



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.

CONTENTS

INTRODUCT	TON	UI
Programs &		
	Requirements	
	Test Alternates	
Transfer Poli		
Financial As	sistance	
LIFE AT SZA	ABIST	13
Video Confe		
	/Forums/Seminars/Guest Lectures	
	Development Courses	
	/Labs/Libraries	
	ommittee (RC)	
	mmittee (DC)	
Academic Co	vanced Studies and Research (BASR)	
	search Innovation and Commercialization (ORIC)	
Data Center		
	ncement Cell (QEC)	
ZAB FM		
Newsletters		
	port Services	
	ident Council (SSC) & Student Societies	
	evelopment Center (EDC)	
Jobs and Inte		
ZABSolution		
National and	d International Linkages and Collaborations	
FACULTY OI	F MANAGEMENT SCIENCES	21
BBA	-Bachelor of Business Administration	
BS A&F	-BS Accounting & Finance	
MBA	-Master of Business Administration	
EMBA	-Executive Master of Business Administration	
PMBA	-Professional Master of Business Administration	
MHRM	-Masters of Human Resource Management	
MPM	-Master of Project Management	
MS PM MS MS	-MS Project Management	
MS BA	-MS Management Sciences -MS Business Analytics	
PhD MS	-PhD Management Sciences	
1112 1/10	The management deterrees	
FACULTY O	F COMPUTING AND ENGINEERING SCIENCES	
DEPARTMEN	NT OF COMPUTER SCIENCE	39
BS CS	-BS Computer Science	
BS SE	-BS Software Engineering	
MS CS	-MS Computer Science	
MS CYS	-MS Cyber Security	
PhD CS	-PhD Computing	

CONTENTS

DEPARTMEN	T OF ROBOTICS AND ARTIFICIAL INTELLIGENCE	50
BS AI	-BS Artificial Intelligence	
MS DSc	-MS Data Science	
EL CLUEN OF	A PRINCIPLOM A COCKLY COVENIONS	EC
	EDUCATION & SOCIAL SCIENCES	56
BS SS MS SS	-BS Social Sciences	
	-MS Social Sciences	
With Speciali	SS-International Relations	
	SS-Economics	
	SS-Sociology	
	SS-Psychology	
1413	55 T Sychology	
MS DS	-MS Development Studies	
MS CLPsy	-MS Clinical Psychology	
MS Socio	-MS Sociology	
	3.5.5.5.5.6.0)	
	MEDIA SCIENCES	64
BMS	-Bachelor of Media Science	
MMS	-Master of Media Science	
A CAPELUIC (CAVENDAR COSC CO	60
Fall 2022	CALENDAR 2022-23	69
Spring 2023		
CAMPUS WIS	SE PROGRAMS OFFERING	71
	fering at Different Campuses of SZABIST	

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, creativity and continuous learning. We prepare our students for professional careers in a wide variety of programs including Management, Computer, Social and Media Sciences, Mechatronic 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 of providing opportunity for high quality tertiary education and research to the youth of Pakistan, SZABIST has a presence in Karachi, Islamabad, Larkana, Hyderabad, and an overseas campus in Dubai, UAE. We are also developing our campus at Gharo , which will inshAllah, open in Fall 2022.

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 our students to realize and nurture their 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 students' learning experience and continuously improve the standard of education, the Institutional Research Department/Quality Enhancement Cell periodically assesses all programs to 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 campuses. A "Library Hub" is also being established to fulfill emerging research and academic requirements.

As I welcome the new students, I encourage them to strive for excellence and while they equip themselves with marketable skills, they should actively work to promote the values of a tolerant, inclusive and pluralistic society.

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 26 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 15 Bachelors, 16 Masters and 5 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 and Accreditation Councils, 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, SZABIST was awarded 94% for its Quality Enhancement processes. Quality assurance measures are rigorously applied through tools such as Program Self-Assessment Reports, feedback of relevant stakeholders, publications and fulfilling documentation 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



A great leader Mr. Nelson Mandela said: "Education is the most powerful weapon which you can use to change the world."

SZABIST has seen exponential growth in its programs, students, and physical infrastructure since its inception in 1995. This could be possible with the full support of its Management, especially of its worthy Chancellor, Dr. Azra Fazal Pechuho.

The whole purpose of education is to create "Analytical Minds". As a responsible institution, we just don't believe in classroom studies but believe in complete personality development. We, therefore, regularly conduct co-curricular and extracurricular activities through our various students' societies. We aim to prepare our students to be useful to society.

During the unfortunate COVID era, SZABIST has remained the most successful institution in the City, transforming from a physical to a virtual and hybrid system quickly to save the precious time of its students. We conducted virtual seminars and guest speeches to engage our students besides taking their regular classes to ensure our commitment to the students.

SZABIST now has six campuses in Karachi, Islamabad, Larkana, Hyderabad, Gharo, and Dubai. SZABIST is the only Pakistani institution having its campus in Dubai International Academic City since 2003, competing with the world's leading institutions. Karachi campus is the mother campus having more than 8000 students enrolled in its 40-plus academic programs in Management Sciences, Computer Science, Social Sciences, Media Science, Life Sciences, Education, Mechatronic Engineering, and Law. Our three-year LLB program is offered in collaboration with the University of London.

SZABIST programs comply with HEC recommended course plans and are accredited by regulatory bodies such as NBEAC, NCEAC, PEC, NACTE, and CIEC. The learning outcomes of the programs ensure to create critical & creative thinking, acquire problem-solving skills, and professionally handle all pedagogical tools. We are fully aware that a University without Research is like a "Body" without a "Soul"; therefore, we emphasize research activities at levels in our programs.

Finally, I thank all the newcomers for choosing SZABIST for their academic pursuits and wish them a happy stay during the entire period of their course of studies. I expect, as SZABISTian, you will show a high level of maturity through your conduct and actions.

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

VICE PRESIDENT DEVELOPMENT AND FINANCE MESSAGE



Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology initiated by Shaheed Mohtarma Benazir Bhutto and currently functioning under the able leadership of its Chancellor Dr. Azra Fazal Pechuho has emerged as a leading higher education institute that plays a vital role in producing highly qualified graduates.

Here we provide the environment, facilities, academic and professional experiences, and opportunities for research that aim at a creative, ethical, smart and holistic personality. With the commencement of the new academic year, students are encouraged to utilize the wide range of services and facilities, the events, programs, seminars, and festivals that will make their life at SZABIST interesting.

Get involved, make the most of your time and gain the experience that will make you the smart individual in demand at national and multinational firms within the country and abroad.

We are here to support you and welcome you to a fulfilling and interesting period at SZABIST.

Nasreen Haque Vice President (Development and Finance) SZABIST

VICE PRESIDENT'S (ADMINISTRATION) MESSAGE



I am delighted to welcome you to Shaheed Zulfikar Ali Bhutto Institute of Science and Technology. At SZABIST, you will become part of a strong and supportive community that values academic excellence and diversity.

The unfailing dedication and vision of Shaheed Mohtarma Benazir Bhutto has led SZABIST to grow into an exceptionally well established and well reputed institution. Today SZABIST has developed into a strong multidisciplinary institution with campuses in Karachi, Hyderabad, Larkana, Islamabad and Dubai.

Over the years, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST) has excelled in

the field of education and has produced some of the most well qualified and outstanding graduates.

We at SZABIST are dedicated not just to the purpose of education and learning, but also to assisting and guiding students to adjust to university life and to discover their skills and talents. We encourage students to promote a campus environment that is respectful, supportive and safe.

SZABIST is truly proud of the role students play in the life of the institution and it is hoped that you will also play an important part.

It is hoped that the Prospectus 2022 will serve as a useful guide in planning out your academic journey and that each of you have a well learning and fruitful experience here at SZABIST.

With best wishes

Imtiaz Kazi Vice President Administration SZABIST

HEAD OF CAMPUS' MESSAGE



I welcome you to SZABIST, Islamabad Campus, which has made great progress and has become one of the leading educational institutions of higher learning. SZABIST remains affordable for its students, hailing from socio-economically diverse cadres of society, while ensuring all standards of educational process being met effectively. Such an arrangement has shaped a classic top-notch Pakistani culture at all campuses of SZABIST, giving it an edge over other educational institutions of the sort.

In addition to excelling in academic standards, students' active participation in socio-cultural activities of high canons such as tree plantation, blood donation, youth awareness,

community service campaigns/drives/projects and the like nurture exceptional values of social importance and imbibe a high sense of social and civic responsibility among the youth. The university, energized by its distinguished faculty and strengthened by its brilliant students, now stands in the highest echelons of education in the country and strives to forge new paths for a brighter tomorrow of Pakistan.

Following a dual track of education where personality development and character building go hand in hand with academic excellence, the institute has developed an appropriate environment spearheaded by its distinguished faculty, capable management, and talented students. SZABIST family—the management, the faculty and the students, all are conscious of their coordinated role, being equal stakeholders in the entire educational process at the campus. We are also proud of our alumni who are actively operational in the corporate world, realizing the true mission of SZABIST. The laurels and the good word they bring us further our innovative plans of future expansion and improvement.

We at SZABIST have made it possible through our motto of quality education at affordable cost for all. We welcome students from varied backgrounds and faraway places like GB, AJK, Baluchistan & KPK to present a united Pakistani community of students, engaged in a ceaseless endeavour to set competitive educational standards and seek unprecedented horizons in higher education to stimulate and lead the industrial transformation of the country.

This prospectus provides you with comprehensive information about our programs. We hope that you will become part of the SZABIST student community for a fruitful, self-fulfilling, and productive stay at SZABIST.

Khusro Pervaiz Khan Head of Campus SZABIST

INTRODUCTION

Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST) is a chartered institute of Pakistan established through a Legislative Act of Sindh Assembly (Sindh Act No. XI of 1995). It is highly ranked, 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.

SZABIST comprises five campuses located in Karachi, Hyderabad, Larkana, Islamabad and Dubai with a current student population of over 18,000, collectively. Altogether over 24,000 talented graduates have been proudly awarded degrees by all campuses of SZABIST. Another campus is scheduled for opening for fall 2022 at Gharo on the main National Highway, a 40 minutes -drive, from Karachi Airport.

SZABIST Islamabad offers undergraduate, graduate and post graduate degrees in four diversified disciplines including: Management Sciences, Computer Sciences, Media Sciences & Social Sciences. SZABIST is proud to offer education par excellence in the fields that are crucial for Pakistan's socioeconomic development. Our alumni are sought by national and multinational organizations and hold key positions in several reputable firms.

SZABIST is ranked as one of the most reputed universities by Higher Education Commission (HEC), Pakistan and Chartered Inspection and Evaluation Committee (CIEC) Sindh, Pakistan. All programs of SZABIST are conducted under strict compliance of the relevant regulatory bodies such as NBEAC and NCEAC. Since 2012, the SZABIST-IR/QEC has been ranked in the highest "W" Category in the yearly quantitative report by the Quality Assurance Agency (QAA) of 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, Shifa Foundation Islamabad and Iqra University Islamabad.

SZABIST, Islamabad campus is housed in a purpose-built edifice located in H-8/4 Islamabad. This sector is reserved for educational institutions of the Federal Capital. Hence, it is surrounded by quality education institutions including Roots schools, OPF Boys College, Postgraduate Government Commerce College, Shaikh Zaid International Academy, Lahore Grammar School, Beaconhouse School, and The City School. SZABIST is just at a walking distance from the main Express Way and Metro Bus Stop that connects Rawalpindi and Islamabad. It shares a border with Bait-ul-Mal, Government Post Graduate Commerce College and another with Shifa International Hospital. Designed in accordance with on-site instructions of Mohtarama Benazir Bhutto Shaheed, the campus has fulfilled her academic dreams. It is just fifteen minutes' drive from various localities of Islamabad & Rawalpindi.

DEGREES OFFERED

All five campuses of SZABIST offer various degree programs in different disciplines so please refer to page 70 for details.

Bachelor of Business Administration (BBA)

SZABIST offers a four-year (eight semesters) BBA degree program of 144 credit hours. This is SZABIST's flagship program. For the BBA program, students are required to complete 46 courses and 03 credit hours Business Project & a 03 credit hours Community Service Project. The program includes 42 compulsory courses and 4 elective courses from Management, Marketing, Financ or Supply Chain Management. To obtain the BBA degree, students have to complete 144 credit hours and six-week internship. Maximum time limit to complete the BBA degree is six years. BBA program is an ACCA accredited program; those who complete BBA from SZABIST will get an exemption in 06 out of 09 ACCA Foundation papers (F1, F2, F3, F5, F7 and F9). BBA Program has been accredited by National Business Education Accreditation Council (NBEAC) which is an independent professional council established by HEC.

Bachelor of Science in Accounting & Finance (BS A&F)

SZABIST offers a four-year (eight semesters) Bachelor of Science (Accounting & Finance) program, consisting of 46 Courses (six courses per semester) and a 6 credit hours Research Project. (to be offered over last two semesters). Students have to complete 144 credit hours along with six weeks of internship to obtain the BS Accounting & Finance (BS A & F) degree. The maximum time limit to complete the degree program is six years.

Graduates of BS (A & F) program will get exemptions in nine papers of both Institute of Chartered Accountants of Pakistan (ICAP) and Association of Chartered Certified Accountants (ACCA), UK.

SZABIST also offers 2.5-year Bachelor of Science (Accounting & Finance) program exclusively for CAF qualified students of the Institute of Chartered Accountants of Pakistan (ICAP). CAF qualified students are exempted 60 credit hours (20 course) of course work and have to complete 78 credit hours (26 courses) of course work and a 6 credit hours Research Project (to be offered over last two semesters).

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 full time day program and consists of 41 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 Science in Software Engineering (BS SE)

The BS Software Engineering program is offered through a trained foreign qualified faculty. It consists of 42 courses with a total of 130 credits hours. The maximum duration to complete the degree is six years. The core courses focus on the fundamentals of software engineering followed by a broader range of courses through which students can choose to specialize their learning. The BS Software Engineering curriculum covers all important facets of the discipline of software engineering including project management, requirements analysis, software architecture, software development, and quality assurance. Throughout the degree program, students are exposed to the theory, techniques, tools, and practicalities of software engineering. The maximum time limit to complete the BS degree is six years.

Bachelor of Science in Artificial Intelligence (BS AI)

SZABIST offers a four-year (eight semesters) BS Artificial Intelligence degree. The program covers a wide range of courses in core Artificial Intelligence, Machine Learning, Knowledge Representation & Reasoning, Natural Language Processing etc. The program is a full time day program and consists of 41 courses with a total of 130 credit hours. The Internship opportunities are provided to complete degree requirement. The maximum time limit to complete the degree program is six years.

Following are objectives of the program (BS AI).

- PEO 1: To equip students with the necessary skills and knowledge to solve complex problems in real-world settings.
- PEO 2: To produce graduates practising in the area of Artificial Intelligence in a socially and ethically responsible way.
- PEO 3: To prepare students for lifelong learning skills in Artificial Intelligence and allied disciplines.

Bachelor of Science in Social Sciences (BS SS)

SZABIST offers a four-year (eight semesters) BS Social Sciences degree with specialization stream in Psychology, Sociology, Economics, Development Studies and International Relations. BS Program is essentially day program and it consists of 46 courses (six courses per semester) and a research project (I&II) with a total of 142 credit hours. The maximum time limit to complete the BS degree is six years.

Bachelor of Media Sciences (BMS)

The Faculty of Media Sciences at SZABIST offers a comprehensive 4-year Bachelor of Media Science degree with streams 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 136 credit hours which include 44 courses, a 6-credit hours thesis, and an internship (Forty-four courses include: 34 core courses, 7 from the stream of specialization requirements, i.e. Film and Television production, or Advertising Strategy & Design, or Journalism and 3 electives). All students must complete their degree within six years.

Masters of Business Administration (MBA)

MBA program has been designed to impart quality professional knowledge and understanding of modern management tools, leadership, entrepreneurial skills, and managerial and communication competencies. MBA Program has been accredited by National Business Education Accreditation Council (NBEAC) which is an independent professional council established by Higher Education Commission.

SZABIST offers both MBA Day and Evening programs with specialization in Marketing, Finance, Management, Human Resource Management and Supply Chain Management. The maximum duration to complete MBA degree program is four years.

MBA program is intended for students having a four-year bachelor degree (e.g. BS-CS, BE, BBA etc.) or 16 years of education in different disciplines. The duration to complete this program is two years with 72 credit hours. Twenty-two courses (66 credit hours) and 6 credit hours of Research Project OR Thesis spread over two semesters (03+03) are required to complete the program. Students with BBA or equivalent qualification are exempted 36 credit hours of course work and they are required to complete remaining 36 credit hours in 1.5 years. Students are also required to undertake a six week duration of

internship during summer.

CILT (UK) Level 5 Professional Diploma in Logistic & Transport

The Chartered Institute of Logistics & Transport(CILT) is the leading professional body associated with logistics and transport, having over 35,000 members in over 100 countries worldwide. SZABIST has signed a Memorandum of Understanding (MOU) with CILT-UK to offer a Level 5 Professional Diploma. Now, Business and Engineering Professionals and students have the opportunity of opting for International Professional Diploma in Logistics and Transport by doing five courses. The Professional Diploma fee is to be paid by the student.

Executive Master of Business Administration (EMBA)

SZABIST offers a two-year EMBA degree program for executives and middle-level managers striving for excellence and greater challenges in their careers. This distinct program is specifically designed for those executives who aim to improve their efficiency and strategic thinking. The individuals will be able to leverage their rich work experience through our curriculum, interactive sessions, conferences, symposia, and a wide corporate network. The EMBA program is spread over four semesters and consists of 66 credit hours. Twenty courses (60 credit hours), one Business Project (3 credit), and one Research Project (3 credit) are required to graduate. The maximum time limit to complete the EMBA degree is four years.

Professional Master of Business Administration (PMBA)

PMBA is a one-year program spread over two semesters and consists of 33 credit hours of teaching. Ten taught courses (30 credit hours) and a business project (3 credit hours) must be completed. Each semester is of four months duration. Candidates register for five / six courses offered each semester to complete the degree within one year. The PMBA is equivalent to Post Graduate Diploma as per HEC guidelines. Maximum time limit to complete the PMBA degree is four years.

Master in Human Resource Management (MHRM)

MHRM is a one-year weekend program. The student is required to complete 33 credit hours of coursework/projects within one full calendar year.

The Master in Human Resource Management is designed for those who have functional responsibility to carry out the duties of an organization's human resource department seasoned human resource staff members

wishing to keep current; newcomers to the field requiring new knowledge and skills; or specialists wanting to broaden their knowledge. Maximum time limit to complete the MHRM degree is four years.

Master of Project Management (MPM)

MPM is the first and only project management program is pakistan which is acrcrediated by PMI, USA.

Masters in Project Management (MPM) program provides graduates/students with globally accepted/practiced tools, techniques to manage projects of different nature from all walks of life to enhance their project management capabilities to contribute towards project success.

MPM is a one-year evening program comprising 30 credit hours spread over two semesters. A total of 10 courses are required to graduate. The maximum time limit to complete the MPM degree is four years.

Master of Science in Project Management (MSPM)

SZABIST offers MS in Project Management (MSPM) program which is equivalent to MPhil. The program lays the foundation for students who are planning to pursue doctoral studies. This program offers two streams for MSPM. The first stream is course work-based and the second is research-based. In course work-based stream, students are required to complete 10 courses of 03 credit hours each. In research based stream, the students are required to complete 08 courses of 03 credits hours each (24 credit hours) and two Independent Research Studies (IRS) or a Thesis (06 Credit Hours). In either stream, students are required to complete 30 credit hours. The maximum time limit to complete the MSPM degree is four years and the minimum time to complete is 1.5/2 years. All MSPM Students are required to clear GRE, GAT General test or HAT relevant with a minimum 50% score.

Master of Science in Management Sciences (MS MS)

SZABIST offers MS degree with concentration in the specialized areas of Human Resource Management, Marketing and Finance. The MS program is an evening program and all classes are held during week days. There are two streams available for MS. One Stream is by Course Work and other one is by Research Work. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In Research Work Stream, the student is required to complete 8 Courses and Two IRS OR one Thesis. In both the streams, 30 credit hours are 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 GAT General test or HAT relevant with minimum 50% score.

Master of Science in Business Analytics (MSBA)

SZABIST provides a unique ecosystem that enables working knowledge based on hands-on learning skills acquisition and blend of research thesis and capstone project stream.

The market driven program and the blend of leadership acumen and expertise in data analytics skills matching the requirement of digital economy and augmented with SZABIST corporate linkage offers opportunities endless opportunities at national and international levels.

There are two streams available for MSBA. One Stream is by Course Work and other one is by Research Work. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In Research Work Stream, the student to complete 8 Courses of 24-credit hours and one Research Thesis or Capstone Project of 6-credit hours . 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 GAT General test or HAT relevant 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 12 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. A The maximum time limit to complete the MS degree is four years.

Master of Science in Data Science (MS DSc

SZABIST offers a 2-year duration MS (Data Science) degree. The MS (Data Science) program is of 2-years duration offered in the evening. It requires 30 credit hours including 3 core courses, 2 specialized data science courses. The student has the option to complete MS through coursework only or with research. If a student opts for course work only, he/she is required to complete 10 courses of 3 credit hours each. Else, the student is required to complete 8 courses (24 credit hours), and Two Independent Research Study (6 credit hours) OR a thesis (6 credit hours). 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 Cyber Security (MS CYS)

The MS (Cyber Security) program is of 2-years duration offered in the evening. It requires 33 credit hours, including 4 core courses (3 Credits) and 5 elective courses (3 Credits). To earn MS (Cyber Security) degree, the student has to complete a thesis (2 x 3 Credits). The maximum time limit to complete the MS (Cyber Security) degree is 4 year.

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.

Program Objectives

The cyber security program is planned to satisfy the increasing security intensive needs of private and public sector organizations. In this program, students will equip with the various skills and techniques which are important for securing IT networks and systems. Students having a strong background in Mathematics, Computer Science, Engineering or equivalent are the potential candidates for the Master of Science Cyber Security program. Upon successful completion of the degree program, students will be able to use the latest tools and techniques of cyber security. After graduating from this program, students may have a potential career in various disciplines such as the telecommunications sector, software industry, intelligence agencies, e-businesses, e-government, banking, financial technologies, health care, and insurance. The goal of the program is to enable students to apply scientific and technological development in building a secure

information society. The aim is to make technology-driven solutions to secure cyberspace. Moreover, to allow students to have hands-on digital forensics experience, this deals with the investigation and recovery of information found in digital devices to identify computer-based crime. The area is becoming critical for both data security and law enforcement. MS in Cyber Security offers strong expertise for a career in securing and managing the cyber society.

Master of Science in Social Sciences (MS SS)

SZABIST offers MS Social Sciences degree with specializations in International Relations, Economics, Psychology and Sociology. It is an evening program and maximum time limit to complete the MS degree is four years.

There are two streams available for MS. One stream is course work based 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 are 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 Development Studies (MS DS)

SZABIST offers a degree of MS in Development Studies (equivalent to M. Phil). It is an evening program and maximum time limit to complete the MS degree is four years.

Development studies is a multi- and interdisciplinary field of study, that seeks to understand social, economic, political, technological and cultural aspects of societal change, particularly in developing countries. Development studies is characterized also by normative and policy concerns. It aims at contributing to possible solutions to societal problems that development or its absence may produce.

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 are to be completed. The minimum time limit to earn an MS degree is 1.5 to 2 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 Clinical Psychology (MS CLPsy

SZABIST's Department of Social Sciences offers MS Clinical Psychology. It is an evening program only and consists of 08 courses with Professional Ethics and Clinical Internships of 06 credit hours. Total program credit hours are 38.

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 11 courses and 02 internships. In the Research Based Stream, the student is required to complete 09 Courses (26 Credit Hours), 06 Credits Clinical Internship and One Thesis (6 Credit Hours). In both the streams, 38 Credit hours are 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. The maximum time limit to complete the MS degree is four years.

MS (Sociology)

SZABIST offers MS degree in Sociology. The program consists of eight courses (24 credit hours), and one research thesis (6 credit hours) within a total of 30 credit hours. The maximum time limit to complete the MS degree is 4 years and the minimum time to complete is 1.5 years. As per HEC guidelines, all MS Students are required to clear GRE or GAT General Test with minimum 50% score.

Master of Media Science (MMS)

The Faculty of Media Science at SZABIST offers Master of Media Science degree. Students enrolling in this program will be offered to select any one of the following 4 streams of specialization;

(1) Media Production and Design stream—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. This will also be beneficial 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;

- (2) Digital Journalism & Global Communication 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;
- (3) Fashion Media & Digital Communication stream is for professionals who want to join the growing Fashion media and merchandising industry in Pakistan, in addition to courses that help in managing public relations and communication strategy of companies and nonprofits.
- (4) Adverting Strategy & Design is 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 Media Science degree, students are required to complete 30 credit hours through Coursework: 10 courses (4 core courses and 6 electives) or Research based stream comprising of 4 core courses, 4 electives and Thesis (6 credit hours). All MS students are required to clear GRE or GAT General test or HAT relevant with minimum 50% score. All students must complete their degree within four years.

Doctor of Philosophy

SZABIST, Islamabad campus offers PhD degree in Management Sciences & Computing 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 clearing the admission requirements of SZABIST. After admission, the student is required to complete the course work of 18 credit hours within two years which includes five courses and one Independent Research Study. Maximum course load during semester is 9 credit hours. After course work, the student is required to pass comprehensive examination in maximum two attempts within first two years of registration.

The dissertation carrying a weight of 30 credit hours is required to be completed. 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 examiners in technologically advanced countries. Maximum time limit to complete a PhD degree is 8 years. In Management Sciences, specializations include Human Resource Management, Marketing and Finance.

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, Machine Vision, Image Processing and any other area which falls in the purview of computer sciences/computing.







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	
В	70 – 74	3.00	PhD Degree Requirement
B-	66 – 69	2.75	MS Degree Requirement
C+	63 – 65	2.50	Master's Degree Requirement
С	60 – 62	2.00	Undergraduate Degree Requirement
C-	55 – 59	1.50	-
F	< 55	0.00	

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 either with O Levels or SSC.
- 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

BBA/BS Programs

For admission in the BBA/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)/12th Grade/Intermediate with minimum 50% marks or equivalent from a recognized institution.

For BS Computer Science, Artificial Intelligence and Software Engineering, candidates with mathematical background will be preferred.

For the candidates having Cambridge High School Certificate are obtained as fellows:

Equivalent Intermediate %
85
75
65
55
45

MASTERS DEGREE PROGRAMS

Master of Business Administration (MBA)

For admission in the MBA program, the candidate must possess a 4 years bachelor degree with minimum 2.5 CGPA or 16 years of education with minimum 55% marks from a university recognized by the HEC.

Executive Master of Business Administration (EMBA)/ Professsional Master of Business Administration (PMBA)

For admission in EMBA/PMBA program, the candidate must possess 16-year education or a 4 year bachelor degree with minimum 55% marks/ 2.5 CGPA from a university recognized by the Higher Education Commission of Pakistan (HEC) in any field of study with 3 years professional work experience at mid level/high management position (verifiable) at some well known organization. This requirement is necessary to seek admission in these programs.

Master in Human Resource Management (MHRM)

For admission in the MHRM program, the applicant must possess a minimum of 16 years of education/4-year Bachelor/Masters degree from an HEC recognized educational institute with minimum 55% marks/CGPA 2.5. Relevant work experince of minimum 2 years is required for admission in MHRM

Master of Project Management (MPM)

For admission in the MPM program, the applicant must possess a minimum of sixteen years of education/4-year Bachelor from an HEC recognized educational institute with a minimum of 55% marks/2.5 CGPA.

Master of Science - Project Management (MS PM)

For admission in the MSPM program, the applicant must possess a minimum of 16 years of education/4-year Bachelor with a minimum of 2.5 CGPA or a minimum 55% marks from an HEC recognized university. Candidates are also required to pass GAT General/HAT relevant with a minimum 50% score.

Master of Science in Management Sciences (MS MS)

For admission to MS Management Sciences candidates must possess 16 years of relevant education with minimum 55% marks/2.5 CGPA from a university recognized by HEC. GAT (General) or HAT relevant is mandatory for MS students with minimum 50% score.

Master of Science in Business Analytics (MS BA)

For admission to MS Business Analytics candidates must possess 16 years of relevant education with minimum 55% marks/2.5 CGPA from a university recognized by HEC. GAT (General) or HAT relevant is mandatory for MS students with minimum 50% score.

Master of Science in Computer Science (MSCS)
For admission to MS Computer Science program candidates must possess 16 years of relevant education with minimum 50% marks/2.0 CGPA from a university / institute recognized by HEC. The candidates with a 4-year professional degree (BE, MSc, etc.) may also apply but will require to complete deficiency conversion courses (upto 18 credit hours courses to be determined in consultation with Program Manager, as approved by Academic Council.

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

For admission to MS (Data Science) program candidates must possess 16 years of relevant education with minimum 50% marks/2.0 CGPA from a university / Institute recognized by HEC. Students with 16 years of education in following domains are eligible to apply: Information Technology, Computer Science, Software Computer Engineering, Engineering, Engineering, Statistics, or Mathematics. The candidates with a 4-year professional degree may also apply but will require to complete deficiency conversion courses in consultation with Program Manager, as approved by Academic Council.

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

For admission to MS (Cyber Security) program candidates must possess 16 years of relevant education with minimum 50% marks/2.0 CGPA from a university / Institute recognized by HEC. Students with 16 years of education in following domains are eligible to apply: Information Technology, Computer Science, Software Computer Engineering, Engineering, Electrical Engineering, Statistics, or Mathematics. The candidates with a 4-year professional degree may also apply but will require to complete deficiency conversion courses in consultation with Program Manager, as approved by Academic Council.

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

For admission in MS SS (International Relations, Economics, Psychology & Sociology) program, candidates must possess 16 years of relevant education with minimum 2nd Division/2.0 CGPA from a university recognized by HEC. The candidates with a non-relevant degree may also apply but will require to complete deficiency conversion courses in consultation with Program Manager, as approved by Academic Council. GRE or GAT (General)/HAT relevant is mandatory for MS students with minimum 50% score.

For admission to MS (DS) candidates must possess 16 years of relevant education with minimum 2nd Division/2.0 CGPA from a university recognized by HEC. The candidates with a non relevant degree may also apply but will require to complete deficiency conversion courses in consultation with Program Manager, as approved by Academic Council.

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

For admission to MS (Clinical Psychology) candidates must have sixteen years of relevant education or 4-year bachelor education (with psychology as a major subject) or 2 years bachelor (B.A./B.Sc. with Psychology as a subject) and 2 years Master of Psychology (M.A., M.Sc.) with minimum 50% marks or 2.0 CGPA.

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

For admission in MS Sociology program, candidates must possess 16 years of relevant education with minimum 2nd Division/2.0 CGPA from a university recognized by HEC. The candidates with a non-relevant degree may also apply but will require to complete deficiency conversion courses in consultation with Program Manager, as approved by Academic Council.

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

For admission to the MMS, Program candidates must possess 16 years of education with a minimum 50% /2.00 CGPA from an HEC recognized university in a related field of Media, advertising, communication design, applied or performance arts.

Candidates with 4-year non-media-related discipline degrees (BBA, BSCS, MSc., MCom., MA, etc.) may apply but will

require to complete deficiency conversion courses (up to 12 credit hours to be determined in consultation with Program Manager, as approved by Academic Council. Students need to complete remedial/deficiency courses (up to 12 credits hours) in the first semester before they will be permitted to continue regular courses.

This semester will be considered a zero semester and the credits will not contribute to the CGPA. These courses will be mentioned on the transcript with a zero GPA. The length of the completion of the degree will increase by one semester though the maximum limit of four years of degree completion will remain the same.

Students must complete GRE or GAT general or HAT relevant with a minimum of 50% score.





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, and have passed GRE/Equivalent/GAT (subject) with minimum 60% score. Clearing GAT (Subjective)/GRE/Equivalent is mandatory for admission in PhD. Student would have to appear before admission committee for interview.

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 Computing and Management Sciences. 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 Pre-Defense Seminar
- Receiving Satisfactory reports from foreign evaluators
- Clearing Open Defense

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. At the start of dissertation, the student will work on Proposal for Dissertation comprising of six credit hours. These six credits of proposal will be split into 3 cr. hrs. each semester and these six credit hours of proposal 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. Registration in 12 credit hours can be done only once throughout research phase. No registration is allowed in Summer in general, as it is not a regular semester. The time frame for completing 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.

Pre-Defense Seminar(s)

Before sending the dissertation to two foreign evaluators belonging to technologically advanced countries in the relevant field, the candidate has to demonstrate his or her research work in front of a panel of experts. The candidate is required to incorporate the necessary changes as proposed by the panel of evaluators in the Pre-Defense Seminar.

Foreign Evaluation

The dissertation is sent for evaluation to two foreign evaluators in technologically advanced countries as per criteria prescribed by HEC. If the dissertation is sent again to the same evaluator after major revision, or if it is sent to a 3rd evaluator, the evaluation fee will be borne by the student along with all the additional charges.

Final Defense

After receiving minimum two satisfactory evaluation reports from the foreign evaluators, the candidate is required to appear for PhD open defense. A formal presentation of dissertation is required to be produced before Evaluation Committee in an open defense 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	50
1400 - 1499	45
1300 - 1399	40
1200 - 1299	35
1100 – 1199	30

*Candidates securing 100% marks in SZABIST's admission test will be equivalent to 50.

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) or GRE Subject with minimum 60% score or SZABIST's own GAT Subject test with 70% score for Bio Sciences.

GAT General or relevant HAT is mandatory for MS with minimum 50% score. GAT/GRE 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/BBA programs.

MPM Course Transfer

A maximum of up to 6 credits may be considered for transfer into the MPM program.

MBA Course Transfer

- A maximum of up to 6 credits may be considered for transfer into the MBA 36 credit hours program. Research Project/Thesis is not transferable.
- A maximum of up to 36 credits may be considered for transfer into the MBA 72 credit hours program. Research Project/Thesis is not transferable.
- Only relevant courses of the EMBA (SZABIST) program are transferable into the regular MBA program subject to the eligibility criteria of the MBA program at SZABIST.

PMBA/EMBA Course Transfer

No transfer courses are allowed into the EMBA program at SZABIST.

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: 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 offers financial assistance to eligible and deserving students in the form of various SZABIST funded and external donor funded scholarships as under:

- SZABIST Merit-Based Scholarship
- SZABIST Need-Based Scholarship
- General Subsidy
- SZABIST Employee Children Fee Concession
- SZABIST Employee Continuing Education Scholarship
- Sindh Education Endowment Fund Scholarship
- Baluchistan Education Endowment Fund Scholarship (Partial Funded / Fully Funded)
- USAID Funded Merit and Need-Based Scholarship
- HEC-Indigenous PhD 5000 Fellowship Program
- Mitsubishi Corporation Scholarship
- Various community-based scholarships

SZABIST also offers loan facilities as under:

- Ihsan Trust's Qarz-e-Hasna Interest Free Loan Facility
- The Citizens Foundation Financial Assistance



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 regulary. 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 the 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 regularly revamped with brand new labs space, furniture and latest machines with giga bite network connectivity to cater student's requirements. "Campus licensing" of latest software, including development tools, and operating systems provide an unmatchable environment compared to majority of well-reputed universities of Pakistan.

SZABIST has computing facilities supported with 24x7 broadband connectivity of 295 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 and guest are welcome with their BYOD and can access all network available resources wirelessly. SZABIST has also acquired Microsoft IT academy and Oracle Academic Alliance program.

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

Moreover, SZABIST has its own Research Centers, i.e., the Centre of Renewable Energy Research (CRER), and the Sustainable Development Research Centre (SDRC) with its specialized library for reference and general reading.

SZABIST established Smart Lab equipped with tremendous high speed 7th generation laptops for students. These laptops are connected with SZABIST network through Wi-Fi.

A state of the art Smart screen is also available for teacher and students. They can interact with each other in more effective and robust way.

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 discusses and recommends the individual cases of all such students pertaining to approval of their research work, selection of supervisors, co-supervisors, examiners, evaluators (national and foreign), provides approval for conduction of pre-defense seminars & open defense, and all other related activities. The DC also ensures the research work that carries its value to the society and is free from any un-ethical matters. In this regard, Institutional Ethical Review Board (IERB) work under the supervision of Doctoral Committee.

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

Academic Council is the highest academic statutory body of SZABIST. The Council is responsible for developing and maintaining a mechanism to offer quality education across all the campuses of SZABIST. The Council, in general, takes into consideration matters related to introduction of new program, changes in existing program structure, introduction of new courses, revision in course outlines, policy framework related to entry and exit of students and policy matters pertaining to research and development. The regular agenda items are forwarded by Board of Faculty (BoF) and Board of Advanced Studies and Research (BASR). The frequency of Academic Council's Meeting is twice a year and the meeting is chaired by the President and Co-chaired by Vice President Academics of SZABIST. The members include Deans, Registrar, HoCs, HoDs and external experts from academia and industry.

Office of Research Innovation and Commercialization (ORIC)

The 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. The Office of Research Innovation and Commercialization (ORIC) is being established to link research and commercialization at SZABIST with emerging and existing firms across Pakistan and around the world.

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 entrepreneurship. It serve as a bridge between multiple faculties of SZABIST and produces quality research and innovative products for filing patents/trademarks / designs. 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 that research results aid the growth of Pakistan's economy. It provide assistance to faculty members and research students in producing research article/projects at national as well as international level and arranges periodic workshop / training /seminar /conferences. 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:

- Managing applied research, innovation and commercialization activities within the universities through industrial collaboration:
- Intellectual Property Commercialization through documentation, evaluation, protection, marketing, licensing and royalties agreements;
- Partnership with national / foreign universities, government departments, and non- government organizations for reports, publication, contracts and consultancies;
- Participate in government programs and in securing funding for research from public and private sector;
- Organizing training, workshop, seminars, focus group discussions for maintaining academia - industry linkage as well as capacity development;
- Help final year students through startups and joint ventures.

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 private cloud services and Server Farm (including Domain Controllers, Proxy, Email, Web, Network Management, Electronic Bulletin Board, ZABDESK ERP and many more) and other related services of all five campuses, ZABTECH and IMC.

Computing Resources

Computing resources of the data center is comprising of 20 TFLOPS of processing speed with high performance and reliable 100 Tera Bytes of storage capacity. The data center is equipped with UPS backup and 12-ton redundant precision cooling system for reliability of data center 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 infrastructure, 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.

Quality Enhancement Cell (QEC)

Quality Enhancement Cell at SZABIST is created to foster Institutional Effectiveness (IE), to support planning, policy formation, streamlining processes, decision making and critical academic initiatives of strategic importance to the institute in all core departments. QEC activities include promoting and developing QA processes for monitoring and evaluation of programs.

ZABFM 106.6

ZABFM 106.6 is an in house FM broadcasting station, is an initiative by Shaheed Zulifkar Ali Bhutto Institute of Science & Technology and it was a very 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 is the first educational radio with the allotted frequency 106.6 MHz by Pakistan Electronic Media Regulatory Authority (PEMRA) since 20th December 2011 a Islamabad.

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 and development, education, infotainment, awareness, research, documentaries, talk shows, sports, travel, science & technology, media, culture & society, technology & inventions, Info tech and social order etc.

Newsletters

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

Student Support Services

SZABIST has been fortunate to have a unique and diverse student body with a healthy record of activities and a proud history of achievements in the realms of public speaking, sports, entrepreneurship and technology. Since 2015, with the establishment of the Department of Student Support Services a more organized and focused approach has been adopted with the aid of Student Advisory policies and guidelines for activities in the form of standard operating procedures and financial prudence guidelines with emphasis on documentation for record keeping all of which added much needed structure to student activities at the institute.

The institute provide students with a platform that allows them to conduct activities which work towards the development of a stronger, wiser and a more united student community. It works to inculcate in young minds the values of unity, tolerance, inclusion and leadership.

The student activities are focused mainly on thematic areas/pillars like Leadership, Art and Culture, Community Services and Civic Engagement, Sports and Technical/Professional. The institute aims to train students to tackle real world issues through special focus on the above mentioned themes in order to produce trained and rational all rounded human beings who have an appreciation for art and culture, think critically about their existential state and aim to serve society in the capacity of socially responsible leaders.

It also works to maintain discipline at the institute in order to provide a safe and conducive environment for students. An annual Orientation are also looked after and lastly, the services of a professional clinical psychologist for all forms of personal counselling are also available for all students on campus.

SZABIST Student Council (SSC)

Established in 2015, SSC has been a union of hardworking,

ambitious and talented individuals across all programs of SZABIST elected under the Election Commission of SZABIST. The selection of SSC workforce is by means of an entrance test and screening process all on an annual basis to form the student government at the institute, under the supervision of Student Advisor, Student Council and Election Commission at SZABIST.

SSC aims at helping to explore the talents of all students whilst, along with playing an intermediary role between the administration and student body at large, working towards adding value to student life at SZABIST.

Moreover, it organizes and hosts seasonal entertainment events to encourage networking among students, staff members and the faculty. Along with entertainment, SSC has history of organizing various Conferences, Seminars and Workshops to connect students with the industry and learn from their experiences.

The Executive Board of SSC is the central leadership organization within the Council. The Board consists of the President (SSC), the Vice President (SSC), the Secretary General (SSC) and the Treasurer (SSC). The agenda of each year is reviewed by the Executive board for the 5 pillars attached to SSC elaborated below.

The Leadership Pillar cultivates a sense of self-awareness amongst students through the identification of core strengths, vision, aims and values to become a leader and effectively lead change, conflict resolution, team motivation and reflective thinking skills. The following societies/club are working under the leadership pillar:

- 1. ZABMUN Society
- 2. Character Building Society
- 3. MBA Club

The Sports Pillar enables students to achieve excellence in sports which increases physical health of students and improves team work, coordination, cooperation, and mental health. The Sports Society at SZABIST holds various activities to keep the students energetic and active. The following societies are working under the Sports pillar:

- 1. Sports Society
- 2. Gaming Society
- 3. Adventure Society

The Arts and Culture Pillar flows creative ethos of students

with intellectual and aesthetic understanding of the craft and technique of theatre arts and humanity. The following societies are working under the Arts and Culture pillar:

- 1. Literature & Mushaira Society
- 2. Photography Society
- 3. Drama Society
- 4. Debating Society

The Community Service Pillar holds focal players in Pakistan's fight against climate change inculcating the message of sensitivity, inclusivity and equality in all activities. The following societies are working under the Community Service pillar:

- 1. Environment & Climate Change Society
- 2. SZABIST Social Sciences Society
- 3. Community Services & CSR Society
- 4. Wellness Clinic

The Professional and Technical Pillar develops a set of professional skills which refine and improve the technical skills of mathematics, science and engineering onto different areas such as economic, environmental, social, political and sustainable development. The following societies are working under the Professional and Technical pillar:

- 1. Business Society
- 2. IEEE Society
- 3. Entrepreneurship Society
- 4. Media Society

All student associations, clubs and student societies are formed as per a prescribed procedure working under the aegis of the SZABIST Student Council. Student Council members have rock solid history of conceptualizing and leading projects and events which work to advance the social and civic development of not only the student body but also of the community.

Executive Development Center (EDC)

The Executive Development Center (EDC) at 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, webinars, Zabtalk sessions and presentations by industry experts who share their experiences to help them understand the transition from campus to the corporate world.

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

EDC engages with the Alumni for relationship building, corporate networking and profile update. A body with a name SZABIST Alumni Global Association (SAGA) is there to build strong bond with alumni. The vision of SAGA is "To empower the SZABIST Alumni for exploring new avenues and expanding knowledge for continuing their journey of self-discovery".

Job & Internship Placements

In collaboration with the industry, EDC arranges job/internship 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.

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.

ZABSolutions

SZABIST has its own software house that 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 process of

the SZABIST. The documentation process flow with students progression at SZABIST from filling the online admission form to the printing of transcript and degree and profiles of each student is available on ZAB LMS (ZAB Learning Management System). Several educational institutions in Pakistan have shown their interest in ZAB LMS.

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

- Provide a practical framework for knowledge and technology transfer to the students
- 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

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-Pacific Quality Network (APQN), People's Republic of China
- 5. The Talloires Network, USA
- 6. The Chartered Institute of Logistics and Transport (CILT), UK
- 7. Management Association of Pakistan (MAP), Karachi
- 8. Marketing Association of Pakistan (MAP), Karachi
- 9. 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. Association of Chartered Certified Accountants ACCA, UK

This MoU provides exemption from ACCA papers to graduates of SZABIST in Bachelors of Business Administration (BBA) and BS Accounting & Finance.

2. Balochistan Education Endowment Fund Scholarship.

Under this MoU, Government of Balochistan provides fully funded scholarship to 5-6 meritorious and financially needy students of SZABIST who are local domicile certificate holders of Balochistan. The scholarship covers the entire duration of the degree program.

3. Coventry University, UK

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

4. Ihsan Trust, Meezan Bank

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.

5. International Committee of the Red Cross (ICRC), UK

Through this MoU, SZABIST Law Department is committed to work with ICRC to promote and implement legal changes for protection of health care against violence. Both parties to collaborate for improved protection of health care workers, patients, facilities and transport through mobilization of a broad Community of Concern and advocacy.

6. Mitsubishi Corporation, Japan

Mitsubishi Corporation through this MoU provides 100% scholarship to the students enrolled in the Media Science BSMS program annually.

7. NOWPDP

NOWPDP a Disability Inclusion Initiative and SZABIST Karachi-BBA have joined hands for supporting initiatives for persons with disabilities in the province of Sindh. Both the parties help each other by facilitating access to opportunities and services for persons with disabilities.

8. Orange Tree Foundation OTF, Pakistan

SZABIST have collaborated with Orange Tree Foundation for providing scholarships for the students of SZABIST. This MoU ensures equitable opportunities of education for all the needy yet bright students. To bring them at par of mainstreaming through creating a critical mass of talented youth for the development of society.

9. Sindh Police Shaheed Scholarship

This MoU enables children of Shaheed Police Officers of Sindh to study at SZABIST on fully funded scholarship. The MoU is applicable to the Police employees who embraced SHAHADAT while performing their duty within the jurisdiction of the Sindh province.

10. Tabba Kidney Institute

SZABIST and Tabba Kidney Institute have joined hands to participate in collaborative research and in capacity building activities. Both parties plan to conduct academic research to get further insights into the areas of Urology. Students of Bachelor of Science in Public Health (BSPH) can get the opportunity of certificate-based volunteer work in TKI. To foster increased interaction among TKI research staff, SZABIST faculty and advanced / graduate students engaged in scientific and scholarly research in areas of mutual interest.

11. The Citizen Foundation, TCF Pakistan

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.

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 have to be completed.

13. University of London, UK

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

14. Getz Pharma BIDE SZABIST (tripartite MoU) Getz Pharma, Baqai Institute of Diabetology & Endocrinology BIDE and SZABIST have joined hands to foster a culture of collaboration to improve healthcare indicators in Pakistan. This collaboration shall allow experienced physicians, researchers and students at BIDE and SZABIST in scientific research to generate valuable insights into the areas of Non Communicable Diseases, particularly Diabetes. The three patrons plan to engage in activities centered on capacity building of healthcare providers.

15. Greenstar Social Marketing Pakistan Limited

Through this MoU, SZABIST and Greenstar Social Marketing have decided to work on the field of research pertaining to Family planning and child health.

16. Iqra University, Islamabad

A Memorandum of Understanding was singed between SZABIST Islamabad and Iqra University Islamabad on June 23, 2021 to organise guest lectures seminars, and training sessions of mutual interest.

17. Shifa Foundation, Islamabad

SZABIST Islamabad signed an MoU with Shifa Foundation on August 03, 2021 to engage students in community development and other environmental programs while honorary internships (general and clinical) would be provided to SZABIST Islamabad students.

18. Subway Centaurus, Islamabad

Subway Centaurus and SZABIST Islamabad signed a memorandum of understanding on September 10, 2021 to collaborate in joint market research projects, Special discount will be given to SZABIST employees and students.

19. SZABIST and PMI

SZABIST, Islamabad took a giant step forward on June 3rd, 2016 towards enhancing the Project Management program by signing an MoU with Project Management Institute Islamabad Chapter Pakistan (PMI-IPC) for promoting cooperation in exchange of information, joint research and development of academic programs concerning Project Management, and also exchange of experts and researchers. The strategic partnership is expected to be a way forward in bridging the gap between industry and academia.

20. Higher Education Commission (HEC)

SZBIST signed MOU with HEC on January 15th, 2019 for establishing EDUTV of HEC with studio departments of five universities including SZABIST. SZABIST and HEC ensured continued cooperation on agreed scope of cooperation.

21. Pakistan Centre for Philanthropy (PCP) SZBIST signed MOU with PCP on March 27th, 2019 to

promote collaboration for academic research and to showcase Pakistani nonprofits through various means including video documentation; to allow the parties to plan educational and training activities of mutual interest. It also aims to provide internship opportunities at PCP to graduate students of SZABIST.

22. Pakistan Air Force (PAF) Hospital, Islamabad

SZABIST Islamabad signed MoU with PAF Hospital on October 21st, 2021. The PAF hospital will provide OPD/IPD services to the SZABIST employees and staff at discounted rates. The PAF Hospital provides General and Clinical Internships to the students of SZABIST, Both parties agreed to collaborate for activities such as organizing awareness seminars, professional trainings, and participation in conferences.

23. Nishan Rehab Pakistan

SZABIST Islamabad signed an MoU with Nishan Rehab Pakistan on January 12th, 2022 for the engagement of students in the areas of anti-smoking campaigns, awareness of drug addiction, and the role of youth in the prevention of substance abuse disorders. Collaboration with Nishan Rehab will train students of BS/MS Clinical psychology on 9 basic Universal Treatment Curriculums (UTCs) published by NAADAC (National Association of Alcohol and Drug Abuse Counselors) in the USA. Through this training, students will be capable to undertake the exam of ICAP (Internationally Certified Addiction Professionals). Furthermore, placement of Clinical psychology students to get hands-on experience in domains of drug rehabilitation, family therapy, and therapeutic sessions for personality disorders and bipolar-related disorders, etc. is central aspect of agreement.

24. Rawalpindi Chamber of Commerce & Industry (RCCI)

SZABIST Islamabad signed an MoU with the Rawalpindi Chamber of Commerce & Industry (RCCI) on July 27th, 2017. Both parties agreed to work on the promotion of "Action-Based Research" concerning industry-related issues and challenges. Students will also visit industrial partners for business plans and entrepreneurial activities. Moreover, faculty and student development initiatives will also be taken for their capacity building in knowledge-sharing forums.

25.HADI Worldwide, Islamabad

A memorandum of agreement was signed with HADI Worldwide, Islamabad on December 17th, 2021. The objective of this MoU is to leverage each other's strengths including human resources, equipment, venue, linkages, ideas, capabilities, opportunities, services, etc. thereby contributing to the effectiveness and sustainability of the educational, employability, and job production landscape of Pakistan.

26.P@SHA Islamabad

SZABIST Islamabad signed MoU with P@SHA Islamabad on January 11, 2022 aiming to hire P@SHA-recommended industry trainer and provide digital material accessible to students for the duration of the industry-oriented courses. P@SHA agreed to provide support in setting standards for the Final Year Projects to enhance the quality of development, documentation, and successful deployment. Support in access to the industry network for matching industry projects to students and faculty of SZABIST with IT and Its companies in Pakistan.

27.Islamic Relief Pakistan

SZABIST Islamabad signed MoU with Islamic Relief Pakistan on January 12th, 2022. Islamic Relief Pakistan and the SZABIST will endeavor to assist and support each other in the research and developments that mutually benefits both Parties, to explore potential mutually beneficial, applied, and community-based research projects, and to develop appropriate innovative communication linkages to facilitate information transfer. It is also mutually agreed that both parties will participate in conference(s) and seminar(s) and capacity-building workshops that facilitate either Party for sharing and dissemination of their research work and achievements.



FACULTY OF MANAGEMENT SCIENCES



VISION

SZABIST Faculty of Management Sciences aspires to become one of the leading entities for excellence in business education, service, research and innovation.

MISSION

SZABIST Faculty of Management Sciences is committed to:

 Produce highly qualified business professionals to meet dynamic and challenging contemporary needs;

- Generate knowledge and expertise for business and economic solutions through research;
- Create an enabling environment for corporate and entrepreneurial outlook;
- Serve the community through student, faculty, and alumni collaboration.

FACULTY OF MANAGEMENT SCIENCES

BBA

SZABIST offers a four-year (eight semesters) BBA degree program of 144 credit hours. For the BBA program, students are required to complete 46 courses, 03 credit hours Business Project & 03 credit hours Community Service Project. The courses include 42 compulsory courses and 4 electives from Management, Marketing, Finance and Supply Chain Management. To obtain the BBA degree, students have to complete 144 credit hours and an internship. The degree needs to be completed within six years. BBA program is an ACCA accredited program; those who complete BBA from SZABIST will get an exemption in 06 out of 09 ACCA Foundation papers (F1, F2, F3, F5, F7 and F9). BBA Program is also accredited by National Business Education Accreditation Council (NBEAC), HEC, Pakistan.

First Year

Fall Semester Pre-Req BA 1108 IT in Business BA 1109 Personal Management and Communication BA 1203 Management Principles BA 1206 Oral Communication and Presentation Skills BA 1113 Islamic Studies/Humanities BA 2307 Sociology

Spring Semester

oping semester		
BA 1101	Introduction to Accounting	
BA 1102	Microeconomics	
BA 1105	English Writing Skills	
BA 1204	Maths for Business	
BA 1213	Pakistan Studies	
BA 2312	Human Behavior	

Second Year

Fall Semester

BA 1201	Financial Accounting	BA 1101
BA 1211	Logic and Critical Thinking	BA 1105
BA 3504	Organizational Behavior	BA 2312
BA 2303	Marketing Principles	BA 1203
BA 1202	Macroeconomics	BA 1102
BA 2406	Business and Electronic	BA 1206
	Communication	

Spring Semester

BA 2311	Business Statistics	BA 1204
BA 2411	Cost and Management	BA 1201
	Accounting	
BA 2301	Introduction to Business	BA 1201
	Finance	
BA 2402	Retail Management	BA 2303
BA 2403	Business Ethics	BA 1203
BA 3507	Consumer Behavior	BA 2303

Third Year

Fall Semester		Pre-Req
BA 3501	Financial Markets and	BA 1201
	Institutions	
BA 3502	Entrepreneurship	BA 1203
BA 3508	Media Management	BA 2303
BA 3605	Statistical Inference	BA 2311
BA 4706	Development Economics	BA 1202
BA 4801	Law and Taxation	BA 1211

Spring Semester

BA 3601	Financial Management	BA 2301
BA 3602	Marketing Management	BA 2303
BA 3603	Business Research Methods	BA 3605
BA 3607	Operations Management	BA 1203
BA 4804	Human Resource Management	BA 3504
BA xxxx	University Elective -I	
	(as offered by Campus)	

Fourth Year

Fall Semester

BA 4814	Project Management	BA 3607
BA 4705	Services Marketing	BA 3602
BA 4710	Business Project	BA 3603
BA 4xxx	Elective-I	
BA 4xxx	Elective-II	
BA xxxx	University Elective-II	
	(as offered by Campus)	

Spring Semester

BA 3505	Quantitative Skills	BA 1204
BA 3609	Pakistan Economy	BA 4706
BA 4704	Management Information	BA 1108
	Systems	
BA 4810	Community Service Project	BA 3603
BA 4xxx	Elective-III	
BA 4xxx	Elective-IV	

FACULTY OF MANAGEMENT SCIENCES

LIMITERCITY ELECTIVE			Product Innovation and Decian
UNIVERSITY ELECTIVE (To be offered by the campus as Compulsory		BA 4859	Product Innovation and Design Integrated Marketing Communications
courses)	ered by the campus as compulsory	BA 4866	
courses)		BA 4762	Digital Marketing
BA 3506	Foreign Languages	BA 4868	Marketing Analytics
BA 3519	Current Affairs	C1 Cl	hain Managanant
BA 3613	World Economy	Supply Chain Management BA 4116 Supply Chain Management	
BA 3614	Business Analysis and Forecasting*	BA 4116	Trade Marketing
BA 3619	Enterprise Management	BA 4211	Production Management
BA 4701	Islamic Banking and Finance*	BA 4768	Total Quality Management
BA 4707	Marketing Research*	BA 4739	Export Marketing
BA 3515	Graphic Design for Multimedia*	BA 4742	Customer Relationship Management
BA 3621	Professional Development	BA 4764	Dynamics of Logistics and Distribution
BA 3521	Auditing	BA 4824	Sales Management
BA 3522	Social Advocacy and Community Service	BA 4844	Operations Research
BA 3622	E-Commerce	BA 4859	Product Innovation and Design
D110022	L'editinere	BA 4766	Purchase Management
ELECTIVI	SS.	D11 17 00	i dichase Management
222011120		Management	
Finance		BA 4116	Supply Chain Management
BA 4115	Derivatives	BA 4117	Salary and Compensation
BA 4214	Micro Finance	BA 4711	Change Management
BA 4218	Financial Research	BA 4712	Industrial Relations and Labor Laws
BA 4735	Islamic Banking and Finance*	BA 4713	Leadership and Motivation Techniques
BA 4719	Investment Banking	BA 4812	Recruitment and Selection
BA 4724	Financial Modeling	BA 4813	Training and Development
BA 4727	Dynamics of Banking	BA 4815	Event Management
BA 4734	International Banking	BA 4826	Talent Management
BA 4752	Financial Reporting and Analysis	BA 4837	
BA 4756	Econometrics	BA 4844	Operations Research
BA 4831	Portfolio and Investment Management		1
BA 4833	Security Analysis		
BA 4834	Treasury and Funds Management	*Universi	ity Elective can be taken as an Elective if not
BA 4855	Financial Risk Analysis	offered by the Campus as a compulsory course.	
BA 4867	Business Analysis and Forecasting*	All courses may not necessarily be offered every	
BA xxxx	Fintech	year. Alternate courses may be substituted as and	
		when re	quired. Full-time academic load is six
Marketing		courses (18 credit hours). All students are required to
BA 4116	Supply Chain Management	register fo	or full load in the first semester.
BA 4125	Emerging Media		
BA 4126	Trade Marketing	Internshi	p
BA 4217	Experiential Marketing	The internship is scheduled in summer semester at	
BA 4224	e-Marketing Strategies	the end of third year. After completion of the 6-week	
BA 4836	Marketing Research*	internship, all students are required to submit a	
BA 4721	Advertising	comprehensive report giving details of their	
BA 4722	Brand Management	experience and learning.	
BA 4739	Export Marketing		
BA 4815	Event Management		
BA 4816	Industrial Marketing		
BA 4821	Media Planning		
D A 4004	Calas Managament		

PROSPECTUS 2022

BA 4824 Sales Management

BA 4842 Graphic Design for Multimedia*

BS Accounting & Finance

BS (A&F) is a four years (eight semesters) program and consists of 144 credit hours. Students are required to complete 46 courses and a 6 credit hours of final year project (to be offered over last two semesters) along with six weeks of internship to graduate. The maximum duration to complete this degree is six years. Graduates of BS (A & F) will get exemptions in nine papers of both Institute of Chartered Accountants of Pakistan (ICAP) and Association of Chartered Certified Accountants (ACCA), UK.

SZABIST also offers 2.5-year Bachelor of Science (Accounting & Finance) program exclusively for CAF qualified students of the Institute of Chartered Accountants of Pakistan (ICAP). CAF qualified students are exempted 60 credit hours (20 course) of course work and have to complete 78 credit hours (26 courses) of course work and a 6 credit hours Research Project (to be offered over last two semesters).

First Year

Fall Semester Pre-Req AF 1101 Business Mathematics* AF 1102 Computer Concepts and Applications* AF 1104 Introduction to Financial Accounting* AF 1105 Pakistan Studies Communication Skills AF 1203 _ AF 1205 Islamic Studies/Humanities

Spring Semester

AF 1103	O F	AF 1203
AF 1207	Business Management and	
	Ethics*	_
AF 1201	Advanced Financial Accounting*	AF 1104
AF 2303	Introduction to Psychology	-
AF 2304	Introduction to Sociology	-
AF 2405	Principles of Microeconomics*	-

Second Year

Fall Semester		Pre-Req
AF 1202	Calculus for Business Studies	AF 1101
AF 1206	Principles of Marketing	-
AF 2302	Cost Accounting*	AF 1201
AF 2305	Organizational Behavior*	AF 1207
AF 3505	Principles of Macroeconomics*	AF 2405
AF 4703	Introduction to Business	_
	Finance*	

Spring Semester

oping comester		
AF 2301	Business and Technical English	AF 1103
	Writing*	
AF 2401	Management Accounting	AF 2302
AF 3501	Accounting and Financial	-
	Information Systems	
AF 2402	Management Information	_
	Systems	
AF 2404	Money and Banking	AF 3505
AF 2406	Statistics and Probability*	-

Third Year

Fall Semester		Pre-Req
AF 3607	Corporate Accounting*	AF2401
AF 3511	Auditing -I*	-
AF 3506	Statistical Inference	AF 2406
AF 3507	Financial Institutes and Markets	AF 2404
AF 3606	Taxation*	-
AF 3608	Islamic Banking and Finance	-

Spring Semester

1 0		
AF 3611	Auditing-II*	AF 3511
AF 2403	Marketing Management	AF 1206
AF 3605	Financial Reporting*	AF 3607
AF 4701	Business and Labor Law*	-
AF 4702	Financial Management	AF 4703
AF 3609	Business Research Methodologies	AF 3506

Fourth Year

Fall Semester		Pre-Req
	Accounting Elective-I	-
AF 4707	Company Law*	-
AF 4801	Corporate Finance	AF 4702
AF 4xxx	Finance Elective-I	-
AF 3603	e-Commerce	-
AF 4xxx	Final Project-I	AF 3609

Spring Semester

Spring Semester			
	AF 1204	Introduction to Human Resource	AF 2305
		Mamangment	
	AF 2306		AF 3505
	AF 3504	Entrepreneurship and Small	-
		Business Management	
	AF 4xxx	Accounting Elective-II	-
	AF 4xxx	Final Project-II	-
	AF 4xxx	Finance Elective-II	-

*Exempt courses for CAF qualified students of Institute of Chartered Accountants of Pakistan (ICAP)

All courses may not necessarily be offered every year. Alternate courses may be substituted as and when needed. Fulltime academic load is 18 credit hours. All students are required to register for full load in first semester.

Internship

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

ELECTIVES

Accounting

AF 4722 Advanced Performance Management AF 4721 Advanced Audit and Assurance AF 4822 Strategic Business Reporting AF 4723 Forensic Accounting AF 4821 Public Sector Accounting

Finance AF 4725 Analysis of Investment and Management of Portfolios International Finance AF 4825 AF 4824 Financing of SME AF 4823 Financial Risk Analysis Quantitative Data Analysis AF 4826 AF 4724 Advanced Financial Management AF 4727 Dynamics of Banking AF 4728 Financial Modeling AF 4726 Behavioral Finance AF 4827 Business Analysis and Forecasting AF xxxx Fintech

Courses are subject to change.







MBA Program

For students with 4-year undergraduate degree/16-years of education, the minimum duration of the MBA program is 2 years. Twenty-two courses (66 credit hours) and 6 credit hours of Research Project OR Thesis spread over two semesters (3+3) are required to complete the program. Students are also required to complete a six-week internship. The maximum duration to complete MBA program is 4 years. MBA Program is accredited by National Business Education Accreditation Council (NBEAC), HEC, Pakistan.

First Year

Fall Semester

BA 5301	Financial Accounting*	-
BA 5419	Business Management and Ethics*	-
BA 5418	Managerial Communication*	-
BA 5502	Quantitative Tools for Managers*	-
BA 5302	Microeconomics*	-
BA 5106	Marketing Management*	-

Spring SemesterPre-ReqBA 5402Macroeconomics*BA 5302BA 5205Human Resources Management*BA 5419BA 5411Cost and Management Accounting*BA 5301BA 5401Introduction to Business Finance*BA 5301BA 5405Statistical Inference*BA 5502BA 5501Applied Research Methods-

Second Year

Fall Seme	Pre-Req	
BA 5308	International Business	-
BA 5601	Strategic HRM	BA 5205
BA 5105	Financial Management*	BA 5401
BA 5203	Strategic Marketing	BA 5106 BA 5205
BA 5xxx	Elective-I	-
BA 5508	Research Project-I (03 CH) OR	BA 5501
BA 5507	Thesis-I (03 CH)	

Spring Semester

1 0		
BA 5104	Strategic Management	BA 5506 BA 5205
BA 5208	Strategic Finance	BA 5105
BA 5xxx	Elective-II	-
BA 5xxx	Elective-III	-
BA 5xxx	Elective-IV	-
BA 5608	Research Project - II (03 CH) OR	BA 5501
BA 5607	Thesis-II (03 CH)	

^{*} Exempted courses for BBA and Equivalent degree holders.

The students with 4-year BBA/BABS/BS (Accounting & Finance)/BS (Entrepreneurship) or equivalent degree are exempted 36 credit hours of course work. The minimum duration of degree for such students will be 1.5-year with the following program structure:

First Year

Fall Semester

BA 5501	Applied Research Methods	-
BA 5203	Strategic Marketing	-
BA 5601	Strategic HRM	-
BA 5208	Strategic Finance	-

Spring Semester

BA 5104	Strategic Management	-
BA 5xxx	Elective-I	-
_	Elective-II	-
BA 5508	Research Project-I (03 CH) OR	BA 5501
BA 5507	Thesis-I (03 CH)	

Second Year

Fall Semester

BA 5308	International Business	-
BA 5xxx	Elective-III	-
BA 5xxx	Elective-IV	-
BA 5608		BA 5508
BA 5607	Thesis-II (03 CH)	BA 5507

All elective courses may not be offered in every semester. Alternative courses may be substituted as and when required.

A student may take either Research Project or Thesis.

ELECTIV	ES	BA 5435	Human Resource Management and
Finance			Technology
	Advance Financial Management	BA 5452	Psychological Contract in Organizations
	Analysis of Financial Statements		
	Corporate Finance	Managem	
BA 5134	Derivatives	BA 5111	Business Process Re-engineering
BA 5135	Financial Markets and Institutions	BA 5112	Change Management
BA 5137	International Banking	BA 5113	Industrial Management and Labor
BA 5138	Econometrics		Relations
BA 5139	Financial Risk Analysis	BA 5116	Industrial Relations and Labor Laws
BA 5151	International Finance	BA 5136	Business Strategy and Policy
BA 5155	Mergers and Acquisitions	BA 5152	Event Management
BA 5179	Commodity Pricing	BA 5172	Entrepreneurial Business Strategy
BA 5187	Business Analysis and Forecasting		Project Management
BA 5229	Financial Modeling		Crisis Management
	Islamic Banking and Finance		Corporate Sustainability
	Portfolio and Investment Management		Lean Six Sigma Manufacturing
	Treasury and Funds Management		Hospitality and Tourism Management
	Investment Banking		Business Theory
	Fundamentals of Financial Engineering		Business Application
	Behavioral Finance		
BA 5284	Theory and Practice of Lending	Marketin	
	Financial Management Policy		Advertising
	Venture Capital and Private Equity		Brand Management
	Financial Reporting and Analysis		Consumer Behavior
	SAP Financial Accounting Module		Customer Relationship Management
	Real Estate Investments and Finance		Export Marketing
			Global Marketing
	esource Management		Services Marketing
	Leadership and Motivation Techniques		Strategic Advertising
	Compensation Management		Trade Marketing
	Performance Appraisal		Social Marketing
	Salary and Compensation		Integrated Brand Communication
	Human Resources Information Systems		Industrial Marketing
	Job Analysis and Design		Media Planning and Management
BA 5167	Talent Management and		Personal Selling
	Succession Planning		Pharmaceutical Marketing
	Leadership Development		Sales Management
	HR Operations and Business Partnering	BA 5228	Retail Management
BA 5196	Conflict Resolution		Public Relations
	Recruitment and Selection		Integrated Marketing Communications
	Training and Development	BA 5259	Emerging Media
	HR Policy Development	BA 5264	Interactive Global and Regional Marketing
BA 5251	Human Resource Development	BA 5269	Marketing Intelligence
BA 5285	Performance Management	BA 5281	Digital Marketing
	HR Analytics	BA 5286	Media Marketing
	Human Capital Development and Analytics	BA 5293	New Product Development
BA 5335	Human Resource Audit		Process and Innovation
BA 5332	Contemporary Issues in Human Resource	BA 5296	Rural Marketing
	Management		Experiential and Content Marketing
BA 5352	SAP Human Capital Module		Media Management

BA 514	41 l	Pub	lic	Rela	ations	Ma	na	gei	m	ent

BA 5438 Marketing Practices in Pakistan

BA 5331 Marketing Analytics

BA 5339 Packaging for Brands

BA 5337 Retail Strategy and Structure

BA 5437 Retail Supply Chain Management

BA 5436 Retail Operation

BA 5336 Retail Buying and Merchandising

BA 5451 Strategic Entrepreneurship

BA 5354 SAP Sales and Distribution Module

BA 5355 Marketing Strategies for Emerging

Economies

Supply Chain Management (SCM)

BA 5191 Advance Manufacturing and

TPM in SCM

BA 5194 Supply Chain Finance

BA 5214 Supply Chain Management

BA 5263 Dynamics of Logistics and Distribution

BA 5265 Operational Planning in Supply Chain

BA 5266 Strategic Procurement in SCM

BA 5287 Execution and Control of

Operations in SCM

BA 5291 Detailed Scheduling and

Planning in SCM

BA 5142 Materials Management

BA 5338 Shipping in SCM

BA 5353 SAP Procurement Module

BA 5432 Green Supply Chain Management

BA 5431 Supply Chain Operations

BA 5449 Strategic Warehouse Management

BA 5439 Green Logistics

Non-Credit Hours Course

BA 5110 Software Tools for Business

Internship

All MBA students are required to complete a 6-week internship. Completion of internship is a degree requirement for all MBA programs. Students can produce their current employment record as an alternative to the internship program provided such employment experience is recognized by SZABIST.

The Executive Development Center (EDC), SZABIST Islamabad offers support and services in finding suitable opportunity for the internship.







Executive Master of Business Administration (EMBA)

The EMBA is a 2-year program spread over four semesters and consists of 66 credit hours of teaching. Twenty courses (60 credit hours), one Business Project (3 credit hours) and one Research Project (3 credit hours) are needed to graduate. The maximum time limit to complete the EMBA degree is 4

First Year

Fall Semester

BE 5101	Accounting for Business	-	
BE 5102	Business Management	-	
BE 5103	Contemporary Marketing	-	
BE 5104	Managerial Communication	-	
BE 5105	Quantitative Analysis for	-	
	Decision Making		

Spring Se	Pre-Req.	
BE 5201	Applied Research Methods	BE 5105
BE 5202	Business Finance	BE 5101
BE 5203	Managerial Accounting and	BE 5101
	Control	
	Managerial Economics	-
	Marketing Management	BE 5103
BE 5206	Organizational Behavior	BE 5102

Second Year

Fall Semester

BE 5301	Financial Management	-
BE 5302	Human Resource Management	BE 5101
BE 5303	Operations and Supply Chain	BE 5206
	Management	
BE 5309	Business Project	BE 5201
BE 5xxx	Elective-I (Marketing, HR,	-
	Finance or Supply Chain)	

Spring Semester

BE 5401	Entrepreneurship and Family	BE 5102
	Businesses	
	Ethics and Corporate Governance	BE 5102
BE 5403	Strategic Management	BE 5202, BE 5102, BE 5302
	Research Project	BE 5201
BE 5xxx	Elective-II (Marketing, HR,	-
	Finance or Supply Chain)	
BE 5xxx	Elective-III (Marketing, HR,	_
	Finance or Supply Chain)	

ELECTIVES

Marketing

BE 5321	Services Marketing
BE 5334	Retail Management
BE 5333	Media Planning and Management
BE 5322	Advertising

BE 5333	Media Planning and Management
BE 5322	Advertising
BE 5323	Brand Management

BE 5324 Consu	ımer Behavior
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DE 3324	Consumer behavior
BE 5325	Customer Relationship Management
BE 5332	Integrated Marketing Communications
BE 5326	Digital Marketing
BE 5327	Emerging Media
BE 5328	Experiential and Content Marketing
BE 5329	Export Marketing
BE 5331	Global Marketing

BE 5335 SAP Sales and Distribution Module

BE 5425 International Banking and Finance

Finance

BE 5423	Corporate Finance
BE 5426	Islamic Banking and Finance
BE 5421	Analysis of Financial Statements
BE 5427	Portfolio and Investment Management
BE 5428	Project Evaluation
BE 5422	Banking Operations
BE 5424	Financial Modeling
BE 5429	Treasury and Funds Management
BE 5431	SAP Financial Accounting Module
BE 5432	SAP Management Accounting Module

Human Resource Management

BE 5521	Compensation Management
BE 5527	Recruitment and Selection
BE 5526	Performance Appraisal
BE 5531	Training and Development
BE 5522	Conflict Resolution
BE 5523	Crisis Management
BE 5524	HR Analytics
BE 5528	Salary and Compensation
BE 5529	Talent Management and Succession
	Planning
BE 5532	SAP Human Capital Module

BE 5525 Leadership and Motivational Techniques

Supply C	hain Management
BE 5631	Supply Chain Management
BE 5623	Dynamics of Logistics and Distribution
BE 5626	Operational Planning in Supply Chain
BE 5627	Strategic Procurement in SCM
BE 5621	Advance Manufacturing and TPM in SCM
BE 5622	Detailed Scheduling and Planning in SCM
BE 5624	Execution and Control of Operations in
	SCM

BE 5629 Supply Chain Finance BE 5632 SAP Procurement Module BE 5633 SAP Production-Planning and Manufacturing Module

The University reserves the right to change its programs and policies at any time without prior notification. All courses may not be offered every year. Alternate courses may be substituted as and when needed.

PROFESSIONAL MBA

The PMBA is a one-year program spread over two semesters and consists of 33 credit hours of teaching. Ten taught courses and a business project must be completed. The candidate registers for five/six courses offered every semester to complete the degree within one year. The PMBA is equivalent to Post Graduate Diploma as per HEC guidelines. The Maximum time limit to complete the PMBA degree is 4 years.

First Year

Fall Semester		Pre-Rec
BE 5101	Accounting for Business	-
	Business Management	-
BE 5103	Contemporary Marketing	-
BE 5104	Managerial Communication	-
BE 5105	Quantitative Analysis for	-
	Decision Making	

Spring Semester		Pre-Req.
BE 5201	Applied Research Methods	BA 5105
BE 5202	Business Finance	BA 5101
BE 5204	Managerial Economics	-
BE 5205	Marketing Management	BA 5103
BE 5206	Organizational Behavior	BA 5102
1	Business Project	-

Master in Human Resource Management

The Master in Human Resource Management program is designed for those who have functional responsibility to carry out the duties of an organization's human resource department. The student is required to complete 33 credit hours of course work within one full calendar year. The maximum time period to complete the degree is four years.

Fall Semester

HR 5101 Advanced Recruitment & Selection	-
HR 5102 Advanced Rewards and	_
Performance Management	
HR 5201 Advanced Training and	_
Development	
HR 5203 International Human Resource	
Management	-
HR 5319 Institutional Effectiveness & Global	-
Governanace in HR	

Spring Semester

HR 5204 Advanced Topics in Organizational theory & Behavior	-
HR 5308 Final Project	-
HR 5322 Knowledge Management	-
HR 53xx Elective-I	-
HR 53xx Elective-II	-
HR 53xx Elective-III	_

ELECTIVES

HR 5311	Advanced Topics in Organizational	HR 5324 Organization Restructuring
	Behavior	HR 5325 Organizational Development
HR 5312	Communication Strategies at Workplace	HR 5326 QR Strategies and Legality
HR 5313	Continuous Professional Development	HR 5327 Quality Assurance Management
HR 5314	Employee Engagement Strategies	HR 5328 Rewards and Performance Management
HR 5315	Employee Retention	HR 5329 Supply Chain Management
HR 5316	Ergonomics at workplace	HR 5331 Talent Management
HR 5317	Human Resource Information	HR 5332 Total Quality Management
	Management	HR 5333 Work and Organization
HR 5318	Innovation and Change Management	HR 5334 Workforce Diversity
HR 5321	ISOs Certification	HR 5335 Workload Balance
HR 5322	Knowledge Management	HR 5336 Change Management
HR 5323	Learning Organization	HR 5337 Strategic Human Resource Management

HR 5324	Organization Restructuring
HR 5325	Organizational Development
HR 5326	QR Strategies and Legality
HR 5327	Quality Assurance Management
HR 5328	Rewards and Performance Management
HR 5329	Supply Chain Management
HR 5331	Talent Management
HR 5332	Total Quality Management
HR 5333	Work and Organization
HR 5334	Workforce Diversity
HR 5335	Workload Balance

Master of Project Management (MPM)

MPM is the first and the only project management program in Pakistan which is accrediated by Project Management Institute (PMI), USA. The MPM program is designed to enhance competencies of working professionals and students in areas of strategic intent, leadership skills and professional behaviour. Through this one year degree program, students can gain actionable knowledge for real-world challenges which goes beyond traditional project management fundamentals. In addition, the electives provide students to specialize in either IT/Telecom, Government/NGO or Construction/Manufacturing project management. The classes are offered on weekends (Friday to Sunday). It comprises of 30 credit hours spread over two semesters. Minimum ten courses are required to graduate. The maximum time to complete the degree is 4 years.

First Semester

PM 5113	Principles of Project Management	-
	Organizational Project Management	-
	Leadership and Work Ethics	-
PM 5114	Project Scope and Scheduling	_
	Management	
PM 5104	Cost and Financial Management for	_
	Project Management	

Second Semester

PM 5351	Project Risk Management	-
PM 5207	Software Tools for Project	_
	Management	
PM 5xxx	Elective-I	-
PM 5xxx	Elective-II	-
PM 5208	Capstone Project	-

ELECTIVES

IT/Telecom

PM 5157	Agile Project Management
DM E1E2	Innovestion and Tashnalassy Man

PM 5152 Innovation and Technology Management

PM 5159 Project Analytics

PM 5162 Telecom Project Management PM 5158 Digital Project Management

PM 5161 Project Resource and Communication Management

Govt/NGO

PM 5361 Government Planning and Development Management

PM 5364 Public Private Partnership Management

PM 5362 NGO Project Management

PM 5363 Project Governance, Monitoring, and Evaluation

PM 5365 Sustainable Development Projects

PM 5155 Project Program Portfolio Management

Construction/Manufacturing

PM 5259 Construction Project Management PM 5263 Project Procurement and Contractual Management

PM 5264 Project Simulation

PM 5301 Project Quality Management
 PM 5261 Blockchain Project Management
 PM 5262 Construction Quality and Cost

Management

All elective courses may not be offered every semester. Alternative courses may be substituted as and when required.



Master of Science in Project Management (MSPM)

SZABIST offers MS in Project Management (MSPM) program and it is equivalent to MPhil. The program lays the foundation for students who are planning to pursue doctoral studies. This program offers two streams: (a) coursework-based and (b) research-based.

In either stream, students are required to complete 30 credit hours. The maximum time limit to complete the MSPM degree is four years and the minimum time to complete is 1.5/2 years. All MSPM students are required to clear GRE, GAT General test, or HAT relevant with a minimum 50% score.

Course work Based Stream

- Five compulsory courses (15 credit hours)
- Five elective courses (15 credit hours)

First Year

Fall Semester Pre-Req.

MP 5103 Research Methodology	-
MP 5113 Strategic Management and Leadership	-
MP 5107 Fundamentals of Project Management	-
MP 5xxx Elective-I	-

Spring Semester

MP 5202 Quantitative Tools for Research	_
MP 5213 Case Studies in Project Manageme	nt -
MP 5xxx Elective-II	-
MP 5xxx Elective-III	-

Second Year

Fall Semester

T WIT C CITIES VET				
	MP	5xxx	Elective-IV	-
	MP	5xxx	Elective-V	_

ELECTIVES

- MP 5102 Project Management Constraints
- MP 5103 Operations Research
- MP 5201 Quality Management Tools
- MP 5205 Theories of Management
- MP 5215 Human Resource Management Communication
- MP 5217 Financial Decision Analysis
- MP 5218 Software Project Management
- MP 5223 Project Scheduling, Planning and Time Management
- MP 5224 Project Scope
- MP 5226 Governance, Monitoring and Evaluation of Development Projects
- MP 5314 Project Review, Assurance and Governance
- MP 5317 Supply Chain Management
- MP 5318 Business Analysis
- MP 5322 Project Program Portfolio Management
- MP 5324 Risk Management Dynamics
- MP 5325 Project Simulation
- MP 5328 Project Risk Management

Research Based Stream

- Five compulsory courses (15 credit hours)
- Three elective courses (09 credit hours)
- Two Independent Research Studies (6 credit hours)
 OR Thesis (6 credit hours)

First Year

Fall Semester Pre-Req.

MP 5103 Research Methodology	-
MP 5113 Strategic Management and Leadership	-
MP 5107 Fundamentals of Project Management	-
MP 5xxx Elective-I	-

Spring Semester

MP 5202 Quantitative Tools for Research	-
MP 5213 Case Studies in Project Management	-
MP 5xxx Elective-II	-
MP 5xxx Elective-III	-

Second Year

Fall Semester

MP 5xxx	Thesis - I	MP 5103, 5202	
	OR		

MP 5111 Independent Research Study - I	MP 5103, 5202
MP 5211 Independent Research Study-II	MP 5103, 5202

Spring Semester

MI	5xxx Thesis II	Thesis-I



Regular course load for the program is 4+4+2 courses. Summer is not a regular semester. Therefore, courses are not offered on a regular basis in summer.

All elective courses may not be offered in every semester. Elective courses may vary from time to time. Alternative courses may be substituted as and when required.

MS (Project Management) Bridge Arrangement

This arrangement allows MPM graduates to enhance their academic qualification. For MPM graduates, a maximum of six courses can be transferred to MSPM program; subject to passing the courses with a minimum 2.75 grade points and on surrendering the MPM degree. Project and Software Tools for Project Management are not transferrable towards MSPM degree completion requirements for MPM graduates.

Master of Science in Management Sciences

There are two streams available for Master of Science in Management Sciences. One Stream is by Course Work and the other one is by Research Work. In Course Work Stream, the student is required to complete 10 courses of 3 credit hours each. In the Research Work Stream, the student is required to complete 8 Courses and Two IRS OR one Thesis of Six credit hours. In both the streams, 30 credit hours are to be completed. The time limit to earn an MS degree is from 1.5 to 4 years. The detail of two streams is as follows:

1. Course Work Stream

The Scheme of Study is as follows:

- Six Compulsory Courses
- Four Electives
- No IRS or Thesis

Compulsory Courses

MS 5137	Research Methods and Techniques
MS 5204	Quantitative Tools for Research
MS 5132	Applied Strategic Management
MS 5104	Strategic Marketing Decisions
MS 5318	Strategic Finance
MS 5238	Strategic Human Resource Development

Electives (Electives in any of following Specializations)

- Finance
- Marketing
- Human Resource Management

First Year

Fall Semester

MS 5137	Research Methods and Techniques	-
MS 5132	Applied Strategic Management	-
MS 5238	Strategic Human Resource	-
	Development	
MS 5104	Strategic Marketing Decisions	ı

Spring Semester

	Quantitative Tools for Research	-
MS 5318	Strategic Finance	-
MS 5xxx	Elective I	-
MS 5xxx	Elective II	-

2. Research Work Stream

The Scheme of Study is as follows:

- Six Compulsory Courses
- Two Electives
- Two IRS OR Thesis

Compulsory Courses

1	J
MS 5137	Research Methods and Techniques
MS 5204	Quantitative Tools for Research
MS 5132	Applied Strategic Management
MS 5104	Strategic Marketing Decisions
MS 5318	Strategic Finance
MS 5238	Strategic Human Resource Development

Electives (Electives in any of following Specializations)

- Finance
- Marketing
- Human Resource Management

First Year

Fall Semester

MS 5137	Research Methods and Techniques	-
MS 5132	Applied Strategic Management	-
MS 5238	Strategic Human Resource	_
	Development	
MS 5104	Strategic Marketing Decisions	-

Spring Semester

	Quantitative Tools for Research	-
MS 5318	Strategic Finance	-
MS 5xxx	Elective I	-
MS 5xxx	Elective II	-

Second Year

Fall Semester MS 5xxx Elective III MS 5xxx Elective IV

ELECTIVES

Finance	
MS 5113	Financial Time Series
MS 5103	Managerial Economics
MS 5105	Econometrics
MS 5111	Derivatives and Financial Risk
MS 5115	Operations and Mathematical Modeling
MS 5134	Behavioral Finance
MS 5206	Modern Financial Applications
MS 5215	Corporate Finance
MS 5217	Corporate Finance Planning and
	Decisions
MS 5218	Financial Markets
MS 5237	Business Finance and Decision Making
MS 5317	Seminars in Finance
MS 5412	Islamic Banking and Finance
MS 5414	Applied Econometrics
MS 5421	Capital Asset Pricing Model
MS 5425	Empirical Asset Pricing
MS 5426	Mathematical Modeling in Finance
MS 5467	Tools for Data Analytics
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Marketing

	,
MS 5249	Advance Marketing Strategy
MS 5301	Seminars in Marketing
MS 5422	Distribution and Channel Management
MS 5424	Strategic Brand Management
MS 5429	Marketing Metrics
MS 5431	Strategic Entrepreneurial Marketing
MS 5432	Strategic Social Marketing
MS 5428	Global Marketing Strategies
MS 5433	Advertising Research
MS 5434	Behavioral Marketing
MS 5467	Tools for Data Analytics
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MS 5467	Tools for Data Analytics
Human Re	esource Management
MS 5101	Change Management
MS 5102	Organizational Development
MS 5202	Organizational Strategies and
	Effectiveness
MS 5203	Global Corporate Strategy
MS 5205	International Business Management
MS 5211	Creative Leadership
MS 5216	Corporate Governance

Second Year

Fall Semester	Pre-Req.
MP 5xxx Thesis - I	MS 5137, MS 5204
OR	
MP 5111 Independent Research Study - I	MS 5137, MS 5204
MP 5211 Independent Research Study-II	MS 5137, MS 5204

Spring Semester

MP 5xxx Thesis - II	Thesis-I

MS 5225	Leadership and Motivation Techniques
MS 5229	Negotiations and Conflict Resolution
MS 5241	Public Administration and Governance
MS 5245	System Thinking and Organizational
	Learning
MS 5303	Issues in Strategic Management
MS 5415	NGO Management
MS 5423	Global Governance and Development
MS 5427	Seminars in HRM
MS 5467	Tools for Data Analytics

Elective courses may vary from time to time. All courses may not necessarily be offered every year. Alternate courses may be substituted as and when required.

Students cannot register in Independent Research Study (IRS) OR thesis without completing six compulsory courses.

Maximum course load for a semester is 4 courses (12 credit hours). Summer is not a regular semester; therefore, courses are not offered on a regular basis in summer. A student can take maximum two interdisciplinary elective courses of the corresponding level in SS/CS/IT/ Media/MBA program with the prior approval of respective program managers.



Master of Science in Business Analytics

SZABIST offers Master of Science in Business Analytics with specialization in Finance, Marketing, Management /HR & Supply Chain Management. The program comprises of 30 credit hours & is based on two streams. Research work Stream requires the student to complete 8 Courses of 24-credit hours and one Research Thesis or Capstone Project of 6-credit hours each. The minimum time duration to earn MS Degree by this stream is 2 years. Course Work Stream requires the student to complete 10 Courses of 3credit hours each. The minimum time limit to complete MS Degree by Course Work stream is 1.5 years. The maximum duration to complete this degree is 4 years.

Course Curriculum:

Course Work Stream

The Scheme of Study is as follows

- Six Compulsory Courses (6x3 = 18 CHs) from Business Analytics Core Domain
- Four Elective Courses (4x3=12 CHs) from area of specialization)
- No IRS or Thesis

First Year

Fall Semester

BSA 5101	Data Mining
BSA 5102	Maths and Statistics
BSA 5103	Research Methodology
BSA 5104	Strategic Decision Making

Spring Semester

	BSA	5201	Programming Using Python
	BSA	5202	Tools for Business Analytics
			Elective I
I	BSA	5xxx	Elective II

Second Year

Fall Semester

BSA 5xxx Elective III	
BSA 5xxx Elective IV	

Research Work Stream

The Scheme of Study is as follows

- Six Compulsory Courses (6x3 = 18 CHs) from Business Analytics Core Domain
- Two Elective Courses (2x3=6 CHs) from area of specialization)
- Thesis / Capstone Project (6 CHs)

First Year

Fall Semester

I um ocmic	Ste1
BSA 5101	Data Mining
BSA 5102	Maths and Statistics
BSA 5103	Research Methodology
BSA 5104	Strategic Decision Making

Spring Semester

	0	
BSA	5201	Programming Using Python
BSA	5202	Tools for Business Analytics
BSA	.5xxx	Elective I
BSA	.5xxx	Elective II

Second Year

Fall Semester

- W-1 O U-1-05 VU-1
BSA 5xxx Thesis-I OR
BSA 5xxx Capstone Project-I

Spring Semester

_		
BSA	5xxx	Thesis-II OR
BSA	5xxx	Capstone Project-II

Electives (Electives in any of following areas subject to the offering of course)

- Finance
- Marketing
- Management/HR
- Supply Chain Management

Electives (Electives in any of following areas subject to the offering of course)

- Finance
- Marketing
- Management/HR
- Supply Chain Management

35

ELECTIVES

Finance

BSA 5221 Fintech/Data Science for Finance

BSA 5222 Applied Time Series Analysis for Forecasting

BSA 5322 Risk Management

BSA 5321 Financial Modelling

Marketing

BSA 5231 Digital Marketing and Social Media

BSA 5332 Retailing and Analytics

BSA 5232 Market Strategy and Forecasting

BSA 5331 Customer Relations Management

Management/HR

BSA 5241 Decision Support System

BSA 5342 Management Models

BSA 5341 Disaster Management (GIS)

BSA 5242 HR Analytics

BSA 5243 Performance Management

Supply Chain Management

BSA 5252 Strategies for Managing Supply Chain

BSA 5251 Advanced Warehouse, Store & Material Management

BSA 5352 Green Supply Chain Management

BSA 5351 Distribution Networks









PhD Management Science

For PhD Program, students are required to complete 48 credit hours. Five courses of 3 credit hours each, one Independent Research Study(IRS) of 3 credit hours and one dissertation of 30 credit hours. Following are the important points for PhD in Management Sciences:

- There are two compulsory courses in Ph.D i.e. Advanced Research Methods and Techniques and Advanced Quantitative Tools for Research.
- Students cannot register in IRS before completing all the compulsory courses.
- Candidate may be given prerequisite/deficiency courses or thesis which will be decided by the Interview Board at the time of admission.
- Prerequisite Courses are non-credit courses.
- The student will not be allowed to register in compulsory courses before completing prerequisite courses/ thesis (if any).
- 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 must be fulfilled which include the following:
 - Passing GAT Subject with minimum 60%.
 - Maintaining minimum CGPA requirement for each course and for entire program.
 - Passing Comprehensive Examination to establish the PhD candidacy (maximum 2 attempts allowed).
 - Publishing one Research Paper from the theses in W,X or Y-category journal before the completion of 30 credit hours dissertation.
- Elective courses are to be selected from the specialized area of Marketing, Finance and Human Resource Management.
- 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 to PhD-Management Science.

First Year

Fall Semester

MS 6106	Advanced Research Methods
	and Techniques
MS 6216	Advanced Quantitative Tools
	for Research
MS 6xxx	Elective I

Spring Semester

MS 6xxx	Elective II
MS 6xxx	Elective III
MS 6xxx	Independent Research Study

Second Year

Fall Semester

MS 6xxx	Dissertation (Proposal in One or
	Two Semester)

Spring Semester

MS 6xxx	Dissertation	

Third Year

Fall Semester

MS 6xxx	Dissertation	

Spring Semester

MS 6xxx	Dissertation	
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ELECTIVES

Finance

MS 6111 Business Finance and Decision Mak	ing
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MS 6113 Applied Econometric

MS 6202 Econometrics

MS 6315 Capital Asset Pricing Model

MS 6317 Empirical Asset Pricing

MS 6318 Financial Markets

MS 6319 Modern Financial Applications

MS 6322 Behavioral Finance

MS 6323 Corporate Finance

MS 6411 Financial Time Series

MS 6418 Operations and Mathematical Modeling

MS 6429 Islamic Banking and Finance

MS 6421 Corporate Finance Planning and Decision MS 6422 Derivatives and Financial Risk MS 6423 Managerial Economics MS 6325 Seminars in Finance MS 6425 Strategic Finance

MS 6434 Mathematical Modeling in Finance

Marketing

MS 6314

MS 6204 Strategic Marketing Decisions MS 6215 Seminars in Marketing MS 6312 Advance Marketing Strategy MS 6316 Distribution and Channel Management MS 6415 Strategic Brand Management

MS 6431 Marketing Metrics

Strategic Entrepreneurial Marketing MS 6432 Strategic Social Marketing MS 6433

MS 6428 Global Marketing Strategies MS 6326 Advertising Research Behavioral Marketing MS 6435

Human Resource Management

MS 6112 Strategic Human Resource Development

MS 6114 NGO Management MS 6201 Change Management

MS 6205 Public Administration and Governance

MS 6211 Organizational Development Corporate Governance MS 6311

Global Corporate Strategy MS 6321 Organizational Strategies and Effectiveness

MS 6324 Issues in Strategic Management

MS 6412 Creative Leadership

MS 6413 International Business Management Global Governance and Development MS 6414 Negotiations and Conflict Resolution MS 6416 MS 6417 Leadership and Motivation Techniques MS 6419 System Thinking and Organizational

Learning

MS 6427 Applied Strategic Management

MS 6424 Strategic Management

MS 6426 Seminars in HRM

Elective courses may vary from time to time. All courses may not necessarily be offered every year. Alternate courses may be substituted as and when required.

Course registration is subject to course offering in each semester. The above course plan is tentative for basic understanding. Students can register in any number of offered courses but not exceeding 3 courses (9 credit hours) per semester. One extra course can be allowed depending on the approval of program manager. Summer is not a regular semester and no fresh registration is offered during Summer. A student can take maximum two interdisciplinary elective courses in SS/CS/IT/Media/MBA program with the prior approval of respective program









DEPARTMENT OF COMPUTER SCIENCE The Department of Computer Science is aimed to produce globally recognized scientific and technological experts in the field of computing and engineering sciences. In the recent decade the computer science has played a catalytic role for many real-world applications. This includes, but not limited to, banking, software house, education, government, commerce, security, healthcare etc. The Department of Computer Science at SZABIST is committed to produce quality graduates who can satisfy the national and global contemporary scientific and technological needs. The students are encouraged to render cutting edge research & development in the domain of computing to handle socio-economic challenges.

The Department of Computer Science at SZABIST Islamabad offers degree program both at undergraduate and graduate level. All programs being offered in the Department of Computer Science are fully in-line with the guidance of Higher Education Commission and in accordance with the national and global industrial needs. The programs being offered at the Department of Computer Science are accredited by National Computing Education Accreditation Council (NCEAC), Pakistan. The Department of Computer Science offers following degree programs:

PROGRAMS

- · Bachelor of Science in Computer Science
- · Bachelor of Science in Software Engineering
- · Master of Science in Computer Science
- · Master of Science in Cyber Security
- · Doctor of Philosophy in Computing

BS Computer Science

The program is offered through a well-trained and qualified faculty. It consists of 41 courses (five/six courses per semester) with a total of 130 credit hours. BSCS Program is accredited by NCEAC, HEC, Pakistan. The maximum time to complete the degree is six years.

BS (Computer Science) COURSE PLAN (ROADMAP)

First Year	Sem.	Sem. Codes Course Title Cr.Hrs. Pre-Req.						
CSC 1101 Calculus and Analytical Geometry 3,0 3 -	Sem.	Codes		Cr.r	ırs.	Pre-Req.		
CSC 1101 Calculus and Analytical Geometry 3, 0 3 -			First Year					
CSC 1102 English Composition and Comprehension 3,0 3 -								
CSC 1103 Fundamentals of Programming 3,0 3 -						-		
CSCL 1103						-		
CSC 1107 Applied Physics				_	3	-		
CSCL 1107 Lab: Applied Physics 0,1 1 -			Lab: Fundamentals of Programming			-		
CSC 1108 Introduction to Computer Science 2, 0 2 -	1	CSC 1107	Applied Physics	2, 0	2	-		
CSCL 1108		CSCL 1107	Lab : Applied Physics		1	-		
CSC 1109		CSC 1108	Introduction to Computer Science	2, 0	2	-		
Second Semester		CSCL 1108	Lab: Introduction to Computer Science	0, 1	1	-		
CSC 1208 Object Oriented Programming Techniques 3,0 3 CSC 1103		CSC 1109	Pakistan Studies	2, 0	2	-		
CSC 1208 Object Oriented Programming Techniques 3,0 3 CSC 1103				18				
CSCL 1208			Second Semester	'				
2 CSC 2101 Communication and Presentation Skills 3, 0 3 CSC 1102 CSC 2103 Digital Logic Design 3, 0 3 CSC 1107 CSC 1206 Probability and Statistics 3, 0 3 - CSC 1209 Islamic Studies/ Humanities 2, 0 2 - Second Year Third Semester CSC 1201 Discrete Mathematical Structures 3, 0 3 - CSC 2102 Data Structures and Algorithms 3, 0 3 CSC 1208 CSC 2102 Lab: Data Structures and Algorithms 0, 1 1 CSC L 1208 CSC 2201 Computer Organization and Assembly Language 3, 0 3 - CSC 2201 Lab: Computer Organization and Assembly Language 0, 1 1 - CSC xxxx University Elective-1 3, 0 3 - CSC xxxx CS Supporting-1 3, 0 3 - Fourth Semester CSC 2203 Database Systems 3, 0 3 <td< td=""><td></td><td>CSC 1208</td><td>Object Oriented Programming Techniques</td><td>3, 0</td><td>3</td><td>CSC 1103</td></td<>		CSC 1208	Object Oriented Programming Techniques	3, 0	3	CSC 1103		
CSC 2103 Digital Logic Design 3,0 3 CSC 1107		CSCL 1208	Lab: Object Oriented Programming Techniques	0, 1	1	CSCL 1103		
CSCL 2103 Lab: Digital Logic Design 0, 1 1 CSCL 1107	2	CSC 2101	Communication and Presentation Skills	3, 0	3	CSC 1102		
CSC 1206 Probability and Statistics 3,0 3 -		CSC 2103	Digital Logic Design	3, 0	3	CSC 1107		
CSC 1209 Islamic Studies / Humanities 2, 0 2 - 16		CSCL 2103	Lab: Digital Logic Design	0, 1	1	CSCL 1107		
CSC 1201 Discrete Mathematical Structures 3, 0 3 -		CSC 1206	Probability and Statistics	3, 0	3	-		
CSC 1201 Discrete Mathematical Structures 3, 0 3 -		CSC 1209	Islamic Studies / Humanities	2, 0	2	-		
CSC 1201 Discrete Mathematical Structures 3, 0 3 -				16				
CSC 1201 Discrete Mathematical Structures 3,0 3 -			Second Year					
CSC 2102 Data Structures and Algorithms 3, 0 3 CSC 1208			Third Semester					
CSCL 2102 Lab: Data Structures and Algorithms 0, 1 1 CSCL 1208		CSC 1201	Discrete Mathematical Structures	3, 0	3	-		
3 CSC 2201 Computer Organization and Assembly Language 3, 0 3 - CSCL 2201 Lab: Computer Organization and Assembly Language 0, 1 1 - CSC xxxx University Elective-1 3, 0 3 - CSC xxxx CS Supporting-1 3, 0 3 - Fourth Semester CSC 2203 Database Systems 3, 0 3 CSC 2102 CSCL 2203 Lab: Database Systems 0, 1 1 CSCL 2102 CSC 2204 Finite Automata Theory and Formal Languages 3, 0 3 - CSC 2206 Linear Algebra 3, 0 3 CSC 2102 CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102		CSC 2102	Data Structures and Algorithms	3, 0	3	CSC 1208		
CSCL 2201 Lab: Computer Organization and Assembly Language		CSCL 2102	Lab: Data Structures and Algorithms	0, 1	1	CSCL 1208		
CSC xxxx	3	CSC 2201	Computer Organization and Assembly Language	3, 0	3	-		
CSC xxxx CS Supporting-1 3, 0 3 - 17		CSCL 2201	Lab: Computer Organization and Assembly Language	0, 1	1	-		
Fourth Semester CSC 2203 Database Systems 3, 0 3 CSC 2102		CSC xxxx	University Elective-1	3, 0	3	-		
To Fourth Semester Semester		CSC xxxx	CS Supporting-1	3, 0	3	-		
CSC 2203 Database Systems 3, 0 3 CSC 2102 CSCL 2203 Lab: Database Systems 0, 1 1 CSCL 2102 4 CSC 2204 Finite Automata Theory and Formal Languages 3, 0 3 - CSC 2206 Linear Algebra 3, 0 3 - CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102								
CSCL 2203 Lab: Database Systems 0, 1 1 CSCL 2102 CSC 2204 Finite Automata Theory and Formal Languages 3, 0 3 - CSC 2206 Linear Algebra 3, 0 3 - CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102			Fourth Semester	1				
CSCL 2203 Lab: Database Systems 0, 1 1 CSCL 2102 CSC 2204 Finite Automata Theory and Formal Languages 3, 0 3 - CSC 2206 Linear Algebra 3, 0 3 - CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102		CSC 2203	Database Systems	3, 0	3	CSC 2102		
CSC 2206 Linear Algebra 3, 0 3 - CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102		CSCL 2203	Lab: Database Systems	0, 1	1	CSCL 2102		
CSC 2206 Linear Algebra 3, 0 3 - CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102	4	CSC 2204	, , , , , , , , , , , , , , , , , , ,	3, 0	3	-		
CSC 3202 Design and Analysis of Algorithms 3, 0 3 CSC 2102					3	-		
					3	CSC 2102		
		CSC xxxx			3	-		
16				16				

		Third Year			
		Fifth Semester			
	CSC 2205	Operating Systems	3, 0	3	CSC 2102
	CSCL 2205	Lab: Operating Systems	0, 1	1	CSCL 2102
5	CSC 3109	Software Engineering	3, 0	3	-
	CSC 3201	Compiler Construction	3, 0	3	CSC 2204
	CSC xxxx	CS Supporting -2	3, 0	3	-
	CSC xxxx	CS Supporting-3	3, 0	3	-
			16		
		Sixth Semester			
	CSC 1205	Technical and Business Writing	3,0	3	-
	CSC 3205	Computer Networks and Data Communications	3, 0	3	-
	CSCL 3205	Lab: Computer Networks and Data Communications	0, 1	1	-
6	CSC 4101	Artificial Intelligence	3, 0	3	CSC1201
	CSCL 4101	Lab: Artificial Intelligence	0, 1	1	-
	CSC 4xxx	CS Elective-1	3, 0	3	-
	CSC 4xxx	CS Elective-2	3, 0	3	-
			17		
		Fourth Year			
Seventh Semester					
	CSC 4105	Final Year Project-I	0, 3	3	-
_	CSC 4106	Parallel and Distributed Computing	3, 0	3	CSC 2205
7	CSC 4xxx	CS Elective-3	3, 0	3	-
	CSC 4102	Professional Practices	3, 0	3	-
	CSC xxxx	University Elective-3	3, 0	3	-
			15		
		Eighth Semester			
	CSC 4201	Information Security	3, 0	3	-
0	CSC 4205	Final Year Project-II	0, 3	3	-
8	CSC 4xxx	CS Elective-4	3, 0	3	-
	CSC 4xxx	CS Elective-5	3, 0	3	-
	CSC xxxx	University Elective-4	3, 0	3	-
			15		-
			130		

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

CS ELECTIVES

CS ELECTIV	/ES
CSC 4703	Applied Data Mining
CSC 4706	Digital Image Processing
CSC 4708	Enterprise Resource Planning
CSC 4709	Internet Business Models
CSC 4712	IT Innovations
CSC 4714	Network Security and Encryption
CSC 4716	Switching and Routing
CSC 4717	Web Technologies-I
CSC 4718	Wireless and Mobile Technologies
CSC 4719	Game Development
CSC 4721	Introduction to Cloud Computing
CSC 4722	Introduction to Blockchain Technolo
CSC 4723	Blockchain and Smart Contract
	Development
CSC 4802	Android Application Development
CSC 4803	Auditing Information Systems
CSC 4805	Data and Network Security
CSC 4806	Digital Signal Processing
CSC 4807	Embedded Programming
CSC 4808	Ethical Hacking
CSC 4809	iOS Development
CSC 4812	Mechatronics
CSC 4813	Modeling and Simulation
CSC 4814	Software Project Management
CSC 4815	Software Engineering-II
CSC 4816	Technopreneurship
CSC 4817	Web Technologies-II
CSC 4823	Interaction Design
CSC 4824	Embedded Systems
CSC 4825	Computer Graphics
CSC 4826	Introduction to Data Science
CSC xxxx	User Interface Design
CSC xxxx	Introduction to Development and
	Operations

UNIVERSITY ELECTIVES

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

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

COMPUTER SCIENCE SUPPORTING COURSES

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

CSC 2122	Differential Equations
CSC 1202	Multivariate Calculus
CSC 2123	Graph Theory
CSC 2121	Theory of Programming Languages
CSC 3203	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.

All courses may not be offered in every semester. Elective courses may vary from time to time. Alternative courses may be substituted as and when required.



BS SOFTWARE ENGINEERING

The BS Software Engineering program at SZABIST is a full-time four year degree program comprising eight semesters with minimum of 130 credit hours. The degree program is designed around a set of courses pertaining to the principles of software analysis, design, architecture, development, testing, and maintenance techniques that are necessary to produce high-quality software systems. Some additional courses from the disciplines of Computer Science, Mathematics, Management Science, and Humanities are part of the degree program to develop a broader knowledge base of the students.

The BS Software Engineering program is offered through a trained and qualified faculty. It consists of 42 courses with a total of 130 credits hours. The maximum duration to complete the degree is six years.

BS (SOFTWARE ENGINEERING) COURSE PLAN (ROADMAP)

Sem.	Codes	Course Title	Cr.H	Irs.	Pre-Req.
First Year					
		First Semester			
	CSC 1101	Calculus and Analytical Geometry	3, 0	3	-
	CSC 1102	English Composition and Comprehension	3, 0	3	-
	CSC 1103	Fundamentals of Programming	3, 0	3	-
	CSCL 1103	Lab: Fundamentals of Programming	0, 1	1	-
1	CSC 1107	Applied Physics	2, 0	2	-
	CSCL 1107	Lab: Applied Physics	0, 1	1	-
	CSC 1108	Introduction to Computer Science	2, 0	2	-
	CSCL 1108	Lab: Introduction to Computer Science	0, 1	1	-
	CSC 1109	Pakistan Studies	2, 0	2	-
		Sub-total Sub-total	18		
		Second Semester			
	CSC 1208	Object Oriented Programming Techniques	3, 0	3	CSC 1103
	CSCL 1208	Lab: Object Oriented Programming Techniques	0, 1	1	CSC 1103
	CSC 2101	Communication and Presentation Skills	3, 0	3	CSC 1102
2	CSC 3109	Software Engineering	3, 0	3	-
	CSC 1201	Discrete Mathematical Structures	3, 0	3	-
	CSC 1209	Islamic Studies / Humanities	2, 0	2	-
	SEC xxxx	University Elective-I	3, 0	3	-
Sub-total		18			
Second Year					
		Third Semester			
	CSC 2102	Data Structures and Algorithms	3, 0	3	CSC 1208
	CSCL 2102	Lab: Data Structures and Algorithms	0, 1	1	CSC 1208
3	SEC 2403	Software Requirement Engineering	3, 0	3	CSC 3109
	SEC 2103	Human Computer Interaction	3, 0	3	CSC 3109
	CSC 2206	Linear Algebra	3, 0	3	-
	SEC xxxx	University Elective-II	3, 0	3	-
		Sub-total	16		

Sem.	Codes	Course Title	Cr.H	Irs.	Pre-Req.
	Fourth Semester				
	CSC 2205	Operating Systems	3, 0	3	CSC 2102
	CSCL 2205	Lab: Operating Systems	0, 1	1	CSC 2102
	CSC 2203	Database Systems	3, 0	3	CSC 2102
4	CSCL 2203	Lab: Database Systems	0, 1	1	CSC 2102
	SEC 2404	Software Design and Architecture	2, 0	2	CSC 5163
	SECL 2404	Lab: Software Design and Architecture	0, 1	1	CSC 5163
	CSC 1206	Probability and Statistics	3, 0	3	-
	SEC xxxx	University Elective - III	3, 0	3	-
		Sub-total	17		
		Third Year			
		Fifth Semester			
	SEC 3604	Software Construction and Development	2, 0	2	SEC 2404
	SECL 3604	Lab: Software Construction and Development	0, 1	1	SEC 2404
	CSC 3205	Computer Networks and Data Communication	3, 0	3	-
5	CSCL 3205	Lab: Computer Networks and Data Communication	0, 1	1	-
	CSC 1205	Technical and Business Writing	3, 0	3	CSC 2101
	SEC xxxx	SE Supporting -I	3, 0	3	-
	SEC xxxx	SE Supporting -II	3, 0	3	-
		Sub-total	16		
		Sixth Semester			
	SEC 3605	Software Quality Engineering	3, 0	3	CSC 3109
	SEC 3617	Information Security	3, 0	3	-
6	CSC 4102	Professional Practices	3, 0	3	-
	SEC 3607	Web Engineering	3, 0	3	-
	SEC xxxx	SE Elective - I	3, 0	3	-
	SEC 4xxx	SE Supporting - III	3, 0	3	-
		Sub-total	18		
		Fourth Year			
		Seventh Semester			
	SEC 3603	Software Project Management	3, 0	3	CSC 3109
	SEC 3606	Software Re-Engineering	3, 0	3	SEC 3604
7	SEC xxxx	SE Elective -II	3, 0	3	-
	SEC xxxx	SE Elective - III	3, 0	3	-
	CSC 4105	Final Year Project - I	0, 3	3	CSC 2203, SEC 2404
		Sub-total	15		
		Eighth Semester			
	SEC xxxx	SE Elective — IV	3, 0	3	-
8	SEC xxxx	SE Elective — V	3, 0	3	-
	CSC 4205	Final Year Project — II	0, 3	3	CSC 4105
	SEC xxxx	University Elective — IV	3, 0	3	-
		Sub-total	12		
		Total		130	

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

SE Electives

SE Elective	es
SEC 4516	Artificial Intelligence
SEC 4537	Parallel and Distributed Computing
SEC 4515	Digital Image Processing
SEC 4528	Game Development
SEC 4532	Introduction to Cloud Computing
SEC 4543	Systems Programming
SEC 4544	Technopreneurship
SEC 3614	Computer Graphics
SEC 4514	Introduction to Data Science
SEC 4534	Modeling and Simulation
SEC 3612	Mobile Application Development
SEC 4521	Agent Based Software Engineering
SEC 4522	Big Data Analytics
SEC 4523	Computational Intelligence
SEC 4524	Computer Vision
SEC 4526	Design Patterns
SEC 4511	e-Commerce
SEC 4527	Formal Methods
SEC 4531	Information Systems Audit
SEC 4533	Management Information Systems
SEC 4535	Multimedia Communication
SEC 4536	Natural Language Processing
SEC 4538	Real Time Systems
SEC 4539	Semantic Web
SEC 4541	Software Engineering Economics

SE Supporting courses

SEC 4713	Digital	Logic	Design
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SEC 4542 Software Metrics

SEC 4518 Visual Programming

SEC xxxx User Interface Design

Operations

SEC 4714 Business Process Engineering

SEC 4545 Topics in Software Engineering

SEC 4525 Data Encryption and Security SEC 4529 Global Software Development

SEC xxxx Introduction to Development and

SEC 4711 Formal Methods in Software Engineering

SEC 4712 Operations Research

SEC 4715 Stochastic Processes

UNIVERSITY ELECTIVES

SEC 3309	Organizational Behavior
	Foreign Languages
SEC 3308	Management Principles
SEC 3306	Sociology
SEC 3311	Psychology

SEC 3301 Introduction to Management SEC 3302 Financial Accounting

SEC 3303 Human Resource Management

DISTRIBUTION OF CREDIT HOURS

Course Group			%
Computing	Core Courses	39	31%
Software Engineering	Core Courses	27	18%
	Electives	15	12%
	Supporting	9	7%
General Education		19	14%
University Electives			9%
Mathematics and Science Foundation			9%
Total		130	100%

Internship

The internship is scheduled 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.

All courses may not be offered in every semester. Elective courses may vary from time to time. Alternative courses may be substituted as and when required.





MS Computer Science

SZABIST offers MSCS degree in three specialization including: Core Computer Science, Software Engineering (SE) and Networks and Security (N&S) in order to cater to 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 Studies (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

	Research Methodology
	Advanced Algorithms Analysis
CSC 5102	Theory of Computation

Second Semester

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

Second Year

Third Semester

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

Fourth Semester

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

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

First Year

First Semester

	Research Methodology
	Advanced Algorithms Analysis
CSC 5102	Theory of Computation

Second Semester

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

Second Year

Third Semester

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

Fourth Semester

10	urtii Schiester	
CS	SC/SEC 5xxx	Thesis/Independent Research Study II
		OR
		Course Work (from CS Stream or
		from SE-Stream)
SE	C 5xxx	Elective-IV (from SE-Stream)

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)

Second Year

Third Semester

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

Fourth Semester

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

CS-Stream

CS-Stream	
CSC 5164	Real-Time Systems
CSC 5162	Digital Image Processing
CSC 5161	Machine Learning
CSC 5163	Data Mining
CSC 5166	Operation Research
CSC 5167	Deep Learning
CSC 5264	Expert Systems
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
CSC 5168	Big Data Analytics
CSC 5271	Natural Language Processing

SE-Stream

SEC 5163	Software Requirement Engineering
SEC 5161	Software System Architecture
SEC 5164	Software System Quality
SEC 5162	Advanced Software Engineering
SEC 5261	Software Analysis and Testing
SEC 5263	Web Engineering
SEC 5262	Software Project Management

N&S-Stream

NSC 5164	Applied Cryptography
NSC 5162	Information Security
NSC 5165	Cyber Security
NSC 5261	Wireless Sensor Networks
NSC 5264	Telecom Policies and Regulations
NSC 5263	Mobile Ad-hoc Networks
NSC 5262	Advanced Data Communications
NSC 5265	Advanced Routing and Switching
NSC 5166	Advanced Ethical Hacking

NSC 5161 Advanced Computer Networks

NSC 5163 Network Security

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)

Programming Fundamentals
Data Structures
Operating Systems
Finite Automata Theory and Formal Languages

MS (CS) with SE-Specialization

Programming Fundamentals Data Structures Operating Systems Software Engineering

MS (CS) with N&S-Specialization

Programming Fundamentals Data Structures

Operating Systems

Data Communication and Computer Networks

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

MS Cyber Security

The MS (Cyber Security) program is of 2-years duration offered in the evening. It requires 33 credit hours, including 4 core courses (3 credits) and 5 elective courses (3 credits). To earn MS (Cyber Security) degree, the student has to complete a thesis (2 x 3 Credits). The maximum time limit to complete the MS (Cyber Security) degree is 4 years.

Why Study Cyber security?

The world is adapting innovative IT solutions such as mobile technology, online banking and electronic government services into everyday use. However, with so many e-solutions and such extensive use of the Internet, attention needs to be turned to the security issue. Cyber systems require innovative and secure IT solutions for everyday use. Therefore, the demand for skilled security professionals is arising to protect against cyber-attacks. Offered through the Department of Computer Science, MS (Cyber security) is designed to respond to the fast-growing demand for technical cyber security experts nationally and internationally. It provides the necessary foundations for the design and development of systems that need to be secure. The major focus will be given to the design of secure systems that exhibit confidentiality, integrity, and availability. The program will provide students with core skills in wide aspects of the security of information systems.

Key objectives of the program are as follow:

- PEO-1 Recognize and evaluate security requirements and issues in organizations using IT systems.
- PEO-2 Assess cyber security risk management policies to protect an organization's critical information and assets adequately.
- PEO-3 Measure the performance of security systems within an enterprise-level information system to maintain and update an enterprise-level information security system.
- PEO-4 Implement continuous network monitoring and provide real-time security solutions.

First Year

First Semester

	Applied Cryptography
CYS 5103	Network Security
CYS 5102	Information Security

Second Semester

Second Semester		
CYS 5201	Digital Forensics	
CYS 5xxx	Elective-I	
CYS 5xxx	Elective-II	

Second Year

Third Semester

	Elective-III
	Elective-IV
CYS 5109	Thesis (Part-1)

Fourth Semester

TOMETHE COM	100101
CYS 5xxx	Elective-V
CYS 5209	Thesis (Part-II)

Electives Courses

CYS 5234	Network Penetration Testing and
	Countermeasures
CYS 5237	Security in Mobile and Wireless
	Networks
CYS 5332	Ethical Hacking
CYS 5334	Malware Detection and Analysis
CYS 5232	Blockchain and Crypto Assets
CYS 5333	Intrusion Detection and Firewalls
CYS 5235	Reverse Engineering and Malware
	Analysis
CYS 5335	Security and Privacy for the Smart Grid
CYS 5233	Machine Learning for Cyber Security
CYS 5337	Security Modelling and Analysis of
	Mobile Agent Systems
CYS 5236	Security in Ad Hoc Sensor Networks
CYS 5336	Security in Cloud Environment
CYS 5231	Advanced Topic in Cyber Security - I
CYS 5331	Advanced Topic in Cyber Security - II

Deficiency Courses
Programming Fundamentals (Core Programming Course)
Data Structures & Algorithms OR Design & Analysis of Algorithms
Computer Networks

Course type	Min No. of Courses Min	No. of Credit Hours
Core Courses	4 x 3	12
Electives	5 x 3	15
Thesis	2 x 3	06
Total		33

PhD (Computing)

The PhD program requires students to complete 48 credit hours. Course work of 18 credits (6 courses) is needed which include 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	1
CSC 6xxx	Elective-III
CSC 6xxx	Elective-IV

Second Year

Fall Semester

CSC 6xxx	Dissertation	

Spring Semester

CSC	6xxx	Dissertation

Third Year

Fall Semester

CSC 6xxx	Dissertation	
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Spring Semester

CSC 6xxx Dissertation

Elective courses are listed under different streams in MS Computer Science, MS Data Science and MS Cyber Security 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 who 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.





The Department of Robotics and Artificial
Intelligence at SZABIST is committed to
provide world-class hi-tech scientific and
technological expertise in the field of Artificial
Intelligence, Robotics and Data Science. Globally,
the hybridization of these fields has rendered robust,
intelligent, autonomous, and real-time systems for
modern applications. The Department of Robotics and
Artificial Intelligence at SZABIST is aimed to produce
quality graduates. The students are encouraged to render
cutting-edge research & development in the domain of
Robotics and Artificial Intelligence to handle socio-economic
challenges.

INTELLIGENCE

and Artificial Intelligence at SZABIST Islamabad offers degree programs both at the undergraduate and graduate levels. All programs being offered in the Department of Robotics and Artificial Intelligence are fully in line with the guidance of the Higher Education Commission and in accordance with the national and global industrial needs. The Department of Robotics and Artificial Intelligence offers the following degree programs:

- · Bachelor of Science in Artificial Intelligence
- · Master of Science in Data Science

BS ARTIFICIAL INTELLIGENCE

BS (Artificial Intelligence) program is a four year degree program. The objective of the BS (Artificial Intelligence) program is to inculcate a broad-based rudimentary education in Artificial Intelligence and allied domains. 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 program educational objectives and learning outcomes.

The program is offered through a well-trained and qualified faculty. It consists of 41 courses with a total of 130 credit hours

BS (ARTIFICIAL INTELLIGENCE) COURSE PLAN (ROADMAP)

CSCL 1208 Lab: Object Oriented Programming Techniques 0, 1 1 -	Sem.	Codes	Course Title	Cr.H	Irs.	Pre-Req.
CSC 1108 Introduction to Computer Science 2, 0 2 -			First Year	•		
CSCL 1108	First Semester					
CSC 1103 Fundamentals of Programming 3,0 3 - 1		CSC 1108	Introduction to Computer Science	2, 0	2	-
CSCL 1103		CSCL 1108	Lab: Introduction to Computer Science	0, 1	1	_
CSC 1209 Islamic Studies Humanities 2, 0 2		CSC 1103	Fundamentals of Programming	3, 0	3	_
CSC 1109 Pakistan Studies 2,0 2 -	1	CSCL 1103	Lab: Fundamentals of Programming	0, 1	1	_
CSC 1101 Calculus and Analytical Geometry 3, 0 3 -		CSC 1209	Islamic Studies / Humanities	2, 0	2	-
CSC 1102 English Composition and Comprehension 3, 0 3 -		CSC 1109	Pakistan Studies	2, 0	2	-
Sub-total 17		CSC 1101	Calculus and Analytical Geometry	3, 0	3	-
Second Semester		CSC 1102	English Composition and Comprehension	3, 0	3	-
CSC 1208 Object Oriented Programming Techniques 3, 0 3 CSC 1100			Sub-total		17	
CSCL 1208 Lab: Object Oriented Programming Techniques 0, 1 1 - CSC 2103 Digital Logic Design 3, 0 3 - CSCL 2103 Lab: Digital Logic Design 0, 1 1 - CSC 2206 Linear Algebra 3, 0 3 CSC 110			Second Semester			
CSC 2103 Digital Logic Design 3,0 3 -		CSC 1208	Object Oriented Programming Techniques	3, 0	3	CSC 1103
2 CSCL 2103 Lab: Digital Logic Design 0, 1 1 - CSC 2206 Linear Algebra 3, 0 3 CSC 110 CSC 1206 Probability and Statistics 3, 0 3 - CSC 2101 Communication and Presentation Skills 3, 0 3 CSC 110 Second Year Third Semester CSC 2102 Data Structures and Algorithms 3, 0 3 CSC 110 CSC 2102 Lab: Data Structures and Algorithms 0, 1 1 - CSC 2201 Computer Organization and Assembly Language 3, 0 3 CSC 210 3 CSC 1201 Discrete Mathematical Structures 3, 0 3 CSC 120 CSC 4101 Artificial Intelligence 3, 0 3 CSC 120 CSC 2122 Differential Equations 3, 0 3 CSC 110		CSCL 1208	Lab: Object Oriented Programming Techniques	0, 1	1	-
CSC 2206 Linear Algebra 3, 0 3 CSC 110		CSC 2103	Digital Logic Design	3, 0	3	-
CSC 1206 Probability and Statistics 3,0 3 - CSC 2101 Communication and Presentation Skills 3,0 3 CSC 1102 Sub-total Second Year Third Semester CSC 2102 Data Structures and Algorithms 3,0 3 CSC 110 CSC 2201 Computer Organization and Assembly Language 3,0 3 CSC 2102 CSC 1201 Discrete Mathematical Structures 3,0 3 CSC 120 CSC 4101 Artificial Intelligence 3,0 3 CSC 120 CSC 2122 Differential Equations 3,0 3 CSC 110	2	CSCL 2103	Lab: Digital Logic Design	0, 1	1	-
CSC 2101 Communication and Presentation Skills 3, 0 3 CSC 1102		CSC 2206	Linear Algebra	3, 0	3	CSC 1101
Sub-total Second Year Se		CSC 1206	Probability and Statistics	3, 0	3	-
Third Semester		CSC 2101	Communication and Presentation Skills	3, 0	3	CSC 1102
Third Semester					17	
CSC 2102 Data Structures and Algorithms CSCL 2102 Lab: Data Structures and Algorithms 0, 1 1 - CSC 2201 Computer Organization and Assembly Language 3, 0 3 CSC 210 CSCL 2201 Lab: Computer Organization and Assembly Language 0, 1 1 - CSC 1201 Discrete Mathematical Structures 3, 0 3 CSC 120 CSCL 4101 Artificial Intelligence 3, 0 3 CSC 120 CSCL 4101 Lab: Artificial Intelligence 0, 1 1 - CSC 2122 Differential Equations 3, 0 3 CSC 110		Second Year				
CSCL 2102 Lab: Data Structures and Algorithms CSC 2201 Computer Organization and Assembly Language 3, 0 3 CSC 210 CSCL 2201 Lab: Computer Organization and Assembly Language CSC 1201 Discrete Mathematical Structures CSC 4101 Artificial Intelligence CSCL 4101 Lab: Artificial Intelligence CSC 2122 Differential Equations 3, 0 3 CSC 120 CSC 110						
CSC 2201 Computer Organization and Assembly Language 3, 0 3 CSC 210 CSCL 2201 Lab: Computer Organization and Assembly Language 0, 1 1 - CSC 1201 Discrete Mathematical Structures 3, 0 3 - CSC 4101 Artificial Intelligence 3, 0 3 CSC 120 CSCL 4101 Lab: Artificial Intelligence 0, 1 1 - CSC 2122 Differential Equations 3, 0 3 CSC 110		CSC 2102		3, 0	3	CSC 1103
3 CSCL 2201 Lab: Computer Organization and Assembly Language 0, 1 1 - CSC 1201 Discrete Mathematical Structures 3, 0 3 - CSC 4101 Artificial Intelligence 3, 0 3 CSC 120 CSCL 4101 Lab: Artificial Intelligence 0, 1 1 - CSC 2122 Differential Equations 3, 0 3 CSC 110		CSCL 2102	Lab: Data Structures and Algorithms	0, 1		-
CSC 1201 Discrete Mathematical Structures 3, 0 3 - CSC 4101 Artificial Intelligence 3, 0 3 CSC 120 CSCL 4101 Lab: Artificial Intelligence 0, 1 1 - CSC 2122 Differential Equations 3, 0 3 CSC 110		CSC 2201	Computer Organization and Assembly Language	3, 0		CSC 2103
CSC 4101 Artificial Intelligence 3, 0 3 CSC 120 CSCL 4101 Lab: Artificial Intelligence 0, 1 1 - CSC 2122 Differential Equations 3, 0 3 CSC 110	3	CSCL 2201	Lab: Computer Organization and Assembly Language	0, 1	1	-
CSCL 4101 Lab: Artificial Intelligence 0, 1 1 - CSC 2122 Differential Equations 3, 0 3 CSC 110		CSC 1201	Discrete Mathematical Structures	3, 0	3	-
CSC 2122 Differential Equations 3, 0 3 CSC 110		CSC 4101	Artificial Intelligence	3, 0	3	CSC 1208
		CSCL 4101	Lab: Artificial Intelligence	0, 1	1	-
Sub-total		CSC 2122	Differential Equations	3, 0	3	CSC 1101
Sub-total		Sub-total			18	

Sem.	Codes	Course Title	Cr.H	lrs.	Pre-Req.
	+	Fourth Semester			+
	CSC 3205	Computer Networks and Data Communications	3, 0	3	-
	CSCL 3205	Lab: Computer Networks and Data Communications	0, 1	1	-
	CSC 2203	Database Systems	3, 0	3	-
4	CSCL 2203	Lab: Database Systems	0, 1	1	-
	CSC 3202	Design and Analysis of Algorithms	3, 0	3	CSC 2102
	AIC 2401	Programming for Artificial Intelligence	2,0	2	CSC 4101
	AICL 2401	Lab: Programming for Artificial Intelligence	0, 1	1	-
	AIC xxxx	AI Elective - 1	3, 0	3	-
	-	Sub-total		17	
		Third Year			
		Fifth Semester			
	CSC 2205	Operating Systems	3, 0	3	CSC 2102
	CSCL 2205	Lab: Operating Systems	0, 1	1	-
	AIC 3501	Artificial Neural Networks	2, 0	2	AIC 2401
5	AICL 3501	Lab: Artificial Neural Networks	0, 1	1	-
	AIC 3503	Machine Learning	2, 0	2	AIC 2401
	AICL 3503	Lab: Machine Learning	0, 1	1	-
	AIC 3502	Knowledge Representation and Reasoning	3, 0	3	AIC 2401
	AIC xxxx	University Elective – 1	3, 0	3	-
		Sub-total		16	
		Sixth Semester			
	CSC 1205	Technical and Business Writing	3,0	3	CSC 2101
	AIC 3602	Computer Vision	2, 0	2	CSC 3501
	AICL 3602	Lab: Computer Vision	0, 1	1	-
6	AIC 3603	Natural Language Processing	3, 0	3	CSC 3501
	CSC 3109	Software Engineering	3, 0	3	-
	AIC xxxx	AI Elective - 2	3,0	3	-
	AIC xxxx	University Elective - 2	3, 0	3	-
		Sub-total Sub-total		18	
		Fourth Year			
		Seventh Semester			
	CSC 4106	Parallel and Distributed Computing	3, 0	3	CSC 1208, CSC 2205
	CSC 4102	Professional Practices	3, 0	3	- CSC 2203
7	AIC xxxx	University Elective-3	3, 0	3	_
-	AIC xxxx	AI Elective - 3	3, 0	3	-
	AIC 4707	Final Year Project-I	0, 3	3	_
	1	Sub-total	0,0	15	
		SEighth Semester			1
	AIC 4807	Final Year Project-II	0, 3	3	AIC 4707
8	AIC 4xxx	University Elective – 4	3, 0	3	-
	CSC 4201	Information Security	3, 0	3	-
	AIC xxxx	AI Elective - 4	3, 0	3	_
		Sub-total		12	

AI ELECTIVES

AIC 4701	Advanced Statistics
AIC 4706	Theory of Automata and Formal
	Languages
AIC 4802	Data Mining
AIC 4702	Deep Learning
AIC 4805	Speech Processing
AIC 4804	Reinforcement Learning
AIC 4803	Fuzzy Systems
AIC 4703	Evolutionary Computing
AIC 4705	Swarm Intelligence

UNIVERSITY ELECTIVES

AIC 4801 Agent Based Modeling AIC 4704 Knowledge Based Systems

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

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

MATHEMATICS & SCIENCE FOUNDATION COURSES

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

- Calculus and Analytical Geometry
- 2. Linear Algebra
- Probability and Statistics
- **Differential Equations**

DISTRIBUTION OF CREDIT HOURS

	Co	re Courses (List Attached):	
	i.	Computing Core Courses	39
	ii.	Computer Science Core Courses	18
	iii.	General Education Courses	19
	iv.	Artificial Intelligence Core Courses	18
Γ.	Ele	ctive Courses (List Attached)	

i.	Mathematics & Science Foundation	
	Courses	12
ii.	Artificial Intelligence Elective Courses	12
iii.	Institutional Elective Courses	12
	Total	130

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.



Master of Science in Data Science

The MS (Data Science) program is of 2-years duration offered in the evening. It requires 30 credit hours including 3 core courses, and 2 specialized data science courses. The 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 compete 10 courses of 3 Credit hours each. Else, the student is required to complete 8 courses (24 credit hours), and Two Independent Research Study (6 credit hours) OR a thesis (6 credit hours).

The maximum time limit to complete the MS (Data Science) degree is 4 years.

Why Study Data Science?

The amount of data is growing so rapidly as well as its significance in the emerging societal setups such as the pervasive Internet of Things. The way one imagines data is going to change in the coming years. Both Big Data Analytics and pervasive computing hinge on the principle axis of data analytics. MS (Data Science) program is going to be relevant in terms of job creation and artisanal smart business generation. Graduates from this program would definitely avail the early-bird advantage.

Program Objectives

The MS (Data Science) program has been designed to give students the option to be part of a data science endeavour that begins with the identification of business processes, determination of data provenance and ownership, understanding the ecosystem of the business decisions, skill sets and tools that shape the data, making data amenable to analytics, identifying sub-problems, recognizing the technology matrix required for problem resolution, creating incrementally-complex data-driven models and then maintaining them to ultimately leverage them for business growth. Individual objectives include:

- To equip students to transform data into actionable insights to make complex decisions.
- To enable students to understand and analyze problems and arrive at computable solutions.
- To expose students to the set of technologies that match those solutions.
- To gain hands-on experience on data-centric tools for statistical analysis, visualization and big data applications at the same rigorous scale as in a practical data science project.
- To understand the implications of handling data in terms of data security and business ethics.

First Year

First Semester

DSC 5101 Statistical and Mathematical Methods		
	for Data Science	
DSC 5102	Tools and Techniques in Data Science	
DSC xxxx	Elective-I	

Fourth Semester

	Elective-IV
DSC xxxx	Thesis (Part-II) or Elective-V

Second Semester

	Machine Learning
	Specialization-Elective-I
DSC xxxx	Specialization-Elective-II

Second Year

Third Semester

	Thesis (Part-I) or Elective-II
DSC xxxx	Elective-III

Course Types	Cumulative Credits
Core courses (3)	9
Specialization Requirement Courses (2)	6
Electives (3)	9
Thesis (Part-I & Part-II) or	6
Independent Research Study (I & II) or	
Elective (II & V)	
Total	30

Three Core Courses		Cr.Hrs
DSC 5101	Statistical and Mathematical	3
	Methods for Data Science	
DSC 5102	Tools and Techniques in	2 + 1*
	Data Science	
DSC 5201	Machine Learning	3

^{* 2+1} means 2 hours of lecture + 3 hours of lab work

Specialization Courses		Cr.Hrs
DSC 5243	Big Data Analytics	3
DSC 5223	Deep Learning	3
DSC 5241	Natural Language	3
DSC 5242	Distributed Data Processing	3

Deficiency Courses
DSC xxxx Programming Fundamentals
(Core Programming Course)
DSC xxxx Data Structures & Algorithms
OR Design & Analysis of Algorithms
DSC xxxx Database Systems

Elective Courses

LICCIII CO	41000
DSC 5221	Advanced Computer Vision
DSC 5125	Algorithmic Trading
DSC 5224	Bayesian Data Analysis
DSC 5242	Big Data Analytics
DSC 5126	Bioinformatics
DSC 5121	Cloud Computing

DSC 5225	Computational Genomics
DSC 5122	Data Visualization
DSC 5223	Deep Learning
DSC 5226	Deep Reinforcement Learning
DSC 5127	Distributed Data Processing and
	Machine Learning
DSC 5227	Distributed Machine Learning in
	Apache Spark
DSC 5228	High-performance computing
DSC 5128	Inference and Representation
DSC 5241	Natural Language Processing
DSC 5129	Optimization Methods for Data Science
	and Machine Learning
DSC 5229	Probabilistic Graphical Models
DSC 5231	Scientific Computing in Finance
DSC 5131	Social network analysis
DSC 5132	Time-series Analysis and Prediction

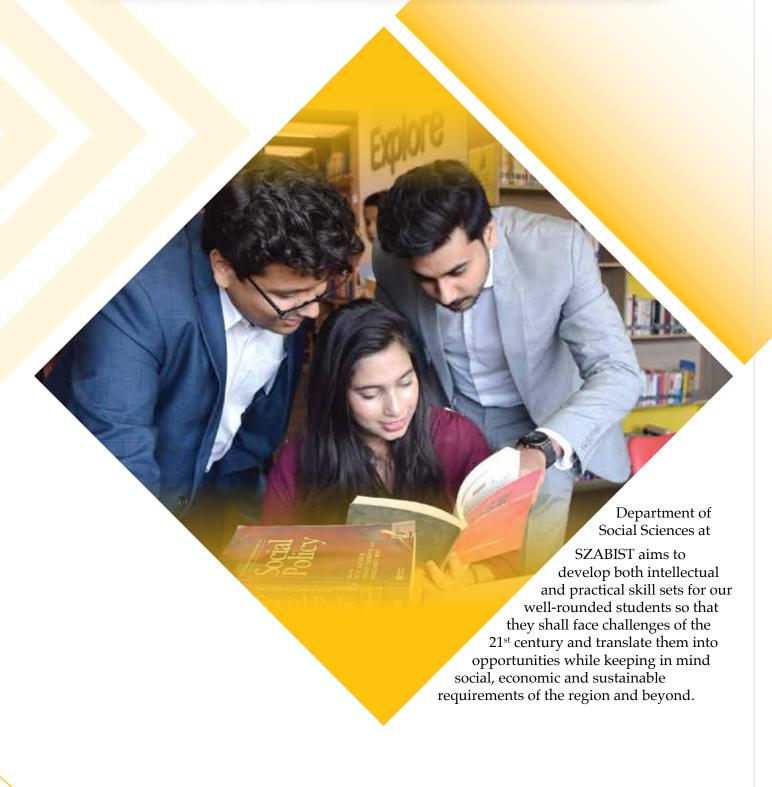
All courses may not be offered in every semester.

Elective courses may vary from time to time.

Alternative courses may be substituted as and when required.

The MS Data Science Program is subjected to 20 students.





FACULTY OF EDUCATION & SOCIAL SCIENCES

Department of Social Sciences

BS Social Sciences

SZABIST offers a comprehensive four year Bachelors degree in Social Sciences with specialization stream in Economics, International Relations, Sociology, Psychology, and Development Studies. The degree consists of 46 courses and a Research Project. The students are required to complete a total of 142 Credit hours and an internship. The maximum time limit to complete the degree is six years.

First Year

Fall SemesterPre-ReqSS 1117Computer and Web Skills-SS 1116English for General Purposes-SS 1105Microeconomics-SS 1115Community Services-SS 1201Introduction to Social Sciences-SS 1112Pakistan Studies-

Spring Semestert

SS 2306	Psychology	-
SS 1205	Macroeconomics	SS 1105
SS 2307	Sociology	-
SS 1155	Introduction to Political Science	-
SS 2412	International Relations	-
SS 1212	Islamic Studies OR	
SS 1213	Humanities*	-
	(For non-Muslim students)	

Second Year

Fall Semester

SS 2314	Study of Anthropology	-
SS 2316		SS 1116
SS 2313	Introduction to Social Psychology	SS 2306
SS 2318	Mathematics and Statistics	-
SS 2413	Philosophy	-
SS 2319	Introduction to Indus Civilization	-

Spring Semester

SS 2406	Gender Studies	-
SS 2418	Statistical Inferences	SS 2318
SS 2414	Introduction to Organizational	SS 2306
	Psychology	
SS 3503	Development Studies	-
SS 1209	Social Policy	SS 2307
SS 1xxx	Elective	-

Third Year

Fall Semester]	Pre-Req
SS 2312	Culture, Art and Society		-
SS 3512	Foreign Language-I		-
SS 3606	Political Economy		-
SS 4xxx	Major-I		-
SS 4xxx	Major-II		-
SS 4xxx	Major-III		-

Spring Semester

- F 6		
SS 3504	Research Methods	-
SS 3605	International Law and	-
	Human Rights	
SS 3612	Foreign Language-II	SS 3509
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	SS 2306
	Psychology	
SS 4709	Research Project-I	SS 3504, SS 2318 SS2418
SS 4xxx	Major-VII	-
SS 4xxx	Major-VIII	-
SS 4xxx	Major-IX	-

Spring Semester

SS 4804	Public Policy	SS 1209
SS 4809	Research Project-II	SS 4709
SS 2405	Enlightenment	SS 2413
SS 4xxx	Major-X	-
SS 4xxx	Major-XI	-
SS 4xxx	Major-XII	-

ELECTIVES

SS 1154	Literature
SS 1165	Human Geography
SS 1157	Comparative Religion

SS 1254 World History

FACULTY OF EDUCATION & SOCIAL SCIENCES

SS 1262	Mass Media	SS 4176	Globalization and Global Governance
SS 1163	Development and Politics	SS 4277	Modern Ideologies
SS 1163	Culture and Media in Sindh	SS 4277	Central and West Asian Studies
SS 1203		SS 4174	
SS 4075	History of Ideas		European Studies
	Sindh Studies	SS 4177	Middle Eastern Studies
SS 1264	Introduction to Philanthropy	SS 4179	Politics of Terrorism
		SS 4178	Muslim World
Streams		SS 4276	International Institutions
	y Stream	SS 4278	Political Geography
SS 4111	Abnormal Psychology	SS 4119	Arms Control and Disarmament
SS 4112	Developmental Psychology	SS 4279	US and International Politics
SS 4134	Cognitive Psychology		
SS 4135	Educational Psychology	Developm	ent Studies Stream
SS 4234	Psychodynamics	SS 1163	Development and Politics
SS 4268	History of Psychology	SS 4128	Agriculture Economics
SS 4167	Child Psychology	SS 4138	Corporate Social Responsibility
SS 4156	Clinical Psychology	SS 4147	Development and Planning
SS 4114	Personality Theories	SS 4139	Gender and Development
SS 4255	Counseling and Psychotherapy	SS 4181	Capabilities and Human Development
SS 4211	Psychological Testing	SS 4184	Poverty and Inequality
SS 4236	Positive Psychology	SS 4238	Social Entrepreneurship
SS 4168	Experimental Psychology	SS 4251	Sustainable Development
SS 4267	Forensic Psychology	SS 4269	Civil Society
SS 4262	Physiological Psychology	SS 4276	International Institutions
SS 4113	Environmental Psychology	SS 4706	Development Economics
SS 4297	Community Psychology	SS 4155	Basic Econometrics
	, , ,	SS 5104	Theories of Development
Sociology		SS xxxx	Monitoring and Evaluation
SS 4269	Civil Society	SS xxxx	
SS 4269 SS 4271	Peace Movements		Rural Planning and Development in Pakistan
SS 4269	Peace Movements Corporate Social Responsibility	SS xxxx	Rural Planning and Development in Pakistan
SS 4269 SS 4271 SS 4138 SS 4141	Peace Movements Corporate Social Responsibility Mass, Media and Society	SS xxxx	Rural Planning and Development in Pakistan s Stream
SS 4269 SS 4271 SS 4138	Peace Movements Corporate Social Responsibility	SS xxxx Economics SS 4139	Rural Planning and Development in Pakistan Stream Gender and Development
SS 4269 SS 4271 SS 4138 SS 4141	Peace Movements Corporate Social Responsibility Mass, Media and Society	Economics SS 4139 SS 4147	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development	SS xxxx Economics SS 4139 SS 4147 SS 4181	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship	Economics SS 4139 SS 4147 SS 4181 SS 4281	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice	SS xxxx Economics SS 4139 SS 4147 SS 4181	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education	Economics SS 4139 SS 4147 SS 4181 SS 4281	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172 SS 4272	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4182	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172 SS 4272 SS 4169	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4182 SS 4283	Rural Planning and Development in Pakistan Section Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4182 SS 4283 SS 4282	Rural Planning and Development in Pakistan Sericam Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172 SS 4172 SS 4169 SS 4273 SS 4295	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4182 SS 4282 SS 4184	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4271 SS 4172 SS 4172 SS 4172 SS 4273 SS 4273 SS 4295 SS 4197	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4283 SS 4282 SS 4184 SS 4228	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172 SS 4172 SS 4169 SS 4273 SS 4295	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4182 SS 4283 SS 4282 SS 4184 SS 4228 SS 4249	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4272 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273 SS 4295 SS 4197 SS 4198 Internation	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion Sociology of Health	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4182 SS 4283 SS 4282 SS 4282 SS 4284 SS 4228 SS 4249 SS 4251 SS 4155	Rural Planning and Development in Pakistan Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy Sustainable Development Basic Econometrics
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4296 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273 SS 4295 SS 4197 SS 4198	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion Sociology of Health Onal Relations Stream Foreign Policy and International Politics	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4284 SS 4128 SS 4182 SS 4282 SS 4184 SS 4228 SS 4249 SS 4251 SS 4155 All course	Rural Planning and Development in Pakistan s Stream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy Sustainable Development Basic Econometrics es may not necessarily be offered every year.
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4272 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273 SS 4295 SS 4197 SS 4198 Internation	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion Sociology of Health	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4182 SS 4282 SS 4282 SS 4284 SS 4228 SS 4249 SS 4251 SS 4155 All course Alternate	Rural Planning and Development in Pakistan Sericam Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy Sustainable Development Basic Econometrics es may not necessarily be offered every year.
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4272 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273 SS 4295 SS 4197 SS 4198 Internation SS 4275	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion Sociology of Health Onal Relations Stream Foreign Policy and International Politics	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4284 SS 4128 SS 4182 SS 4282 SS 4184 SS 4228 SS 4249 SS 4251 SS 4155 All course	Rural Planning and Development in Pakistan Sericam Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy Sustainable Development Basic Econometrics es may not necessarily be offered every year.
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4272 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273 SS 4295 SS 4197 SS 4198 Internation SS 4275	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion Sociology of Health Inal Relations Stream Foreign Policy and International Politics Diplomacy, Conflict Resolution and	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4282 SS 4184 SS 4228 SS 4249 SS 4251 SS 4155 All course Alternate required.	Rural Planning and Development in Pakistan Sericam Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy Sustainable Development Basic Econometrics es may not necessarily be offered every year.
SS 4269 SS 4271 SS 4138 SS 4141 SS 4237 SS 4238 SS 4239 SS 4241 SS 4242 SS 4196 SS 4272 SS 4171 SS 4172 SS 4272 SS 4169 SS 4273 SS 4295 SS 4197 SS 4198 Internation SS 4275 SS 4274	Peace Movements Corporate Social Responsibility Mass, Media and Society Post-Colonial State and Social Development Social Entrepreneurship Social Justice Sociology of Education The Sociology of Poverty Social Theories-I Social Theories-II Class, Caste, and Ethnicity in South Asia Political Sociology Social Change in Pakistan Citizenship Urbanization Criminology The Sociology of Religion Sociology of Health Inal Relations Stream Foreign Policy and International Politics Diplomacy, Conflict Resolution and Confidence Building Measures	Economics SS 4139 SS 4147 SS 4181 SS 4281 SS 4261 SS 4183 SS 4284 SS 4128 SS 4282 SS 4184 SS 4228 SS 4249 SS 4251 SS 4155 All course Alternate required. Full time	Rural Planning and Development in Pakistan Sectream Gender and Development Development and Planning Capabilities and Human Development Fiscal and Monetary Economics Mathematical Economics Industrial Economics Industrial Economics Trade Economics Agriculture Economics Game Theory Labour Economics Economic Growth Poverty and Inequality History of Economic Thoughts Pakistan Economy Sustainable Development Basic Econometrics es may not necessarily be offered every year.

FACULTY OF EDUCATION & SOCIAL SCIENCES

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

There are two streams available for MS SS. 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 are to be completed. The time limit to earn an MS degree is 1.5 to 4 years. The details 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

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**

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

Second Year

Fall Semester**

		5001	
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

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	21 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**

The meg.
SS 5121, SS 5122

Pre-Rea

Spring Semester

SS 5xxx	Thesis ((Part II))	Thesis-I

^{**(}Offering may fluctuate as per university policy)

- * Electives (Electives in any of the following specializations)
- International Relations

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

SS 5xxx Thesis (Part I)

- Economics
- Psychology
- Sociology

	T 0	00 =004	C 1 177 Pt 1.
ELECTIV	ES	SS 5331	Gender and Human Rights
		SS 5402	Law and Human Rights
	rnational Relations) Stream	SS 5336	Community Development and Social
SS 5431	Dynamics of Security		Mobilization
SS 5439	Globalization in the 21st Century:	SS 5339	Gender Issues in Global Scenario
	Challenges and Opportunities	SS 5333	Sociology of Gender Issues
SS 5436	Role of Great Powers and International	SS 5352	Women Studies
	Relations	SS 5306	Sacred and Secular
SS 5437	Critical Geo-Politics	SS 5351	Sociology of Sexuality
SS 5104	Politics of Geo-Economics	SS 5441	Globalization: Issues and Debates
SS 5104	Democratization as a Global Process	SS 5215	Global Governance
SS 5212	NGO Management	SS 5349	Sociology of Science, Knowledge and
SS 5306	Sacred and Secular	00 0017	Technology
		CC E242	
SS 5311	Environmental Studies	SS 5342	Industrial Sociology
SS 5312	Globalization and Developing Countries	SS 5341	Immigration in Contemporary Perspectives
SS 5313	Intellectual Property Rights and Laws	SS 5335	Sociology of Migration and Urbanization
SS 5321	History of Ideas	SS 5302	Sustainable Development
SS 5206	Political Economy in the Global Perspective	SS 5334	Social Change and Development
SS 5443	Human Rights in International Perspective	SS 5347	Rethinking Global Development: New
SS 5441	Globalization: Issues and Debates		Frameworks for Understanding Poverty,
SS 5434	Political Theory		Inequality and Growth in 21 Century
SS 5442	History of Economic Thought in	SS 5337	Community Organizing and Development
	Contemporary Perspective	SS 5346	Religion and Development
SS 5438	Foreign Policy of Pakistan	SS 5344	Population and Development: Current
SS 5445	History of International Relations		Issues and Future Implications
SS 5446	Theories of International Relations	SS 5338	Contemporary Sociological Thoughts
SS 5334	International Politics of South Asia	SS 5343	Leadership in Sociology: Theory and Practice
00 0001	international Fondes of South Fish	SS 5353	Foundational Sociological Perspective
MC (F	annian) Clarana	SS 5354	Health and Illness: Theory and Practice
	nomics) Stream	00 0004	Health and filless. Theory and Fractice
SS 5234	International Trade	1.60 (P. 1	
SS 5236	Economic Growth and Development		hology) Stream
SS 5236 SS 5238	Economic Growth and Development Monetary Economics	MS (Psycl	Applications of Contemporary Data
SS 5236 SS 5238 SS 5203	Economic Growth and Development Monetary Economics Public Finance	SS 5461	Applications of Contemporary Data Analysis Tools
SS 5236 SS 5238	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century:	SS 5461 SS 5435	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests
SS 5236 SS 5238 SS 5203	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities	SS 5461 SS 5435 SS 5423	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology
SS 5236 SS 5238 SS 5203	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century:	SS 5461 SS 5435	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests
SS 5236 SS 5238 SS 5203 SS 5439	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities	SS 5461 SS 5435 SS 5423	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan	SS 5461 SS 5435 SS 5423 SS 5422	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in
SS 5236 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership
SS 5236 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development
SS 5236 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology
SS 5236 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management
SS 5236 SS 5238 SS 5203 SS 5439 SS 5439 SS 5305 SS 5314 SS 5322 SS 5327 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I
SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442 SS 5235	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II
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SS 5236 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442 SS 5235	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II
SS 5236 SS 5238 SS 5203 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442 SS 5235 SS 5432 SS 5237	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Teconometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy Gender Issues in Rural Development Advanced Labour Economics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419 SS 5329	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II Psychophysiology and Psychopharmacology
SS 5236 SS 5238 SS 5238 SS 5203 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442 SS 5235 SS 5432 SS 5237 MS (Socio	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy Gender Issues in Rural Development Advanced Labour Economics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II
SS 5236 SS 5238 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5321 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442 SS 5235 SS 5432 SS 5237 MS (Socious SS 5332	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy Gender Issues in Rural Development Advanced Labour Economics Pology) Stream Sociology of Development	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419 SS 5329 SS 5462	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II Psychotherapy and Counseling-II Psychophysiology and Psychopharmacology Clinical Internship
SS 5236 SS 5238 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5228 SS 5231 SS 5228 SS 5233 SS 5442 SS 5235 SS 5432 SS 5237 MS (Socious SS 5332 SS 5345	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy Gender Issues in Rural Development Advanced Labour Economics Plogy) Stream Sociology of Development Population Dynamics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419 SS 5329 SS 5462	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II Psychophysiology and Psychopharmacology
SS 5236 SS 5238 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5228 SS 5231 SS 5228 SS 5231 SS 5232 SS 5233 SS 5442 SS 5235 MS (Socious SS 5332 SS 5345 SS 5348	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy Gender Issues in Rural Development Advanced Labour Economics Plogy) Stream Sociology of Development Population Dynamics Social Statistics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5421 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419 SS 5329 SS 5462 Two intered	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II Psychotherapy and Counseling-II Psychophysiology and Psychopharmacology Clinical Internship
SS 5236 SS 5238 SS 5238 SS 5203 SS 5439 SS 5439 SS 5223 SS 5305 SS 5214 SS 5322 SS 5327 SS 5312 SS 5228 SS 5231 SS 5228 SS 5233 SS 5442 SS 5235 SS 5432 SS 5237 MS (Socious SS 5332 SS 5345	Economic Growth and Development Monetary Economics Public Finance Globalization in the 21st Century: Challenges and Opportunities Financial Time Series Political Economy of Pakistan Public Policy Management Topics in Political Economy Development Economics and Sustainability Globalization and Developing Countries History of Ideas Corporate Governance Advanced Microeconomics Advanced Macroeconomics Advanced Econometrics History of Economic Thought in Contemporary Perspective Gender Work and Economy Gender Issues in Rural Development Advanced Labour Economics Plogy) Stream Sociology of Development Population Dynamics	SS 5461 SS 5435 SS 5423 SS 5422 SS 5463 SS 5465 SS 5433 SS 5464 SS 5469 SS 5471 SS 5468 SS 5466 SS 5467 SS 5328 SS 5411 SS 5319 SS 5419 SS 5329 SS 5462 Two intercof the bot	Applications of Contemporary Data Analysis Tools Use, Construction and Interpretation of Tests School Psychology Cross-Cultural Psychology Community Psychology Environmental Psychology Gender Psychology Consumer Behavior Perspective in Organizational Psychology Psychological Assessment in Organizational Psychology Psychology of Leadership Organizational Culture and Development Marketing and Consumer Psychology Organizational Conflict and Management Assessment and Diagnosis-I Assessment and Diagnosis-II Psychotherapy and Counseling-II Psychotherapy and Counseling-II Psychophysiology and Psychopharmacology Clinical Internship

MS Development Studies

There are two streams available for MS (Development Studies). 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)
- 02 University Electives (6 Credit Hours)
- 06 Electives (18 Credit Hours)
- No IRS or Thesis

First Year

Fall Semester

DS 5101 Research Methodologies	-
DS 5102 Statistical Methods	-
DS 5xxx University Elective-I	-
DS 5xxx Elective-I	_

Spring Semester

DS 5xxx University Elective-II	-
DS 5xxx Elective-II	-
DS 5xxx Elective-III	-
DS 5xxx Elective-IV	-

Second Year

Fall Semes	ster	
DS 5xxx	Elective-V	-
DS 5xxx	Elective-VI	-

Electives

DS 5103	The Economics of Developing Countries
DS 5211	Public Policy Managment
DS 5312	Globalization & Developing Countries
DS 5313	The Political Economy of Pakistan
DS 5315	Gender and Development
DS 5316	Right Based Approaches to Development
DS 5317	Conflict Management & Negotiation Skills
DS xxxx	Development Practices I
DS xxxx	Development Practices II

DS xxxx Climate Change-From Theory to Practice

Thesis Option

2- MS (Research Based Stream)

The scheme of study is as follows:

- 02 Core Courses (6 Credit Hours)
- 02 University Electives (6 Credit Hours)
- 04 Electives (12 Credit Hours)
- 02 IRSs or Thesis (6 Credit Hours)

First Year

Fall Semester

DS 5101 Research Methodologies	-
DS 5102 Statistical Methods	-
DS 5xxx University Elective-I	-
DS 5xxx Elective-I	-

Spring Semester

DS 5xxx University Elective-II	-
DS 5xxx Elective-II	-
DS 5xxx Elective-III	-
DS 5xxx Elective-IV	-

Second Year

Fall Semester	Pre-Req.
DS 5108 Independent Research Study-I	DS 5101, DS 5102
DS 5208 Independent Research Study-II	DS 5101, DS 5102

OR

Fall Semester (For thesis students only)

DS 5xxx Thesis (Part I) DS 5101, DS 5102
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Spring Semester (For thesis students only)

DS 5xxx	Thesis (Part II)	Thesis-I
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University Electives

DS 5104 Theories of Development DS 5105 Disasters and Development DS 5204 Sustainable Development DS 5314 Development Management

Students may opt for thesis in lieu of two IRS. Thesis can be taken once all core courses & three elective courses, are completed. Registration in thesis is allowed in two semesters with 3 credit hours per semester.

Maximum two interdisciplinary courses can be allowed with the approval of the concerned program managers. All courses may not be offered in every semester. Elective courses may vary from time to time. Alternative courses may be substituted as and when required.

MS Clinical Psychology

There are two streams for MS Clinical Psychology. One stream is Course Work Based and the other one is Research Based. To obtain a MS degree in Clinical Psychology student is required to complete 38 credit hours including 9 Courses (26 Credit Hours), two clinical internships (6 Credit Hours) and a Thesis (6 Credit Hours). Alternatively, students may opt for 32 credit hours course work and 6 credit hours clinical internship. The time limit to earn the degree is 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:

- 03 Core Courses (9 Credit Hours)
- 07 Electives (21 Credit Hours)
- 01 Profressional Ethics (02 Credit Hours)
- 02 Clinical Internships (06 Credit Hours)
- No IRS or Thesis

First Year

Fall Semester

CLP 5101 Professional Ethics	-
CLP 5102 Qualitative Research Methods	-
CLP 5103 Quantitative Research Methods	-
CLP xxxx Elective I	-
CLP xxxx Elective II	-

Spring Semester

CLP 5201 Use, construction, and	-
Interpretation of tests	
CLP 5205 Clinical Internship-I	CLP 5101
CLP xxxx Elective III	-
CLP xxxx Elective IV	-
CLP xxxx Elective V	-

Second Year

Fall Semester

1	CLP 5305 Clinical Internship-II	CLP 5205
	CLP xxxx Elective-VI	-
	CLP xxxx Elective-VII	-

Flectives

CI D 5151	Assessment	and Diagr	ocic I
CLP 5151	Assessment	and Diagr	10S1S-L

CLP 5152 Neuropsychology

CLP 5153 Psychotherapy and Counseling-I

CLP 5154 Child Psychology

CLP 5251 Assessment and Diagnosis-II

CLP 5252 Psychotherapy and Counseling-II

CLP 5253 Advance Forensic Psychology

CLP 5254 Psychopharmacology

CLP xxxx Community Psychology

CLP xxxx Cross-cultural Psychology

CLP xxxx Developmental Psychology

CLP xxxx Environmental Psychology

CLP xxxx Evidence Based Practice

CLP xxxx Gender Psychology

CLP xxxx Physiological Psychology

CLP xxxx School Psychology

2- MS (Research Based Stream)

The scheme of study is as follows:

- 03 Core Courses (9 Credit Hours)
- 05 Electives (15 Credit Hours)
- 01 Profressional Ethics (02 Credit Hours)
- 02 Clinical Internships (06 Credit Hours)
- 01 Thesis (06 Credit Hours)

First Year

Fall Semester

CLP 5101 Professional Ethics	-		
CLP 5102 Qualitative Research Methods	-		
CLP 5103 Quantitative Research Methods	-		
CLP xxxx Elective I	-		
CLP xxxx Elective II	-		

Spring Semester

CLP 5201 Use, construction, and	-
Interpretation of tests	
CLP 5205 Clinical Internship-I	CLP 5101
CLP xxxx Elective III	-
CLP xxxx Elective IV	-
CLP xxxx Elective V	-

Second Year

Fall Semester

CLP 5209 Thesis I	CLP 5102 , CLP 5103
CLP 5305 Clinical Internship-II	CLP 5205

Spring Semester

CLP 5309	Thesis	(Part II)	CLP 5209

Thesis Option

Thesis can be taken once all core courses & elective courses are completed. Registration in thesis is allowed in two semesters with 3 credit hours per semester.

All courses may not be offered in every semester. Elective courses may vary from time to time. Alternative courses may be substituted as and when required.

MS Sociology

Students are required to complete 8 courses, and a thesis (6 credit hour) with a minimum of 30 credit hours. The break-up of 30 credit hours is as follows:

The scheme of study is as follows:

- 5 Compulsory Courses*
- 3 Electives
- Thesis (6 Credit Hour)

First Year

Fall Semester

SS 5xxx Foundational Sociological Perspectives	-
SS 5xxx Qualitative Research Methodology	-
SS 5xxx Statistics for Social Scientists	_

Spring Semester

oping semester	
SS 5xxx Contemporary sociological theories*	-
SS 5xxx Quantitative Research Methodology**	-
SS 5xxx Sub-discipline (Elective I)	-
SS 5xxx Sub-discipline (Elective II)	-

Second Year

Fall Semester

SS 5xxx Sub-discipline (Elective III)	-
SS 5xxx MS Thesis (3 credits)***	-

Spring Semester

SS	5xxx T	hesis (3 cred	dits)	-

- * Foundational Sociological Perspectives
- ** Pre-req includes Qualitative Research Methodology and Statistics for Social Scientists
- ***Pre-req includes Qualitative and Quantitative Research Methodology and Elective I&II

Electives

Sociology of Gender Stream

SS 5xxx Gender Issues in Global Scenario

SS 5xxx Sociology of Gender Issues

SS 5xxx Gender, Work, and the Economy

SS 5xxx Women Studies

SS 5xxx Gender Issues in Rural Development

SS 5xxx Sociology of Sexuality

Sociology of Globalization Stream

SS 5xxx Globalization: Issues and Debates

SS 5xxx Global Governance

SS 5xxx Sociology Of Science, Knowledge, and Technology

SS 5xxx Industrial Sociology

SS 5xxx Immigration in Comparative Perspective

SS 5xxx Sociology of Migration and Urbanization

Sociology of Development Stream

SS 5xxx Sustainable Development

SS 5xxx Social Change and Development

SS 5xxx Rethinking Global Development:

New Frameworks for Understanding Poverty, Inequality and Growth in 21st Century

SS 5xxx Community Organization and Development

SS 5xxx Religion and Development

SS 5xxx Population and Development:

Current Issues and Future Implications







In the 21st 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 Media Science (Film & TV Production, Advertising Strategy & Design, and Journalism)
- Master of Media Science (Media Production and Design, Digital Journalism and Global Communication, Fashion Media and Digital Communication, Advertising Strategy and Design)

Bachelor of Media Science

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

To earn an undergraduate degree, students must enroll in and successfully complete a total of 136 credit hours which include 44 courses, a 6-credit thesis, and an internship (Forty-four courses include: 34 core courses, 7 from the stream of specialization requirements, i.e. Film & Television production, or Advertising Strategy & Design or Journalism and 3 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 1123	Pakistan Studies	-
MD 1106	Photography	-

Spring Semester

MD 1222	English for Academic Purposes	MD 1122
MD 1104	Culture, Media and Society	MD 1115, MD 112
MD 3601	Art of Music	-
MD 1211	Basic Design	MD 1107
MD 2321	History and Aesthetics of Film	
MD 1223	Islamic Studies OR	-
MD 1224	Humanities	-
	(For non-Muslim students)*	

Second Year

Fall Semester

MD 2427	Design Practices I	MD 1211
MD 1118	Topics in Asian Literature	MD 1222
MD 2323	Production Practices I	MD 1107
MD 1217	Introduction to Sound	MD 3601
MD 2313	Idea Development	MD 1107
MD 3505	Principles of Journalism	MD 1122

Spring Semester

MD 1119	Play Analysis	MD 1122
MD 2318	History of Commercial Art	MD 1107, MD 1211
MD 2425	Audiovisual Editing	MD 2323, MD 1217
MD 1216	Civilization Studies II	MD 1116
MD 3527	Design Practices II	MD 2427
MD 2325	Media Research	MD 1104, MD 1222

Third Year

Fall Semester

MD 2423	Theatre Project	MD 1112
MD 2424	Media Psychology	MD 1104, MD 1222
MD 3523	Production Practices II	MD 2323, MD 2313 MD 1217
MD 2405	Media Laws and Ethics	MD 1115, MD 1222
MD 1213	Creative Writing	MD 1122, MD 1118
MD 3525	Radio Programming and	MD 1217
	Production	MD 3601

Spring Semester

Spring Sen	lester	
MD 3518	Animation and Motion	MD 2425
	Graphics	MD 2427
MD 4701	State and Nation Building in	MD 1216
	Pakistan	MD 1222
MD 3506	Theories of Visual Culture	MD 1104, MD 1222
MD 4xxx	Stream Elective I	-
MD 4xxx	Stream Elective II	-
MD 4xxx	Stream Elective III	-

Fourth Year

Fall Semester

MD 4807	Thesis I	MD 2325
MD 4714	Producing Short Narratives	MD 3523
MD 4xxx	Stream Elective IV	-
MD 4xxx	Stream Elective V	-
MD 4xxx	Stream Elective VI	_
MD 4xxx	Stream Elective VII	-

Spring Semester

MD 4	1808	Thesis II	MD 4807
MD 4	4xxx	Open Elective I	-
MD 4	4xxx	Open Elective II	-
MD 4	4xxx	Open Elective III	-

(*Humanities will be offered to the non-Muslim students instead of Islamic Studies)

STREAMS			Sports Reporting
Film & Tol	levision Production Stream	MD 4796 MD 4797	Digital Public Relations and Blogging Introduction to Digital News Reporting
MD 4726	Directing I	MID 4/3/	introduction to Digital News Reporting
MD 4728	Directing II		
MD 4781	Sound Design	ELECTIVE	
MD 4821	Cinematography	MD 4854	Illustration
MD 4825	Screenwriting	MD 4732	Typography
MD 4872	Visual Storytelling	MD 4867	Topics in Film and Television
MD 4868	Production Practices III	MD 4878	Design for Social Change
MD 4724	Documentary Vision	MD 4886	Game Design
MD 4764	Production Design	MD 4883	Urdu Literature in South Asian Cinema
MD 4765	Basic Lighting	MD 4873	Modernity in Cinema in Bengal
MD 4829	Screenwriting II	MD 4774	Media Anthropology
MD 4789	Green Screen Keying and Composition	MD 4776	Media Convergence and Innovation
	for Production VFX	MD 4888	Culture and Media in Sindh
MD 4889	Narrative and Social Change	MD 4792	Music Production and Design
MD 4898	Music Score for Film and Television	MD 4892	Music Theory and Performance Sindh Studies
		MD 4788	Sinan Studies
Advertisin	g Strategy & Design Stream	Electives a	and majors will be offered depending on the
MD 4723	Advance Animation	availabilit	y of resources.
MD 4731	Advertising Research	Cantain file	
MD 4739	Advertising Design and Concept		m and video production courses may require
MD 4754	Creative Aspect in Advertising		I fees for equipment rental, film purchases,
MD 4779	Digital Brand Communication		. The Faculty of Media Sciences makes every
MD 4835	Consumer Behavior		ubsidize these costs in order to minimize
MD 4843	Campaign Strategy	financiai i	mpact on students.
MD 4846	New Media Advertising	Students e	enrolled full time are required to take at least
MD 4847	Copywriting		s in each semester. Students unable to
MD 4736	Integrated Marketing Communications	enroll full	time should consult the Program Manager
MD 4837	Media Planning		s any accommodation they might need.
MD 4782	Interaction Design		
MD 4787	Digital Design and Publishing		emester students are required to enroll in 6
MD 4834	Advertising in Pakistan		n order to register for thesis credits in the
MD 4833	Brand Management		ch semester for Thesis I and II respectively,
MD 4897	Digital Media Planning		must complete all pre-requisites. Students
MD 4798	Fundamentals of Digital Advertising		nic probation will not be allowed to register
Journalism	Stream	for thesis	creaits.
MD 4757	Feature Writing I	Internship	
MD 4879	· ·		ty of Media Sciences requires all students to
MD 4864			a 6-week internship at an organization of
1112 1001	Crisis Reporting		ice by the end of their third year. Upon
MD 4877	The International Newsroom		n of the internship, students must submit a
MD 4783	TV Journalism		ensive summary of what they have learned
MD 4859	Introduction to Photojournalism	in their in	
MD 4839	Reporting the News		_
MD 4793	Citizen Journalism		its are also required to work with the faculty
MD 4893	Environmental Journalism		e faculty's annual media festival in the third
MD 4794	Fashion Journalism	year of the	eir degree.
MD 4895	Peace Journalism		
MD 4795	Reporting of Politics and Governance		
MD 4894	Foreign Correspondence		
	•		

Master of Media Science (MMS)

Faculty of Media Sciences offers Masters degree in Media Science. Students enrolling in this program will be offered to select any one of the following 4 streams of specialization;

Media Production and	Fashion Media and Digital	Digital Journalism and	Adverting Strategy &
Design Stream	Communication Stream	Global Communication	Design Stream
		Stream	
This stream is primarily for media professionals and middle management of production houses and teams engaged in media houses, and are hampered in their careers because of lack of knowledge and understanding of production technique skills	This stream is for professionals who want to join the growing Fashion media and merchandising industry in Pakistan, in addition to courses that help in managing public relations and communication strategy of companies and nonprofits.	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.	This stream will provide students with a comprehensive training through courses that prepare them to engage in various career options in the advertising industry.

The choice of four electives will determine the stream. In addition to the four specializations offered, students are at liberty in choosing their path of academic research related to praxis; through course work, or Thesis (For those students who are interested in following an academic career leading to a doctorate).

The students decide on their respective chosen stream; the choice of electives varies according to the four options offered to students. Specialization Streams Offered: Media Production and Design, Fashion Media and Digital Communication, Digital Journalism and Global Communication and Adverting Strategy & Design.

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

Masters by Course Work

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

Masters by Thesis

30 Credit hours (08 courses & Thesis), which includes 4 core courses (12 credit hours), 4 electives (12 credits hours), Thesis I & Thesis II (6 credit hours).

All students must complete their degree within four years.





First Year

Fall Semeste	r
MMS 5101	Applied Media Research
MMS 5102	Digital Culture and Society
MMS 5102	Media Evolution and Innovation
MMS 5103	Media Theories and Application
1411413 3104	wedia Theories and Application
Spring Seme	ester
MMS 5xxx	Elective I
MMS 5xxx	
	Elective III
	Thesis I/MMS 5xxx Elective
1411418 8209	THESIS I, WIND SOOK ELECTIVE
Second Year	
Fall Semeste	r
MMS 5xxx	Elective IV
MMS 5309	Thesis II/MMS 5xxx Elective
ELECTIVES	
	action and Design Stream:
MMS 5431	Urban Geographies and Visual
	Cultures
MMS 5433	Camera and Lights
MMS 5436	Film Analysis
MMS 5439	Story Telling and Screenplay Writing
MMS 5435	Documentary Making
MMS 5434	Directing
MMS 5441	Theories of Film and Television
MMS 5432	Aesthetics of Films
MMS 5438	Production Management
MMS 5442	Theories of Visual Culture and Film
MMS 5437	New Media Production
Fashion Med	lia and Digital Communication Stream:
MMS 5339	Interaction Design for Fashion Industry
MMS 5336	Fashion Design Trends
MMS 5334	E-commerce for Fashion
MMS 5332	Digital Media and Fashion Industry
MMS 5341	Social Media and Online
	Communication
MMS 5331	Digital Fashion Illustration
MMS 5337	Fashion Photography
MMS 5335	Fashion Advertising
MMS 5338	Fashion Public Relations

MMS 5333 Digital Visual Communication

Digital Journalism and Global Communication Stream:		
MMS 5237	Global Journalism	
MMS 5231	Beat Reporting	
MMS 5238	Investigative Journalism	
MMS 5243	Multi-Format News Reporting	
MMS 5232	Data Journalism	
MMS 5235	Fashion and Entertainment Journalism	
MMS 5241	Media and Post-Colonialism	
MMS 5242	Media, Politics and Governance	
MMS 5239	Issues in International Media	
MMS 5234	Digital Journalism	
MMS 5236	Global Communication	
MMS 5233	Development Communication	
Adverting S	trategy & Design Stream:	
MMS xxxx	Copywiriting and Advertising	
	Conceptualization	
MMS xxxx	Digital Advertising	
MMS xxxx	Creative Advertising Campaigns	
MMS xxxx	Strategic Creative Development	
MMS xxxx	Advertising Account Management	
MMS xxxx	Advanced Integrated Marketing	

Electives will be offered depending on the availability of resources.

Communication

MMS xxxx Strategic Brand Management

MMS xxxx Consumer Engagement

MMS xxxx Campaign Strategy

MMS xxxx New Media Advertising

MMS xxxx Media Planning & Strategy



ACADEMIC CALENDAR 2022-23 (Islamabad Campus)

ACADEMIC CALENDAR 2022-23 (Islamabad Campus)

FALL 2022

WEEK	COMMENTS
1	Course Registration
2	IS Thesis Advisors Meeting
3	
4	
5	Teaching Evaluation
6	Teaching Evaluation
7	Mid-Term Exam for Undergraduate Students
8	Mid-Term Exams for Graduate Students
9	
10	
11	Last Week to Withdraw from Courses
12	
13	
14	
15	
16	Final Exam Week
17	Final Exam Week
18	
	Faculty Meeting/Orientation
	IS Thesis Advisors Meeting
	Comprehensive Exam

Independent Research Study Presentations of MS/PhD students

Classes Commencement Date

Islamabad Campus:	26 September, 2022
Karachi Campus:	26 September, 2022
Hyderabad Campus:	22 August, 2022
Larkana Campus:	03 October, 2022
Dubai Campus:	03 October, 2022

PROSPECTUS 2022.

ACADEMIC CALENDAR 2022-23 (Islamabad Campus)

ACADEMIC CALENDAR 2022-23 (Islamabad Campus)

SPRING 2023

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

Classes Commencement Date

Islamabad Campus:	13 February, 2023
Karachi Campus:	13 February, 2023
Larkana Campus:	20 February, 2023
Dubai Campus:	27 February, 2023
Hyderabad Campus:	16 January, 2023

CAMPUS WISE PROGRAMS OFFERING (FALL 2022)

PROGRAMS OFFERING AT DIFFERENT CAMPUSES OF SZABIST (FALL 2022)

PROGRAMS	CAMPUS					
PROGRAMS	Islamabad	Karachi	Larkana	Hyderabad	Dubai	
Bachelor of Business Administration (BBA)	/	/	/	/	/	
BA (Hons.) in Business Studies (BABS)						
BS Accounting & Finance	/	/	/	/		
BS (Accounting & Finance) 2.5 Years ICAP/CAF Qualified	/					
BS Entrepreneurship						
BS Computer Science				/	/	
BS Artificial Intelligence						
BS Software Engineering				/		
Bachelor of Media Science						
BS Social Sciences			/	/		
BE Mechatronic Engineering		/				
BS Biosciences						
BS Biotechnology						
BS Educational Psychology						
BS Public Health						
Bachelor of Law (LLB)			•			
Certificate of Higher Education in Common Law (CertHE)						
CILT (UK) Level 5 Professional Diploma in Logistic & Transport	 					
Master in Business Administration (MBA)				_	./	
Executive MBA			<u> </u>	~	./	
Masters in Project Management					-	
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Professional MBA	-					
Masters in Human Resource Management						
Master of Advertising						
MS Public Health (MSPH)			/			
MS Biosciences						
MS Biotechnology						
MS Computer Science	/			✓	/	
MS (CS) with specialization in Core Computing	/					
MS (CS) with specialization in Software Engineering	✓	✓			✓	
MS (CS) with specialization in Networks & Security	/	/			/	
MS Cyber Security	/	✓				
Master of Media Science	/	✓				
MS Management Science	✓	✓	✓	>		
MS (Business Analytics)	✓					
MS Developmental Studies	/					
MS Mechatronic Engineering		/				
MS Data Sciences						
MS Educational Leadership and Management			/			
MS Project Management	/					
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 Clinical Psychology	/	•				
MS Sociology	Ž					
PhD Social Sciences	*					
PhD (SS) with specialization in Economics	+					
PhD (SS) with specialization in Psychology						
PhD (SS) with specialization in Tsychology	+					
PhD (SS) with specialization in International Relations						
PhD Computing						
PhD Management Sciences	/					
PhD Biosciences						
PhD Educational Leadership and Management		<u> </u>				

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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