Actuating Systems (3, 1)
ME 2408	Signals and Systems (2, 0)
ME 3607	Solid Modeling (0, 1)

### Third Year

#### Fall Semester

ME 3501	Engineering Mathematics-V: Numerical Methods (3, 0)
ME 3502	Fluid Mechanics (3, 1)
ME 3509	Microprocessor and Microcontroller Based Systems (2, 1)
ME 3506	Materials and Manufacturing Processes (3, 0)
ME 3507	Theory of Machines (2, 1)
ME 3508	Instrumentation and Measurements (3, 1)

#### Spring Semester

ME 3602	Control Systems (3, 1)
ME 3603	Engineering Mathematics-VI: Probability and Statistics (3, 0)
ME 3604	Machine Design (3, 0)
ME 3605	Power Electronics (3, 1)
ME 4705	Mechatronics System Design (3, 1)
ME 1205	Technical Writing Skills (2, 0)



# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## Fourth Year

### Fall Semester

ME 4xxx	Engineering Elective-I (3, 0)
ME 4702	Engineering Economics and Project Management (3, 0)
ME 4707	Mechanical Vibration (2, 0)
ME 4708	Final Year Project-I* (0, 3)
ME 4703	Heat Transfer (2, 1)
ME 4802	Robotics (3, 1)

### Spring Semester

ME 4706	Professional Practices (2, 0)
ME 4xxx	Engineering Elective-II (3, 0)
ME 4xxx	Management Sciences Elective (3, 0)
ME 4808	Final Year Project-II (0, 3)
ME 4807	Manufacturing Automation (2, 1)

\*To be continued and graded at the conclusion of 8th Semester.

### Electives

#### Engineering Electives

ME 4722	Digital Signal Processing
ME 4828	Modeling and Simulation
ME 4821	Digital Image Processing
ME 4727	Digital Control Systems
ME 4826	Embedded Systems
ME 4721	Artificial Intelligence and Computer Vision
ME 4827	Applied Thermodynamics

### Management Sciences Electives

ME 4823	Engineering Management
ME 4724	Entrepreneurship
ME 4728	Total Quality Management
ME 4725	Leadership and Motivation Techniques
	Or any other relevant course

### Social Sciences Electives

ME 2352	Organizational Behavior
ME 2353	Psychology
ME 2354	Sociology
ME 2351	Foreign Languages
	Or any other relevant course

Elective courses are offered subject to the availability of the required expertise & resources.

Full-time academic load during first semester is six courses. All students are required to register for full load in the first semester.

### Community Service Learning Course

A non-credited community service learning course (1,1) will be offered in Summer at the end of 2<sup>nd</sup> year. This course aims to impart general awareness and knowledge along with social guidance to develop students into socially active citizens.

### Internship

The internship is scheduled for summer at the end of the third year. After the completion of the 6-week internship, all students are required to submit a comprehensive report giving details of their experience and learning.



# FACULTY OF COMPUTING AND ENGINEERING SCIENCES

## MS Mechatronic Engineering

### Program Objectives

The broad objectives of the Master's program in Mechatronic Engineering are to instill in its students a solid foundation of mathematical, scientific and engineering knowledge in addition to developing the intellectual skills essential for prosperity and success in their careers. The program is structured in such a manner that the students are provided a firm theoretical foundation with opportunity to strengthen their knowledge through research assignments, practical training and projects. The objectives of Masters in Mechatronics Engineering program are to:

- Enable students to pursue a rigorous post doctorate/research program in Mechatronics Engineering.
- Improve the marketability of our students in the local industry, public sector and R&D Organizations.
- Provide technical confidence and financial guidance needed to start a small-scale industry to graduates interested in self-employment.

### Roadmap

#### First Year

##### Fall Semester

- ME 5102 Advanced Robotics (3, 0)  
ME 5101 Advanced Embedded Systems (3, 0)  
ME 5105 Research Methodology (3, 0)

##### Spring Semester

- ME 5202 Image Processing for Intelligent Systems (3, 0)  
ME 5201 Data Acquisition and Control (3, 0)  
ME xxxx Elective-I (3, 0)

#### Second Year

##### Fall Semester

- ME 5xxx Elective-II (3, 0)  
ME 5xxx Elective-III (3, 0)

##### Spring Semester

- (If students opt for research work based degree)*  
ME 5xxx Thesis (0, 6)

*(If students opt for coursework based degree)*

- ME 5xxx Elective-IV (3, 0)  
ME 5xxx Elective-V (3, 0)

#### Electives

##### Robotics and Industrial Automation

- ME 5225 Mobile Robotics  
ME 5222 Cognitive Robotics  
ME 5324 Machine Vision  
ME 5321 Advanced Manufacturing Design Techniques  
ME 5221 Adaptive Control  
ME 5326 Precision Manufacturing Systems  
ME 5325 Optimization of Engineering Systems  
ME 5322 Computer Integrated Manufacturing  
ME 5224 Micro-Manufacturing Systems and Technology  
ME 5226 Rapid Prototyping, Tooling and Automation  
ME 5223 Linear Control Systems  
ME 5323 Industrial Control Technology

##### Smart Electromechanical Systems

- ME 5329 Micro-Electro Mechanical Systems  
ME 5227 Advanced Modeling and Simulation  
ME 5331 Programming of Embedded Systems  
ME 5228 Linear Control Systems  
ME 5327 Artificial Intelligence  
ME 5332 Sensor and Sensing Technology  
ME 5229 Optomechatronic Systems  
ME 5232 Smart Materials and Structures  
ME 5231 Pattern Recognition and Analysis  
ME 5328 Digital Integrated Circuit Design

All courses may not be necessarily being offered every year. Alternate courses may be substituted as and when needed.

# FACULTY OF EDUCATION & SOCIAL SCIENCES

SZABIST prepares students for managerial careers in Social Science. SZABIST offers course work in many disciplines to provide potential managers with an understanding of the complexities of the professional world in which they will operate and of the organizations of which they will become a part.

The course work at SZABIST is an intensive study of a host of disciplines, and offers majors in Psychology, Sociology, International Relations, Economics, Sindh Studies and Educational Leadership.



# FACULTY OF EDUCATION & SOCIAL SCIENCES

## Department of Social Sciences

### BS Social Sciences

To obtain a BS degree in Social Sciences, students are required to complete a total of 144 credit hours within 6 years. The degree consists of a total of 46 courses and a Research Project.

#### First Year

##### Fall Semester

SS 1117	Computer and Web Skills
SS 1116	English for General Purposes
SS 1109	Islamiat/Ethics and Pakistan Studies
SS 1105	Microeconomics
SS 1115	Community Services
SS 1201	Introduction to Social Sciences

##### Spring Semester

SS 2306	Psychology
SS 1205	Macroeconomics
SS 2307	Sociology
SS 1155	Introduction to Political Science
SS 2412	International Relations
SS 4705	Sindh Studies

#### Second Year

##### Fall Semester

SS 2314	Study of Anthropology
SS 2316	English for Academic Purposes
SS 2313	Introduction to Social Psychology
SS 2318	Mathematics and Statistics
SS 2413	Philosophy
SS 1xxx	Elective-I

##### Spring Semester

SS 2406	Gender Studies
SS 2418	Statistical Inferences
SS 2414	Introduction to Organizational Psychology
SS 3503	Development Studies
SS 1209	Social Policy
SS 1xxx	Elective-II

#### Third Year

##### Fall Semester

SS 2312	Culture, Art and Society
SS 3509	Language-I
SS 3606	Political Economy
SS 4xxx	Major-I

SS 4xxx	Major-II
SS 4xxx	Major-III

##### Spring Semester

SS 3504	Research Methods
SS 3605	International Law and Human Rights
SS 3609	Language-II
SS 4xxx	Major-IV
SS 4xxx	Major-V
SS 4xxx	Major-VI

#### Fourth Year

##### Fall Semester

SS 2411	Environmental Studies
SS 4707	Introduction to Health Psychology
SS 4709	Research Project-I
SS 4xxx	Major-VII
SS 4xxx	Major-VIII
SS 4xxx	Major-IX

##### Spring Semester

SS 4804	Public Policy
SS 4809	Research Project-II
SS 2405	Enlightenment
SS 4xxx	Major-X
SS 4xxx	Major-XI
SS 4xxx	Major-XII

#### ELECTIVES

SS 1154	Literature
SS 2305	Human Geography
SS 1157	Comparative Religion
SS 1254	World History
SS 1262	Mass Media
SS 1163	Development and Politics
SS 1263	Culture and Media in Sindh
SS 1164	History of Ideas

#### MAJORS

##### Psychology

SS 4111	Abnormal Psychology
SS 4112	Developmental Psychology



# FACULTY OF EDUCATION & SOCIAL SCIENCES

SS 4134	Cognitive Psychology
SS 4135	Educational Psychology
SS 4234	Psychodynamics
SS 4268	History of Psychology
SS 4167	Child Psychology
SS 4156	Clinical Psychology
SS 4114	Personality Theories
SS 4255	Counseling and Psychotherapy
SS 4211	Psychological Testing
SS 4236	Positive Psychology
SS 4168	Experimental Psychology
SS 4267	Forensic Psychology
SS 4262	Physiological Psychology

## **Sociology**

SS 4269	Civil Society
SS 4271	Peace Movements
SS 4138	Corporate Social Responsibility
SS 4141	Mass, Media and Society
SS 4237	Post-Colonial State and Social Development
SS 4238	Social Entrepreneurship
SS 4239	Social Justice
SS 4241	Sociology of Education
SS 4242	The Sociology of Poverty
SS 4196	Social Theories-I
SS 4296	Social Theories-II
SS 4171	Class, Caste, and Ethnicity in South Asia
SS 4172	Political Sociology
SS 4272	Social Change in Pakistan
SS 4169	Citizenship
SS 4273	Urbanization
SS 4295	Criminology
SS 4197	The Sociology of Religion

## **International Relations**

SS 4275	Foreign Policy and International Politics
SS 4274	Diplomacy, Conflict Resolution and Confidence Building Measures
SS 4219	Peace Research
SS 4222	Strategic Studies
SS 4176	Globalization and Global Governance
SS 4277	Modern Ideologies
SS 4174	Central and West Asian Studies
SS 4175	European Studies
SS 4177	Middle Eastern Studies
SS 4179	Politics of Terrorism
SS 4178	Muslim World
SS 4276	International Institutions
SS 4278	Political Geography
SS 4119	Arms Control and Disarmament
SS 4279	US and International Politics

## **Sindh Studies**

SS 4188	Geography and Geology of Sindh
SS 4287	History and Politics of Sindh
SS 4288	Irrigation System of Sindh
SS 4185	Agriculture in Sindh
SS 4285	Archaeology of Sindh
SS 4186	Anthropology and Culture of Sindh
SS 4286	Art and Architecture in Sindh
SS 4187	Ethnomusicology of Sindh
SS 4289	Sindh's Economy and Commerce
SS 4292	Survey of Sindhi Literature
SS 4189	Philosophy of Sindh
SS 4192	Sindh's Sociology-I: Education and Language Policy
SS 4193	Sindh's Sociology-II: Social Structures and Development
SS 4194	Sindh's Sociology-III: Health, Gender, and Feminism
SS 4293	The Sindhi Diaspora
SS 4291	Sindh's Geopolitical Exigencies
SS 4191	Sindh's Botanical and Zoological Heritage

## **Economics**

SS 4139	Gender and Development
SS 4147	Development and Planning
SS 4181	Capabilities and Human Development
SS 4281	Fiscal and Monetary Economics
SS 4261	Mathematical Economics
SS 4183	Industrial Economics
SS 4284	Trade Economics
SS 4128	Agriculture Economics
SS 4182	Game Theory
SS 4283	Labour Economics
SS 4282	Growth
SS 4184	Poverty and Inequality
SS 4228	History of Economic Thoughts
SS 4249	Pakistan Economy
SS 4251	Sustainable Development
SS 4155	Basic Econometrics

All courses may not necessarily be offered in every year. Alternate courses may be substituted as and when required.

Full time academic load is six courses. All students are required to register for full load in the first semester.

## **Internship**

The internship is scheduled for summer at the end of the third year. After the completion of the 6-week internship, all students are required to submit a comprehensive report giving details of their experience and learning.

# FACULTY OF EDUCATION & SOCIAL SCIENCES

## MS SS (International Relations, Economics, Psychology and Sociology)

There are two streams available for MS SS (International Relations, Economics, Psychology and Sociology). One Stream is Course Work Based Stream and other one is Research based Stream. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In the Research Based Stream, the student is required to complete 8 Courses (24 Credit Hours) and Two IRS (6 Credit Hours) OR One Thesis (6 Credit Hours). In both the streams, 30 Credit hours to be completed. The time limit to earn a MS degree is from 1.5 to 4 years. The detail of two streams is as follows:

### 1- MS (Course Based Stream)

The scheme of study is as follows:

- 02 core courses (6 Credit Hours)
- 08 Electives (24 Credit Hours)
- No IRS or Thesis

### 2- MS (Research Based Stream)

The scheme of study is as follows:

- 02 core courses (6 Credit Hours)
- 06 Electives (18 Credit Hours)
- 02 IRSs or Thesis (6 Credit Hours)

## First Year

### Fall Semester

- SS 5121 Advanced Research Methods and Techniques-I (Qualitative)
- SS 5122 Advanced Research Methods and Techniques-II (Quantitative)
- SS 5xxx Elective-I\*
- SS 5xxx Elective-II

### Spring Semester\*\*

- SS 5xxx Elective-III
- SS 5xxx Elective-IV
- SS 5xxx Elective-V
- SS 5xxx Elective-VI

## Second Year

### Fall Semester\*\*

- SS 5xxx Elective-VII
- SS 5xxx Elective-VIII

\*\*(Offering may fluctuate as per university policy)

\* Electives (Electives in any of the following specializations)

- International Relations
- Economics
- Psychology
- Sociology

## First Year

### Fall Semester

- SS 5121 Advanced Research Methods and Techniques-I (Qualitative)
- SS 5122 Advanced Research Methods and Techniques-II (Quantitative)
- SS 5xxx Elective-I\*
- SS 5xxx Elective-II

### Spring Semester\*\*

- SS 5xxx Elective-III
- SS 5xxx Elective-IV
- SS 5xxx Elective-V
- SS 5xxx Elective-VI

## Second Year

### Fall Semester\*\*

- SS 5xxx Independent Research Study (I & II) OR
- SS 5xxx Thesis (Part I)

### Spring Semester

- SS 5xxx Thesis (Part II)

\*\*(Offering may fluctuate as per university policy)

\* Electives (Electives in any of the following specializations)

- International Relations
- Economics
- Psychology
- Sociology

# FACULTY OF EDUCATION & SOCIAL SCIENCES

## ELECTIVES

### MS (International Relations)

- SS 5431 Dynamics of Security
- SS 5439 Globalization in the 21st Century: Challenges and Opportunities
- SS 5436 Role of Great Powers and International Relations
- SS 5437 Critical Geo-Politics
- SS 5104 Politics of Geo-Economics
- SS 5111 Democratization as a Global Process
- SS 5212 NGO Management
- SS 5306 Sacred and Secular
- SS 5311 Environmental Studies
- SS 5312 Globalization and Developing Countries
- SS 5313 Intellectual Property Rights and Laws
- SS 5321 History of Ideas
- SS 5206 Political Economy in the Global Perspective
- SS 5402 Law and Human Rights
- SS 5441 Globalization: Issues and Debates
- SS 5434 Political Theory
- SS 5442 History of Economic Thought in Contemporary Perspective
- SS 5438 Foreign Policy of Pakistan

### MS (Economics)

- SS 5234 International Trade
- SS 5236 Economic Growth and Development
- SS 5202 Monetary Economics
- SS 5203 Public Finance
- SS 5439 Globalization in the 21st Century: Challenges and Opportunities
- SS 5223 Financial Time Series
- SS 5305 Political Economy of Pakistan
- SS 5214 Public Policy Management
- SS 5322 Topics in Political Economy
- SS 5327 Development Economics and Sustainability
- SS 5312 Globalization and Developing Countries
- SS 5321 History of Ideas
- SS 5228 Corporate Governance
- SS 5231 Advanced Microeconomics
- SS 5232 Advanced Macroeconomics
- SS 5233 Advanced Econometrics
- SS 5442 History of Economic Thought in Contemporary Perspective
- SS 5235 Gender Work and Economy
- SS 5432 Gender Issues in Rural Development

### MS (Sociology)

- SS 5332 Sociology of Development
- SS 5345 Population Dynamics
- SS 5348 Social Statistics
- SS 5217 Cultural Anthropology
- SS 5212 NGO Management
- SS 5331 Gender and Human Rights
- SS 5402 Law and Human Rights

- SS 5336 Community Development and Social Mobilization
- SS 5339 Gender Issues in Global Scenario
- SS 5333 Sociology of Gender Issues
- SS 5352 Women Studies
- SS 5306 Sacred and Secular
- SS 5351 Sociology of Sexuality
- SS 5441 Globalization: Issues and Debates
- SS 5215 Global Governance
- SS 5349 Sociology of Science, Knowledge and Technology
- SS 5342 Industrial Sociology
- SS 5341 Immigration in Contemporary Perspectives
- SS 5335 Sociology of Migration and Urbanization
- SS 5302 Sustainable Development
- SS 5334 Social Change and Development
- SS 5347 Rethinking Global Development: New Frameworks for Understanding Poverty, Inequality and Growth in 21 Century
- SS 5337 Community Organizing and Development
- SS 5346 Religion and Development
- SS 5344 Population and Development: Current Issues and Future Implications
- SS 5338 Contemporary Sociological Thoughts
- SS 5343 Leadership in Sociology: Theory and Practice
- SS 5353 Foundational Sociological Perspective

### MS (Psychology)

- SS 5461 Applications of Contemporary Data Analysis Tools
- SS 5435 Use, Construction and Interpretation of Tests
- SS 5423 School Psychology
- SS 5422 Cross-Cultural Psychology
- SS 5463 Community Psychology
- SS 5465 Environmental Psychology
- SS 5433 Gender Psychology
- SS 5464 Consumer Behavior
- SS 5421 Perspective in Organizational Psychology
- SS 5469 Psychological Assessment in Organizational Psychology
- SS 5471 Psychology of Leadership
- SS 5468 Organizational Culture and Development
- SS 5466 Marketing and Consumer Psychology
- SS 5467 Organizational Conflict and Management
- SS 5328 Assessment and Diagnosis-I
- SS 5411 Assessment and Diagnosis-II
- SS 5319 Psychotherapy and Counseling-I
- SS 5419 Psychotherapy and Counseling-II
- SS 5329 Psychophysiology and Psychopharmacology
- SS 5462 Clinical Internship

Two interdisciplinary courses can be allowed with approval of the both Program Managers subject to the relevance of courses. Elective courses may vary from time to time.

# FACULTY OF EDUCATION & SOCIAL SCIENCES

## PhD SS (International Relations, Economics, Sociology and Psychology)

For PhD SS Program, Students are required to complete 48 credit hours. 5 courses of 3 credit hours each and one Independent Research Study of 3 Credit Hours (total 18 Credit hours for Course Work) and One dissertation of 30 credit hours (Total 48 Credit Hours for PhD).

- There are two compulsory courses in PhD i.e. Advanced Research Methods and Techniques (Qualitative) Advanced Research Methods and Techniques (Quantitative).
- Students cannot register in IRS before completing compulsory courses.
- Candidate may be given prerequisite/ deficiency courses or theses which will be decided by the Interview Board at the time of admission.
- Prerequisite Courses are non-credit courses.
- Dissertation of 30 Credit Hours is Compulsory.
- Registration in Dissertation is allowed after passing Comprehensive Examination, GAT- Subject Test and maintaining minimum CGPA requirement .
- All the requirements of HEC pertaining to PhD must be fulfilled these are:
  - Minimum 60% GAT Subject.
  - CGPA requirement (3.00 GPA /CGPA minimum pass requirement for each course and for CGPA.
  - Passing Comprehensive examination to establish the PhD candidacy (maximum 2 attempts allowed).
  - One Research Paper Published from the thesis in Y-category journal before the completion of 30 Credit Hours Dissertation.
- Elective Courses to be selected from the specialized area of International Relations, Economics, Psychology and Sociology.
- Maximum Course Load for each Semester is 9 Credit Hours.
- Time duration for PhD is Minimum 3 years and Maximum 8 years.
- All General guidelines mentioned in DOCTORAL DEGREE PROGRAMS are applicable on PhD- Social Sciences.

### First Year

#### Fall Semester

- SS 6104 Advanced Research Methods and Techniques-I (Qualitative)  
 SS 6105 Advanced Research Methods and Techniques-II (Quantitative)  
 SS 6xxx Elective-I

#### Spring Semester

- SS 6xxx Elective-II  
 SS 6xxx Elective-III  
 SS 6xxx Independent Research Study

### Second Year

#### Fall Semester

- SS 6xxx Dissertation

#### Spring Semester

- SS 6xxx Dissertation

### Third Year

#### Fall Semester

- SS 6xxx Dissertation

#### Spring Semester

- SS 6xxx Dissertation

### ELECTIVES

#### PhD (International Relations)

- SS 6225 Dynamics of Security  
 SS 6229 Globalization in the 21st Century: Challenges and Opportunities  
 SS 6331 Role of Great Powers and International Relations  
 SS 6223 Critical Geo-Politics  
 SS 6237 Politics of Geo-Economics  
 SS 6224 Democratization as a Global Process  
 SS 6235 NGO Management  
 SS 6238 Sacred and Secular  
 SS 6226 Environmental Studies  
 SS 6228 Globalization and Developing Countries  
 SS 6234 Intellectual Property Rights and Laws  
 SS 6227 Foreign Policy of Pakistan  
 SS 6233 History of Ideas  
 SS 6222 Political Economy in the Global Perspective  
 SS 6221 Law and Human Rights  
 SS 6231 Globalization: Issues and Debates  
 SS 6236 Political Theory  
 SS 6232 History of Economic Thought in Contemporary Perspective



# FACULTY OF EDUCATION & SOCIAL SCIENCES

## PhD (Economics)

- SS 6324 International Trade
- SS 6327 Economic Growth and Development
- SS 6332 Monetary Economics
- SS 6322 Public Finance
- SS 6229 Globalization in the 21st Century: Challenges and Opportunities
- SS 6311 Financial Time Series
- SS 6237 Politics of Geo-Economics
- SS 6333 Political Economy of Pakistan
- SS 6334 Public Policy Management
- SS 6335 Topics in Political Economy
- SS 6222 Political Economy in the Global Perspective
- SS 6112 Development Economics and Sustainability
- SS 6232 History of Economic Thought in Contemporary Perspective
- SS 6228 Globalization and Developing Countries
- SS 6233 History of Ideas
- SS 6326 Corporate Governance
- SS 6325 Advanced Microeconomics
- SS 6321 Advanced Macroeconomics
- SS 6323 Advanced Econometrics
- SS 6329 Gender Work and Economy
- SS 6328 Gender Issues in Rural Development

## PhD (Sociology)

- SS 6367 Sociology of Development
- SS 6363 Population Dynamics
- SS 6366 Social Statistics
- SS 6315 Cultural Anthropology
- SS 6235 NGO Management
- SS 6355 Gender and Human Rights
- SS 6221 Law and Human Rights
- SS 6353 Community Development and Social Mobilization
- SS 6356 Gender Issues in Global Scenario
- SS 6368 Sociology of Gender Issues
- SS 6373 Women Studies
- SS 6371 Sociology of Sexuality
- SS 6231 Globalization: Issues and Debates
- SS 6357 Global Governance
- SS 6369 Sociology of Science, Knowledge and Technology
- SS 6359 Industrial Sociology

- SS 6358 Immigration in Contemporary Perspectives
- SS 6352 Sociology of Migration and Urbanization
- SS 6372 Sustainable Development
- SS 6351 Social Change and Development
- SS 6365 Rethinking Global Development: New Frameworks for Understanding Poverty, Inequality and Growth in 21 Century
- SS 6354 Community Organizing and Development
- SS 6364 Religion and Development
- SS 6362 Population and Development: Current Issues and Future Implications
- SS 6361 Leadership in Sociology: Theory and Practice
- SS 6238 Sacred and Secular

## PhD (Psychology)

- SS 6343 Applications of Contemporary Data Analysis Tools
- SS 6266 Use, Construction and Interpretation of Tests
- SS 6342 School Psychology
- SS 6341 Cross-Cultural Psychology
- SS 6346 Community Psychology
- SS 6348 Environmental Psychology
- SS 6349 Gender Psychology
- SS 6347 Consumer Behavior
- SS 6251 Perspective in Organizational Psychology
- SS 6252 Psychological Assessment in Organizational Psychology
- SS 6253 Psychology of Leadership
- SS 6319 Organizational Culture and Development
- SS 6317 Marketing and Consumer Psychology
- SS 6318 Organizational Conflict and Management
- SS 6314 Assessment and Diagnosis-I
- SS 6344 Assessment and Diagnosis-II
- SS 6254 Psychotherapy and Counseling-I
- SS 6255 Psychotherapy and Counseling-II
- SS 6316 Psychophysiology and Psychopharmacology
- SS 6345 Clinical Internship

Two interdisciplinary courses can be allowed with approval of the both Program Managers subject to the relevance of courses. Elective courses may vary from time to time.



# FACULTY OF EDUCATION & SOCIAL SCIENCES

## DEPARTMENT OF EDUCATION

The Department of Education at SZABIST is committed to improve the quality of education in Pakistan. The institute prepares its students for leadership roles in the field of education to meet the challenges of fast-changing global world without losing sight of the local context. The emphasis is on fostering a critical awareness about educational issues, the socio-politics of educational policies, curricular and pedagogical decisions and teacher education/ faculty development problems. This is achieved through interactive teaching, intensive courses and rigorous research-based assignments and practicum.

## Program

The Education programs at the Department of Education are designed to meet national and international standards of educational study and research. They are in conformity with the HEC guidelines and cater the interests of a diverse set of learners who have chosen Education to be their field of study. The programs prepare them for practical leadership roles with sound theoretical standing to make informed decisions.



# FACULTY OF EDUCATION & SOCIAL SCIENCES

## B.Ed (1.5 Years) Secondary

### Program Description

The Bachelor of Education (B.ED, Secondary) 1.5 years program at SZABIST is intended to help pre-service and in-service teachers develop the required knowledge and skills to enter the educational sector as a competent and knowledgeable teacher with a grip on teaching different subjects in secondary grades in public and private sector. The proposed program has been specifically designed for students from non-educational background who want to now shift to serving and getting a degree in education. After the program completion, students will be eligible to apply for the MS/MPhil in Education.

### Program Mission:

The Bachelor of Education (B.Ed) program strives to prepare thoughtful, knowledgeable, lifelong learners who have extensive knowledge about working with students of various age groups and who understand the inherent richness of educational endeavours. The program's mission is to help students' get familiar with research, understand the complexities of learning, human development, and sound pedagogical principles as well as develop grounding in content knowledge. The program's goal is to prepare graduates who are committed to supporting just, engaging, and successful communities of diverse learners.

### First Year

#### Fall Semester

- BED 5105 Foundations of Education
- BED 5102 Educational Leadership and Management
- BED 5104 Effective Communication in Education
- BED 5103 Educational Psychology
- BED 5106 Testing and Evaluation
- BED 5101 Curriculum Design and Development

#### Spring Semester

- BED 5201 Academic Content-I and Pedagogy
- BED 5202 Academic Content-II and Pedagogy
- BED 5203 Academic Content-III and Pedagogy
- BED 5204 Academic Content-IV and Pedagogy
- BED 5205 Research Methods and Techniques
- BED 5206 School, Community and Teacher

### Second Year

#### Fall Semester

- BED 5304 ICT in Education
- BED 5303 Educational Policy and Practices
- BED 5305 Teaching Practice
- BED 5302 Critical Thinking and Reflective Practices
- BED 5301 Classroom Management
- BED 5308 Research Project



### SPECIFICATIONS OF DISCIPLINE

Group 1 : SCIENCE	Group 2: SOCIAL SCIENCES	Group 3: LANGUAGE & LITERATURE
Biology Chemistry Computer Science Mathematics Physics	Civics Economics Geography Islamic Studies Pakistan Studies Psychology Sociology	English Sindhi Urdu



# FACULTY OF EDUCATION & SOCIAL SCIENCES

## COMPULSORY COURSES

BED 5105 Foundations of Education  
 BED 5102 Educational Leadership and Management  
 BED 5104 Effective Communication in Education  
 BED 5103 Educational Psychology  
 BED 5106 Testing and Evaluation  
 BED 5101 Curriculum Design and Development  
 BED 5205 Research Methods and Techniques  
 BED 5304 ICT in Education  
 BED 5303 Educational Policies in Pakistan

BED 5302 Critical Thinking and Reflective Practices  
 BED 5206 School, Community and Teacher  
 BED 5301 Classroom Management  
 BED 5305 Teaching Practice  
 BED 5201 Academic Content-I and Pedagogy  
 BED 5202 Academic Content-II and Pedagogy  
 BED 5203 Academic Content-III and Pedagogy  
 BED 5204 Academic Content-IV and Pedagogy  
 BED 5308 Research Project





# FACULTY OF EDUCATION & SOCIAL SCIENCES

## MA Education

### Program Description

The Department of Education offers MA in Education to in-service and pre-service teachers who have completed 14 years of basic education. MA Education will offer three specializations in Teacher Education, Educational Leadership and Management and Early Childhood Education. The degree will focus on developing an effective teacher with heavy emphasis on understanding teaching methods, educational leadership, and philosophy of education, early childhood education and holistic educational development. The program also meets contemporary national and international trends in the field of education and research and is in conformity with the HEC guidelines.

### Program Mission:

The program envisages knowledge dissemination through critical analysis of theoretical principles in aspects of teacher education, educational leadership and management and early childhood education. It aims to provide teachers with a professional platform through which they can make informed decisions in the classrooms and emerge as competent practitioners. The program also aims to raise educational standards in the country through a thorough analysis of contemporary educational challenges at the national and international levels and proposes to deal with them through a fine blend of theory and practice.

### First Year

#### Fall Semester

- EDU 5103 Foundations of Education
- EDU 5107 Educational Leadership and Management
- EDU 5105 Trends in Teacher Education
- EDU 5101 Classroom Management
- EDU 5102 Effective Communication in Education

#### Spring Semester

- EDU 5305 Testing and Evaluation
- EDU 5302 Educational Psychology
- EDU 5202 Curriculum Design and Development
- EDU 5201 Critical Thinking and Reflective Practices
- EDU 5204 School, Community and Teacher

### Second Year

#### Fall Semester

- EDU 5401 ICT in Education
- EDU 5308 Academic Content-I and Pedagogy
- EDU 5303 Research Methods and Techniques
- EDU 5xxx Elective-I
- EDU 5309 Academic Content-II and Pedagogy
- EDU 5301 Educational Policies in Pakistan

#### Spring Semester

- EDU 5xxx Elective -II
- EDU 5xxx Elective- III
- EDU 5xxx Elective IV
- EDU 5403 Teaching Practice
- EDU 5xxx Thesis

### COMPULSORY COURSES

- EDU 5103 Foundations of Education
- EDU 5107 Educational Leadership and Management
- EDU 5105 Trends in Teacher Education
- EDU 5101 Classroom Management
- EDU 5102 Effective Communication in Education
- EDU 5305 Testing and Evaluation
- EDU 5202 Curriculum Design and Development
- EDU 5201 Critical Thinking and Reflective Practices
- EDU 5204 School, Community and Teacher
- EDU 5401 ICT in Education
- EDU 5302 Educational Psychology
- EDU 5303 Research Methods and Techniques
- EDU 5301 Educational Policies in Pakistan
- EDU 5403 Teaching Practice
- EDU 5308 Academic Content-I and Pedagogy
- EDU 5309 Academic Content-II and Pedagogy
- EDU 5xxx Thesis

### ELECTIVES

- EDU 5321 Affective Education (TE)
- EDU 5221 Guidance and Counseling in Education (TE)
- EDU 5421 Education for Sustainable Development (TE)
- EDU 5322 Gender and Education (TE)
- EDU 5422 Human Development and Learning (ECE)
- EDU 5323 Language and Literacy Experiences (ECE)
- EDU 5324 Supportive and Safe Environment (ECE)
- EDU 5423 Play and Enquiry Based Learning (ECE)
- EDU 5222 Effective Change Management in Education (ELM)
- EDU 5225 Organizational Development in Education (ELM)
- EDU 5224 Human Resource Management (ELM)
- EDU 5223 Entrepreneurship in Education (ELM)

Please note that there will be no internship or comprehensive exam in the MA Education program.

# FACULTY OF EDUCATION & SOCIAL SCIENCES

## MS Educational Leadership and Management

The MS in Educational Leadership and Management is a 1.5-2 years program. It is 30 credit hours program. There are two streams available for MS. One Stream is Course Work Based Stream and other one is Research Based Stream. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In the Research Based Stream, the student is required to complete 8 Courses (24 Credit Hours) and Two IRS (6 Credit Hours) OR One Thesis (6 Credit Hours). In Both the streams, 30 Credit hours must be completed. The time limit to earn a MS degree is from 1.5 to 4 years.

The students will have the opportunity to specialize in the fields of Sociology of Education, Educational Psychology, Testing and Evaluation, Teacher Education, Professional Development, School Administration/Educational Leadership, Guidance & Counseling, Curriculum development, Technology Integration in Education.

The breakup of 30 credit hours is as follows:

- Four compulsory courses (12 credit hours)
- Four elective courses (12 credit hours)
- Thesis (6 credit hours) or 2 Independent Research Studies (3 credit hours each)

### First Year

#### Fall Semester

- ELM 5102 Advanced Research Methods and Techniques-I (Qualitative)  
ELM 5103 Advanced Research Methods and Techniques-II (Quantitative)  
ELM 5xxx Elective-I  
ELM 5xxx Elective-II

#### Spring Semester

- ELM 5xxx Elective-III  
ELM 5xxx Elective-IV  
ELM 5xxx Elective-V  
ELM 5xxx Elective-VI

### Second Year

#### Fall Semester

- ELM5xxx Thesis I/ 2 Independent Research Studies

#### Spring Semester

- ELM 5xxx Thesis II

#### COMPULSORY COURSES

- ELM 5102 Advanced Research Methods and Techniques-I (Qualitative)  
ELM 5103 Advanced Research Methods and Techniques-II (Quantitative)

#### ELECTIVES

- ELM 5235 Sociological Issues in Education / Access / Out comes and Quality  
ELM 5233 Learning Effectiveness in Higher Education Contexts  
ELM 5136 Use of Technology in Education  
ELM 5231 Education in the Context of Conflict  
ELM 5236 Socio-Politics of Language Policy in Educational Contexts  
ELM 5133 Change Management in Education  
ELM 5134 Educational Policy and Practice  
ELM 5135 Assessment and Evaluation in Education  
ELM 5138 School Evaluation and Monitoring  
ELM 5131 Teacher Education  
ELM 5234 Research Philosophy  
ELM 5137 Professional Development and Management in Education  
ELM 5232 Finance and Resource Management  
ELM 5132 Organizational Development  
ELM 5237 Advanced Educational Psychology  
ELM 5201 Curriculum Development and Planning  
ELM 5101 Leadership and Management in Educational Contexts



# FACULTY OF EDUCATION & SOCIAL SCIENCES

## PhD Educational Leadership and Management

The PhD in Educational Leadership and Management program at the Department of Education aspires to meet the growing demand of leaders and managers with expertise in the field of education. There is a strong emphasis on research and critical awareness on issues of social justice and equity in educational contexts. It equips graduates with the knowledge and skills to have impact on educational policy, reform and practice.

The PhD in Educational Leadership and Management is a 3 year program spread over six semesters. It is a 48 credit hour program comprising 5 courses, 1 Independent Research Study (3 credit hours), and a Dissertation (30 credit hours).

The students will have the opportunity to specialize in the fields of Sociology of Education, Educational Policy, Testing/Evaluation, Teacher Education, Professional Development, School Administration/Educational Leadership, Guidance & Counseling, Educational Psychology, Curriculum development & Technology Integration in Education.

### First Year

#### Fall Semester

- ELM 6101 Advanced Research Methods and Techniques-I (Qualitative)  
ELM 6102 Advanced Research Methods and Techniques-II (Quantitative)  
ELM 6xxx Elective-I

#### Spring Semester

- ELM 6xxx Elective-II  
ELM 6xxx Elective-III  
ELM 6108 Independent Research Study-I

### Second Year

#### Fall Semester

- ELM 6xxx Dissertation (Proposal)

#### Spring Semester

- ELM 6xxx Dissertation

### Third Year

#### Fall Semester

- ELM 6xxx Dissertation

#### Spring Semester

- ELM 6xxx Dissertation

### COMPULSORY COURSES\*

- ELM 6101 Advanced Research Methods and Techniques-I (Qualitative)  
ELM 6102 Advanced Research Methods and Techniques-II (Quantitative)

### ELECTIVES

- ELM 6225 Sociological Issues in Education/ Access/Outcomes and Quality  
ELM 6223 Learning Effectiveness in Higher Education Contexts  
ELM 6128 Use of Technology in Education  
ELM 6221 Education in the Context of Conflict  
ELM 6226 Socio-Politics of Language Politics in Educational Contexts  
ELM 6123 Change Management in Education  
ELM 6124 Educational Policy and Practice  
ELM 6125 Assessment and Evaluation in Education  
ELM 6127 School Evaluation and Monitoring  
ELM 6121 Teacher Education  
ELM 6224 Research Philosophy  
ELM 6126 Professional Development and Management in Education  
ELM 6222 Finance and Resource Management  
ELM 6122 Organizational Development

All the students are required to appear in Comprehensive Examination at the end of their course work.

\*The research courses are compulsory for all the students except for SZABIST continuing students who will take two elective courses instead.

# FACULTY OF MEDIA SCIENCES

In the 21<sup>st</sup> century, Media in all its forms, print, TV, radio, film, video, digital, virtual, and mobile has increasingly saturated all aspects of contemporary life. This proliferation of media presents vast opportunities and poses immense challenges. Our degree programs in Media Sciences are designed to help undergraduate and graduate students participate productively both as practitioners and scholars in this exciting and challenging environment.

Broadly defined, the Media Sciences constitute a field of study that encompasses the history, theory, production, content, and public effects of a variety of media including but not limited to journalism, advertising, photography, radio, film, video, television, design, the internet, digital technologies, and the performing arts. We recognize that studying media requires interdisciplinary thinking. Therefore, by bridging theory and practice and using an interdisciplinary approach, we give our students the skills, knowledge, and flexibility that the increasingly competitive international and national market demands.

The Faculty of Media Sciences at SZABIST offers the following undergraduate and graduate degree programs:

- **Bachelor of Sciences in Media Sciences**  
(Film & Television Production, Advertising Strategy & Design, and Journalism)
- **Master of Advertising**
- **MS Media Studies**





# FACULTY OF MEDIA SCIENCES

## Bachelor of Science in Media Sciences

The Faculty of Media Sciences at SZABIST offers a comprehensive 4-year Bachelor of Sciences in Media Sciences degree with majors in Film and Television production, Advertising Strategy & Design, and Journalism.

To earn an undergraduate degree, students must enroll in and successfully complete a total of 135 credit hours which include 43 courses, a 6-credit thesis, and an internship (Forty-three courses include: 33 core courses, 7 major requirements in Film and Television production, or Advertising Strategy & Design, or Journalism and 3 open electives). All students must complete their degree within 6 years.

### First Year

#### Fall Semester

- MD 1122 English for General Purposes
- MD 1107 Drawing and Perspective
- MD 1115 Introduction to Media Industries
- MD 1116 Civilization Studies I
- MD 2402 Islamiat and Pakistan Studies/Humanities
- MD 1106 Photography

#### Spring Semester

- MD 1222 English for Academic Purposes
- MD 1104 Culture, Media and Society
- MD 3601 Art of Music
- MD 1211 Basic Design
- MD 2321 History and Aesthetics of Film
- MD 1217 Introduction to Sound

### Second Year

#### Fall Semester

- MD 2427 Design Practices I
- MD 1118 Topics in Asian Literature
- MD 2323 Production Practices I
- MD 1216 Civilization Studies II
- MD 2313 Idea Development
- MD 3505 Principles of Journalism

#### Spring Semester

- MD 1119 Play Analysis
- MD 2318 History of Commercial Arts
- MD 2425 Audiovisual Editing
- MD 3525 Radio Programming and Production
- MD 3527 Design Practices II
- MD 2325 Media Research

### Third Year

#### Fall Semester

- MD 2423 Theatre Project
- MD 2424 Media Psychology
- MD 3523 Production Practices II
- MD 2405 Media Laws and Ethics
- MD 1213 Creative Writing
- MD 4xxx Major 1

#### Spring Semester

- MD 3518 Animation and Motion Graphics
- MD 4701 State and Nation Building in Pakistan
- MD 3506 Theories of Visual Culture
- MD 4xxx Major II
- MD 4xxx Major III
- MD 4xxx Major IV

### Fourth Year

#### Fall Semester

- MD 4807 Thesis I
- MD 4714 Producing Short Narratives
- MD 4xxx Major V
- MD 4xxx Major VI
- MD 4xxx Major VIII
- MD 4xxx Elective I

#### Spring Semester

- MD 4808 Thesis II
- MD 4xxx Elective II
- MD 4xxx Elective III

## MAJORS

### Film & Television Production

- MD 4726 Directing I
- MD 4728 Directing II
- MD 4781 Sound Design
- MD 4821 Cinematography
- MD 4825 Screenwriting
- MD 4872 Visual Storytelling
- MD 4868 Production Practices III
- MD 4724 Documentary Vision
- MD 4764 Production Design
- MD 4765 Basic Lighting
- MD 4829 Screenwriting II
- MD 4789 Green Screen Keying and Composition for Production VFX
- MD 4889 Narrative and Social Change

# FACULTY OF MEDIA SCIENCES

## Advertising Strategy & Design

- MD 4723 Advance Animation
- MD 4731 Advertising Research
- MD 4739 Advertising Design and Concept
- MD 4754 Creative Aspect in Advertising
- MD 4779 Digital Brand Communication
- MD 4835 Consumer Behavior
- MD 4843 Campaign Strategy
- MD 4846 New Media Advertising
- MD 4847 Copywriting
- MD 4736 Integrated Marketing Communication
- MD 4837 Media Planning
- MD 4782 Interaction Design
- MD 4787 Digital Design and Publishing
- MD 4834 Advertising in Pakistan
- MD 4833 Brand Management

## Journalism

- MD 4757 Feature Writing I
- MD 4879 Multimedia Journalism
- MD 4864 Investigative Journalism and Crisis Reporting
- MD 4877 The International Newsroom
- MD 4783 TV Journalism
- MD 4859 Introduction to Photojournalism
- MD 4839 Reporting the News
- MD 4793 Citizen Journalism
- MD 4893 Environmental Journalism
- MD 4794 Fashion Journalism
- MD 4895 Peace Journalism
- MD 4795 Reporting of Politics and Governance
- MD 4894 Foreign Correspondence
- MD 4896 Sports Reporting

## ELECTIVES

- MD 4854 Illustration
- MD 4732 Typography
- MD 4867 Topics in Film and Television
- MD 4878 Design for Social Change
- MD 4886 Game Design

- MD 4883 Urdu Literature in South Asian Cinema
- MD 4873 Modernity in Cinema in Bengal
- MD 4774 Media Anthropology
- MD 4776 Media Convergence and Innovation
- MD 4888 Culture and Media in Sindh
- MD 4792 Music Production and Design
- MD 4892 Music Theory and Performance
- MD 4788 Sindh Studies

Electives and majors will be offered depending on the availability of the resources.

Certain film and video production courses may require additional fees for equipment rental, film purchases, and travel. The Faculty of Media Sciences makes every effort to subsidize these costs in order to minimize financial impact on students.

Students enrolled full time are required to take at least 5 courses in each semester. Students unable to enroll full time should consult the Head of the Department and the Program Manager to discuss any accommodation they might need.

All first semester students are required to enroll in 6 courses. In order to register for thesis credits in the 7th and 8th semester, students must have completed 6 semesters and prescribed pre-requisite courses. Students on academic probation will not be allowed to register for thesis credits.

## Internship

The Faculty of Media Sciences requires all students to complete a 6-week internship at an organization of their choice by the end of their third year. Upon completion of the internship, students must submit a comprehensive summary of what they learned following their internship.

All students are also required to work within the faculty to organize faculty's annual media festival in the third year of their degree.



# FACULTY OF MEDIA SCIENCES

## Master of Advertising

The Faculty of Media Sciences at SZABIST offers an evening, 18 months Master's degree program in Advertising, providing students, a comprehensive training through courses that prepare them to engage in various career options in the advertising industry. To be awarded a Master of Advertising degree, students need to complete total of 30 credit hours (10 courses), which includes 5 core courses (15 credits hours), 3 electives (9 credit hours) and Research Project I & II (6 credit hours).

### First Year

#### Fall Semester

MD 5168 Research Methods in Advertising  
MD 5164 History of Communication and Advertising  
MD 5166 Ideation Techniques in Advertising  
MD 5167 Principles of Advertising

#### Spring Semester

MD 5268 Creative Advertising Campaigns  
MD 5xxx Elective I  
MD 5xxx Elective II  
MD 5xxx Research Project I

### ELECTIVES

MD 5351 Campaign Strategy  
MD 5264 Copywriting and Advertising Conceptualization  
MD 5265 Digital Advertising  
MD 5272 Advanced Integrated Marketing Communication  
MD 5352 New Media Advertising  
MD 5273 Strategic Brand Management  
MD 5269 Strategic Creative Development  
MD 5353 Media Planning and Strategy  
MD 5274 Consumer Engagement  
MD 5271 Advertising Account Management

Electives will be offered depending on the availability of the resources.

### Second Year

#### Fall Semester

MD 5xxx Research Project II  
MD 5xxx Elective III

## Master of Science - Media Studies (MS MD)

Faculty of Media Sciences offers a two year MS in Media Sciences program. Students enrolling in this program will be offered to select any one of the 3 streams of specialization;

General Entertainment Content Stream (GEC)	Production Stream	Journalism Stream
General Entertainment Content primarily for media professionals already engaged in leading creative teams of their respective media houses and are interested in honing up their cognitive as well as computer generated information skills.	Production Stream is for students engaged in middle management cadre in production houses as part of their creative teams in varied capacities and are hampered in their careers because of lack of knowledge and understanding of production technique skills.	Journalism Stream is offered for all who want to develop an in depth understanding of journalistic practices and are interested in specializing in analytical skills related to both print and electronic media.

On the basis of the three streams offered, the sixth Core choices offered in 2<sup>nd</sup> semester (Spring) will determine the electives for the respective stream. In addition to the three specializations offered students are at liberty in choosing their path of academic research related to praxis; through course work, Independent Research Study (IRS) and Thesis (students who are interested in following an academic career leading to a doctorate). MS GAT/ HAT result of 50% is required for MSMD as per HEC requirements

In Spring Semester students decide their respective chosen stream; choice of Electives vary according to the three options offered to students. Specialization Streams Offered: General Entertainment Content (GEC), Production & Journalism.

# FACULTY OF MEDIA SCIENCES

To be awarded a MS Media Sciences degree, students need to complete total of 30 credit hours. Students can finish their degree program by pursuing one of the three available options:

## **MS by Thesis**

30 Credit hours (10 courses), which includes 6 core courses (18 credit hours), 2 electives (6 credits hours), Thesis I & Thesis II (6 credit hours)

## **MS by Independent Research**

30 Credit hours (10 courses), which includes 6 core courses (18 credit hours), 2 electives (6 credit hours), IRS I & IRS II (6 credit hours)

## **MS by Course Work**

30 Credit hours (10 courses), which includes 6 core courses (18 credit hours), 4 electives (12 credit hours)

All students must complete their degree within four years.

### **First Year**

#### **Fall Semester**

MD 5104 Research Methodology  
MD 5102 Media and Contemporary Culture  
MD 5113 Management Concepts in Media Industries

#### **Spring Semester**

MD 5207 Media Evolution and Innovation  
MD 5201 Communication for Social Change  
MD 5213 Social and Cultural Impact of GEC Programming (for GEC Stream)  
MD 5215 Production Design (for Production Stream)  
MD 5214 Journalism Law and Ethics (for Journalism Stream)

### **Second Year**

#### **Fall Semester**

MD 5xxx Elective-I (Elective from selected Stream)  
MD 5xxx Elective-II (Elective from selected Stream)  
MD 5xxx Thesis I/MD 5xxx IRS I/MDxxx Course work (Elective from selected Stream)

#### **Spring Semester**

MD 5xxx Thesis II/MD 5xxx IRS II/MDxxx Course work (Elective from selected Stream)

### **ELECTIVES**

#### **GEC Stream:**

MD 5361 Advanced Content Research  
MD 5366 Syndication – Foreign and Indigenous Content  
MD 5365 Story Telling and Screenplay Writing  
MD 5364 Production Management  
MD 5362 Directing  
MD 5363 Format Shows and Reality Shows  
MD 5111 Media, Art and Technology  
MD 5212 Theories of Visual Culture  
MD 5414 Theories of Communication Design

#### **Production Stream:**

MD 5382 Camera and Lights  
MD 5384 Film Analysis  
MD 5365 Story Telling and Screenplay Writing  
MD 5383 Documentary Making  
MD 5362 Directing  
MD 5381 Aesthetics of Films  
MD 5211 Theories of Film and Television  
MD 5311 Urban Geographies and Visual Cultures

#### **Journalism Stream:**

MD 5374 Global Journalism  
MD 5371 Beat Reporting  
MD 5375 Investigative Journalism  
MD 5376 Multi-Format News Reporting  
MD 5372 Data Journalism  
MD 5373 Fashion and Entertainment Journalism  
MD 5112 Media and Post-Colonialism  
MD 5314 Media, Politics and Governance  
MD 5315 Issues in International Media

Electives will be offered depending on the availability of the resources.



# FACULTY OF BIOSCIENCES

SZABIST's Biosciences programs are designed to give students a sound and broad academic base for a professional and rewarding career in biological and health care fields. It blends theoretical and practical knowledge, critical thinking and real life experience to equip students with skills and offers the opportunity to study a broad range of disciplines in biological and health sciences, which includes Biochemistry, Physiology, Microbiology, Biotechnology, Molecular Biology & Pharmacology.

## PROGRAM & FACULTY

Biosciences programs aim to produce professionals with firm knowledge of fundamental concepts of Biology and their current applications. The BS, MS, and MSPH programs intend to provide training in the fundamentals of ever-changing fields of healthcare and Biological Sciences.

Upon completion, students will have a broad knowledge of biological sciences and other related discipline with high level of understanding and appreciation in certain specialized areas including cell and tissue culture techniques, genetic manipulations, drug design and therapeutics, advanced analytical techniques and public health care.

Biosciences faculty includes foreign qualified professionals with relevant expertise and experience in both research and teaching. The faculty is actively engaged in research projects and also provides quality supervision to the students at SZABIST Center for Biosciences Research (SCBR) laboratories.



# FACULTY OF BIOSCIENCES

## Lab Facilities

SZABIST is equipped with hi-tech and state-of-the-art scientific laboratories that conduct research which is at par with international standards. The labs include:

- Applied Microbiology and Immunology Lab
- Animal and Plant Tissue Culture Lab
- Applied Biochemistry and Enzymology Lab
- Natural Product Chemistry and Biotransformation Lab
- Biotechnology and Molecular Biology Lab
- General Biosciences Lab
- Green House

## Job Placement Possibilities

- Food Industry
- Biochemical Industry
- Biotechnology Companies
- Healthcare Sector (Public Health)
- Diagnostic Labs and Hospital
- Pharmaceutical Industry
- Bioinformatics Software Houses
- Research Centers
- Academia

## BS Biosciences

BS Biosciences at SZABIST is a four-year program spread over eight semesters and consists of 135 credit hours of teaching (43 courses), an internship of at least six weeks, and a research project. The maximum time limit to complete the BS degree is six years.

### First Year

#### Fall Semester

- BIO 1101 Cell Biology
- BIO 1111 English for General Purposes
- BIO 1107 Fundamental Mathematics
- BIO 2404 Lab Management
- BIO 1109 Chemistry

#### Spring Semester

- BIO 1113 Microbiology-I
- BIO 2301 Biochemistry-I
- BIO 1211 English for Academic Purposes
- BIO 1214 Sociology
- BIO 1208 Statistics
- BIO 1212 Islamic Studies/Ethics and Pakistan Studies

### Second Year

#### Fall Semester

- BIO 1206 Physiology-I
- BIO 1213 Microbiology-II
- BIO 2411 English for Professional Purposes
- BIO 2401 Biochemistry-II
- BIO 1104 Introduction to Computing

#### Spring Semester

- BIO 2305 Physiology-II
- BIO 3504 Immunology

- BIO 4803 Molecular Biology
- BIO 2409 Humanities
- BIO 3503 Genetics

### Third Year

#### Fall Semester

- BIO 2406 Genetic Engineering
- BIO 3507 Biotechnology-I
- BIO 2405 Hematology
- BIO 4801 Bioethics
- BIO 3505 Pharmacology-I
- BIO 2306 Psychology

#### Spring Semester

- BIO 2407 Basic Endocrinology
- BIO 3607 Biotechnology-II
- BIO 3601 Agricultural Science
- BIO 2304 Nutrition and Dietetics
- BIO 3605 Pharmacology-II
- BIO 4703 Research Methodology

### Fourth Year

#### Fall Semester

- BIO 4701 Business Management
- BIO 4705 Research Report-I
- BIO 2309 Animal and Plant Tissue Culture
- BIO 2402 Bioinformatics
- BIO 4xxx Elective-I
- BIO 4xxx Elective-II

# FACULTY OF BIOSCIENCES

## Spring Semester

BIO 2403	Environmental Science
BIO 4802	Biophysics
BIO 4805	Research Report-II
BIO 3509	Epidemiology
BIO 4xxx	Elective-III
BIO 4xxx	Elective-IV

## ELECTIVES

### Molecular Biology:

BIO 4721	Advanced Biochemical Techniques
BIO 4722	Medical Transcription
BIO 4723	Virology
BIO 4822	Nanotechnology

BIO 4725	Advanced Molecular Techniques
BIO 4726	Applied Enzymology
BIO 4827	Systems Biology

### Biotechnology:

BIO 4721	Advanced Biochemical Techniques
BIO 4724	Telemedicine
BIO 4823	Stem Cell Research
BIO 4727	Food Biotechnology
BIO 4825	Fermentation Biotechnology
BIO 4726	Applied Enzymology
BIO 4826	Medical Biotechnology
BIO 4728	Techniques in Biotechnology

## BS Biotechnology

BS Biotechnology at SZABIST is a four-year program spread over eight semesters and consists of 135 credit hours of teaching (44 courses), an internship of at least six weeks, and a research project. The maximum time limit to complete the BS degree is six years.

## First Year

### Fall Semester

BTC 1105	Cell Biology
BTC 1106	English for General Purposes
BTC 1103	Mathematics – I (Pre-Calculus)
BTC 1101	Biosafety and Bioethics
BTC 1104	Organic Chemistry
BTC 1102	Islamic Studies / Ethics

### Spring Semester

BTC 1204	Microbiology
BTC 1201	Biochemistry-I
BTC 1202	English for Academic Purposes
BTC 1206	Inorganic Chemistry
BTC 1205	Probability and Biostatistics
BTC 1203	Biomathematics

## Second Year

### Fall Semester

BTC 2303	English for Professional Purposes
BTC 2305	Microbial Biotechnology
BTC 2304	Introduction to Computer Science
BTC 2301	Biochemistry-II
BTC 2302	Ecology, Biodiversity and Evolution-I
BTC 2306	Physical Chemistry

### Spring Semester

BTC 2402	Ecology, Biodiversity and Evolution -II
BTC 2404	Immunology
BTC 2405	Molecular Biology
BTC 2407	Pakistan Studies
BTC 2401	Classical Genetics
BTC 2406	Genomics and Proteomics

## Third Year

### Fall Semester

BTC 3508	Sociology
BTC 3504	Introduction to Biotechnology
BTC 3503	Enzymology
BTC 3507	Genetic Resources Conservation
BTC 3506	Psychology

### Spring Semester

BTC 3603	Industrial Biotechnology
BTC 3601	Agriculture Biotechnology
BTC 3607	Analytical Chemistry and Instrumentation
BTC 3606	Research Methodology
BTC 3604	Medical Biotechnology

# FACULTY OF BIOSCIENCES

## Fourth Year

### Fall Semester

BTC 4705 Research Report-I  
 BTC 4704 Methods in Molecular Biology  
 BTC 4702 Bioinformatics  
 BTC 4xxx Elective-I  
 BTC 4xxx Elective-II  
 BTC 3505 Principles of Biochemical Engineering

### Spring Semester

BTC 4801 Biological Physics  
 BTC 4805 Research Report-II  
 BTC 4802 Environmental Biotechnology  
 BTC 4803 Food Biotechnology

BTC 4xxx Elective-III

BTC 4xxx Elective-IV

### ELECTIVES

BTC 4723 Medical Transcription  
 BTC 4823 Nanotechnology  
 BTC 4821 Advanced Molecular Techniques  
 BTC 4825 Virology  
 BTC 4824 Systems Biology  
 BTC 4721 Advance Biochemical Techniques  
 BTC 4724 Stem cell Research  
 BTC 4725 Telemedicine  
 BTC 4822 Marine Biotechnology  
 BTC 4722 Fungal Biotechnology

## MS Public Health (MSPH)

MSPH at SZABIST is a two-year program distributed into two streams i.e., MSPH (36 credit hours) and MSPH (60 credit hours). For MSPH (36 credit hours), the curriculum includes 10 courses of 3 credit hours each and a research project (thesis) of 6 credit hours or 2 IRS. The maximum time limit to complete the MSPH degree is four years.

### MSPH - (36 Credit Hours)

#### First Year

##### Fall Semester

MSP 5104 Social and Behavioral Aspects of Public Health  
 MSP 5101 Basic Epidemiology and Biostatistics  
 MSP 5102 Environmental and Occupational Health  
 MSP 5103 Health Promotion, Advocacy and Social Mobilization

##### Spring Semester

MSP 5201 Applied Epidemiology and Biostatistics  
 MSP 5203 Research Methods: Quantitative and Qualitative  
 MSP 5202 Health System  
 MSP 5xxx Elective-I

#### Second Year

##### Fall Semester

MSP 5xxx Thesis-I or IRS-I  
 MSP 5xxx Elective -II Practicum OR  
 One Publication in Peer Reviewed Journal  
 (HEC Indexed Journal)

##### Spring Semester

MSP 5xxx Thesis-II or IRS-II  
 MSP 5xxx Elective-III

For MSPH (60 credit hours), the curriculum includes 18 courses of 3 credit hours each and a research project (thesis) of 6 credit hours or 2 IRS. The maximum time limit to complete the MSPH degree is four years.





# FACULTY OF BIOSCIENCES

## MSPH — (60 Credit Hours)

### First Year

#### Fall Semester

- MSP 5111 Sociology of Health and Disease
- MSP 5106 Population Dynamics
- MSP 5107 Professional Ethics
- MSP 5105 Mental Health
- MSP 5104 Social and Behavioral Aspects of Public Health

#### Spring Semester

- MSP 5206 Microbiology
- MSP 5204 Entomology
- MSP 5207 Parasitology
- MSP 5205 Health Care Risk Management
- MSP 5203 Research Methods: Quantitative and Qualitative

### Elective Courses/Tracks

#### Track 1: Epidemiology and Biostatistics

- MSP 5223 Advanced Epidemiology and Biostatistics
- MSP 5224 Epidemiological Report Writing
- MSP 5321 Epidemiology of Communicable and Non Communicable Diseases

#### Track 2: Health Policy, Management and Economics

- MSP 5323 Human Resource Management for Health
- MSP 5222 Health Policy, Planning and Management
- MSP 5226 Financial Management
- MSP 5225 Applied Health Economics
- MSP 5322 Health Care Financing
- MSP 5324 Supply Chain Management

#### Track 3: Applied Nutrition and Reproductive Health

- MSP 5327 Nutrition for Children, Adolescent and Mothers
- MSP 5228 Community Management of Malnutrition
- MSP 5227 International Food Organizations
- MSP 5325 Demography and Population Dynamics
- MSP 5221 Community Based RH Interventions
- MSP 5326 Gender Development

### Second Year

#### Fall Semester

- MSP 5101 Basic Epidemiology and Biostatistics
- MSP 5102 Environmental and Occupational Health
- MSP 5103 Health Promotion, Advocacy and Social Mobilization
- MSP 5202 Health System
- MSP 5xxx Thesis-I or IRS-I

#### Spring Semester

- MSP 5201 Applied Epidemiology and Biostatistics
- MSP 5xxx Thesis-II or IRS-II
- MSP 5xxx Elective-I
- MSP 5xxx Elective-II
- MSP 5xxx Elective-III
- Practicum OR One Publication in Peer Reviewed Journal (HEC Indexed Journal)



# FACULTY OF BIOSCIENCES

## MS Biosciences

MS Biosciences at SZABIST is a two-year program spread over four semesters and consists of 30 credit hours of teaching. The curriculum includes 8 courses of 3 credit hours each and research project (Thesis) of six credit hours or 2 IRS. Students can also take two additional courses in lieu of Thesis in order to complete the total credit hours. The maximum time limit to complete the MS degree is four years.

### First Year

#### Fall Semester

BIO 5101 Advanced Research Methodology  
BIO 5102 Biostatistics  
BIO 5xxx Elective-I  
BIO 5xxx Elective-II

#### Spring Semester

BIO 5201 Molecular Genetics  
BIO 5202 Techniques in Biomolecules Analyses  
BIO 5xxx Elective-III  
BIO 5xxx Elective-IV

### Second Year

#### Fall Semester

BIO 5xxx Thesis or Elective-V or IRS-I

#### Spring Semester

BIO 5xxx Thesis or Elective VI or IRS-II

### ELECTIVES

BIO 5135 Applied Biotechnology  
BIO 5134 Environmental and Industrial Biotechnology  
BIO 5138 Plant Biotechnology  
BIO 5236 Fermentation Design and Engineering  
BIO 5133 Medical Biotechnology  
BIO 5234 Biocatalysis and Enzymology  
BIO 5235 Clinical Biochemistry  
BIO 5136 Drug Discovery and Development  
BIO 5131 Biocomputation  
BIO 5132 Cancer Biology  
BIO 5232 Applied Immunology  
BIO 5233 Techniques in Diagnostics  
BIO 5238 Molecular Dynamics  
BIO 5137 Food Sampling Techniques and Analysis  
BIO 5231 Food Quality Management System  
BIO 5237 Food Toxicology and Adulteration



# FACULTY OF BIOSCIENCES

## PhD Biosciences

The PhD in Biosciences is minimum 3 year program that requires completing a total of 48 credit hours. The maximum time limit to complete the PhD degree is 8 years. Maximum course load for a semester is 3 courses (9 credit hours).

The following is the break-up of the 48-credit hour courses:

- 2 Core Courses (6 credit hours) \*
- 4 Elective (12 credit hours) OR 1 IRS (3 credit hours) and 3 Electives (9 credit hours)
- 1 Thesis (30 credit hours)

\* The research courses are compulsory for all the students except for SZABIST continuing students who will take two elective courses instead.

## First Year

### Fall Semester

BIO 6101 Statistical Tools for Research  
BIO 6xxx Elective-I  
BIO 6xxx Elective-II

### Spring Semester

BIO 6201 Research Methodology  
BIO 6xxx Elective-III  
BIO 6xxx Elective-IV / IRS-I

## Second Year

### Fall Semester

BIO 6xxx Dissertation

### Spring Semester

BIO 6xxx Dissertation

## Third Year

### Fall Semester

BIO 6xxx Dissertation

### Spring Semester

BIO 6xxx Dissertation

Interdisciplinary courses can be allowed with the approval of both the Program Managers subject to the relevance of courses. Elective courses may vary from time to time.

Followed by successfully completion of the course work, Comprehensive Examination is required to pass in order to acquire PhD candidacy after which research

period starts. The entire research work is carried out under the supervision of the PhD supervisor which is assigned and approved as per the university procedure. The complete research work is required to be submitted in the form of a "Dissertation" after a minimum period of two years.

## Electives

BIO 6121 Advances in Molecular Genetics  
BIO 6124 Computational and Systems Biology  
BIO 6221 Advanced Immunology  
BIO 6222 Next Generation Sequencing Techniques  
BIO 6123 Analytical Techniques for Biomolecules  
BIO 6122 Advances in Plant Biotechnology  
BIO 6125 Oncobiology  
BIO 6226 Recombinant DNA Technology  
BIO 6225 Food Science and Technology  
BIO 6224 Cell Signaling Mechanisms  
BIO 6223 Biomaterials Science and Engineering  
BIO 6126 Principles of Synthetic Biology



# INTERNATIONAL PROGRAMS

The University of London is a world renowned provider of legal education. For over 150 years the university has not only provided the first step on a career path for many thousands of practicing lawyers within the Commonwealth and around the world, but has also provided many thousands more with the vital transferable skills of a world class legal qualification, enabling them to thrive in many other professions. Academic direction for Undergraduate Laws is provided by a consortium of outstanding University of London Law Schools: Birkbeck, King's College London, London School of Economics and Political Science (LSE), Queen Mary University of London, SOAS, and UCL.

On successful completion of your studies you will receive a University of London award. Your Diploma will state that you were registered with the University of London and that your examinations were conducted by the University of London Law Schools.

Find out more about the University of London at: [london.ac.uk/llb](https://london.ac.uk/llb)





# INTERNATIONAL PROGRAMS

## Bachelor of Laws (LLB)

### Entrance Requirements

#### Standard Entry LLB (3-6) Years

To be eligible to register for the LLB, a student must normally be at least 17 years of age at the time of registration and have passes in:

- Either two subjects at GCE A level, and at least three further subjects at GCSE or GCE O level (at not less than grade C)

Or

Three subjects at GCE A level (with one A Level at not less than grade D)

Or

Three subjects at GCE A level, and one further subject at GCSE or GCE O Level (at not less than grade C)

Or

Two subjects at GCE A Level and two further subjects at AS Level.

Overlapping subjects in O Levels and in A Levels will not be counted.

#### Graduate Entry LLB (2-6) Years

- Bachelor degree in any discipline (awarded by an institution acceptable to the University of London).
- A 4-year bachelor degree (in any discipline) awarded by an institution acceptable to University of London may register for LLB degree under the Graduate Entry Route. Students who register via this route are only required to complete 9 courses (instead of 12) for the LLB degree.
- A 2 year bachelor degree and a Master degree (in any disciplines) awarded by institutions acceptable to University of London may register for LLB degree under the Graduate Entry Route. Students who register via this route are only required to complete 9 courses (instead of 12) for the LLB degree.

#### Tests of proficiency in English (provided this has been awarded within the past 3 years)

- International General Certificate of Secondary Education (IGCSE): English as a Second Language passed at grade C or above.
- International English Language Testing System (IELTS) when an overall score of at least 6 is achieved with a minimum of 5.5 in each sub-test.



# INTERNATIONAL PROGRAMS

## LLB Structures

### Standard Entry LLB (3-6 years)

As a Standard Entry student you must register for Legal system and method in your first year of study.

### Standard Entry Route – Qualifying Law Degree

#### Level 4

##### Four compulsory modules

Contract law  
Criminal law  
Legal system and method  
Public law

#### Level 5

##### Three compulsory modules

EU law  
Property law  
Tort law  
\*One optional module chosen from:  
Administrative law  
Commercial law

#### Level 6

##### Two compulsory modules

Equity and Trusts  
Jurisprudence and legal theory  
\*Two optional modules chosen from:  
Evidence Law  
Company law  
Intellectual property  
Introduction to Islamic law



## Graduate Entry LLB (2-6 years)

- If you have already completed a first degree then you may be eligible for the Graduate Entry LLB. This means that you will only have to study nine modules rather than 12 to complete the LLB. Eligibility for Graduate Entry is at the discretion of the University.
- You must pass the online course Law skills for graduates before completing registration. This course is compulsory for all Graduate Entry students and is designed to prepare you for legal study through the development of legal skills in the context of learning about key aspects of the legal system. The course is made up of four units and a final multiple choice test, and notionally can be completed in 10 hours.

### Graduate Entry Route – Qualifying Law Degree

#### Level 4

##### Three compulsory modules

Contract law  
Criminal law  
Public law

#### Level 5

##### Three compulsory modules

EU law  
Property law  
Tort law

#### Level 6

##### Two compulsory modules

Equity and Trusts  
Jurisprudence and legal theory  
\*One optional modules chosen from:  
Alternative Dispute Resolution  
Company law  
Intellectual property  
Evidence Law  
Introduction to Islamic law

\* Subject to the minimum enrolment of ten students.

# ACADEMIC CALENDAR 2019-20 (Karachi Campus)

## ACADEMIC CALENDAR 2019-20 (Karachi Campus)

### FALL 2019

WEEK	COMMENTS
1	Course Registration
2	IS Thesis Advisors Meeting
3	
4	
5	Teaching Evaluation
6	Teaching Evaluation
7	
8	Mid-Term Exams
9	
10	
11	Last Week to Withdraw from Courses
12	
14	
15	
16	Dead Week
17	Final Exam Week
18	Final Exam Week
	New Faculty Meeting / Orientation
	IS Thesis Advisors Meeting
	Comprehensive Exam
	Independent Research Study Presentations of MS/PhD students

### Classes Commencement Date

Karachi Campus:	September 02, 2019
Larkana Campus:	September 09, 2019
Islamabad Campus:	September 02, 2019
Dubai Campus:	September 07, 2019
Hyderabad Campus:	August 19, 2019

# ACADEMIC CALENDAR 2019-20 (Karachi Campus)

## ACADEMIC CALENDAR 2019-20 (Karachi Campus)

### SPRING 2020

WEEK	COMMENTS
1	Course Registration
2	
3	
4	
5	Teaching Evaluation
6	Teaching Evaluation
7	
8	Mid-Term Exams
9	
10	
11	Last Week to Withdraw from Courses
12	
13	
14	
15	
16	Dead Week
17	Final Exam Week
18	Final Exam Week
	New Faculty Meeting/Orientation
	Independent Research Study Presentations of MS/PhD students
	Comprehensive Exam

### Classes Commencement Date

Karachi Campus:	February 03, 2020
Larkana Campus:	February 03, 2020
Dubai Campus:	February 01, 2020
Hyderabad Campus:	January 20, 2020
Islamabad Campus:	January 27, 2020



# CAMPUS WISE PROGRAMS OFFERING (FALL 2019)

## PROGRAMS OFFERING AT DIFFERENT CAMPUSES OF SZABIST (FALL 2019)

PROGRAMS	CAMPUS				
	Karachi	Islamabad	Larkana	Hyderabad	Dubai
Bachelor of Business Administration (BBA)	✓	✓	✓	✓	✓
BA (Hons.) in Business Studies (BABS)	✓				
BS Accounting & Finance	✓	✓	✓	✓	✓
BS Entrepreneurship	✓				
BS Computer Science	✓	✓	✓	✓	✓
BS Software Engineering		✓		✓	
BS Media Science	✓	✓			
BS Social Sciences	✓	✓			
BE Mechatronic Engineering	✓				
BS Biosciences	✓				
BS Biotechnology	✓				
Bachelor of Law (LLB)	✓				
Bachelor of Business Studies (BBS)				✓	
Bachelor of Education (B.Ed.)	✓				
Master in Business Administration (MBA)	✓	✓	✓	✓	✓
Executive MBA	✓	✓			✓
Masters in Project Management	✓	✓			✓
Professional MBA		✓			
Masters in Human Resource Management		✓			
Master of Advertising	✓				
MA Education	✓				
MS Public Health (MSPH)	✓				
MS Biosciences	✓				
MS Computer Science	✓	✓			
MS (CS) with specialization in Software Engineering	✓	✓			✓
MS (CS) with specialization in Networks & Security	✓	✓			✓
MS Media Studies	✓				
MS Management Science	✓	✓		✓	
MS Developmental Studies		✓			
MS Mechatronic Engineering	✓				
MS Data Sciences		✓			
MS Educational Leadership and Management	✓				
MS Project Management	✓	✓			
MS Sociology		✓			
MS Social Sciences	✓	✓			
MS (SS) with specialization in Economics	✓	✓			
MS (SS) with specialization in Psychology	✓	✓			
MS (SS) with specialization in Sociology	✓				
MS (SS) with specialization in International Relations	✓				
MS (SS) with specialization in Political Science		✓			
PhD Social Sciences	✓				
PhD (SS) with specialization in Economics	✓				
PhD (SS) with specialization in Psychology	✓				
PhD (SS) with specialization in Sociology	✓				
PhD (SS) with specialization in International Relations	✓				
PhD Computing	✓	✓			
PhD Management Sciences	✓	✓			
PhD Educational Leadership and Management	✓				
PhD Biosciences	✓				

# **We just Don't Work Hard We Work Smart**

**Disclaimer**

This prospectus is only informational and should not be taken as binding on the institute. The institute, therefore, reserves the right to change any rule, regulation and guideline applicable to the program and the student whenever it is deemed appropriate or necessary, and it will be binding on all continuing and new students for all programs at all campuses.

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