



### Competitive Edge of SHU Programs

Promoting career opportunities in diverse fields such as Food Sciences, Hospital, Healthcare and Medical Device industries, Water Industry, Sewerage Disposal and Treatment Plants, Business Management and Financial Analysis through application of studies in Sciences, Pharmacy, Engineering, Information Technology and Management Sciences Better understanding of a green Students can undertake interdisciplinary studies economy and higher degree of with a blend of Biomedical, Managerial and awareness of healthy lifestyle Pharmaceutical Science subjects Environment of encouragement Emphasis on project-based learning for for creative thinking students to gain valuable insight into the field of Biomedical Engineering Development of a holistic understanding of Facilitation for students to appear for business and scientific operations professional examinations offered by ICAP, CIMA, ACCA, and CFA

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### Message from the Life Chairperson

All the ills of any nation start with lack of education and unfortunately Pakistan is one of them where the literacy rate is lower than 45%. Realizing this weakness of our nation it has been my lifelong passion and desire to do something about it. Therefore I decided that I should put my resources and efforts to contribute towards the development of education in Pakistan. Despite numerous hurdles and loss of precious years, I continued striving to setup the Salim Habib University in Karachi.

It is a proud moment for all of us especially for me that the Salim Habib University Karachi has opened its doors for admission. One thing I repeat that we all have to bear in mind, the lack of education facilities and or its accessibility to some individuals is the primary cause of nation's under development.

"An illiterate man is like a blind person in a dark room who will never see the light of the day"

I wish the University lot of success.

Dr M S Habib Life Chairperson

# <sup>22</sup> SALIM HABIB UNIVERSITY



### Message from the Chancellor

Education is the single most important factor in developing the economy of Pakistan. Its the most valuable tool an individual can possess, and holds the key to our country's future. Henceforth, it is my strong belief that if we wish to succeed, we must empower our educational system. While many have spoken around the benefits of education, few have acted upon addressing this change. We believe it is time to address this gap and ensure our youth an opportunity that can embolden their future. Here at Salim Habib University (SHU), we are committed to achieving this goal as we provide a foundation that cultivates passion, intelligence and character with largely one outstanding mission – To Provide Quality Education for our Children.

I welcome all my undergraduate students, and sincerely thank my dedicated faculty at SHU for mentoring our youth. This University was created in the face of many challenges. However, we pushed hard and were persistent in our mission. We have built an institution that is predicated upon values of integrity and transparency. These core values are the basis of every project I have established, and SHU has been built upon these values. It is a product of our sheer persistence against all odds, and it is this spirit of perseverance, loyalty and stick-to-it-ness that we aim to instill in our children as well.

The University is new yet fully equipped to walk you through each program with the goal of finding your unique passion. Additionally, the experience goes beyond books and laboratories as we have built an aesthetically pleasant campus with athletic facilities meeting international standards as we stand with our youth, and remain united to provide a system where they flourish.

Our goal is to empower our education system and also improve the culture of our nation. Here, at SHU, we want our students to be very proud of and confidently exclaim that they belong to a Pakistani Academic Institution. We want our parents, relatives and people abroad to become excited about what SHU stands for. We want local communities to look within our nation first- for education, and not abroad. Today, Karachi hears us but I can assure that one day the world will also hear about the success of our children.

I am proud of what we have accomplished, and look forward to the many unprecedented opportunities SHU has to offer. Our children will become leaders in business and industry. They will serve our nation with optimism and pride. They will make their mark on this world and Salim Habib University will always be there to support, sustain, and encourage those who are determined to learn.

Best of luck and endless success to Salim Habib University,

Dr Iram Afaq Chancellor





### Message from the Vice Chancellor

Salim Habib University (SHU), since its establishment has shown a commitment to innovation and to serve the needs of the community.

SHU constantly strives to provide high-quality education, equipping students with the acumen to be able to address both national and global challenges. Within a short span of its existence, SHU has shown success in introducing modern curriculum, student engagement, professional training, faculty development, local and international collaborations, progress towards a state-of-the-art campus building, industry partnerships, research endeavors and much more.

The faculty and staff at SHU are dedicated and capable of converting the challenges into opportunities, demonstrating their excellence in teaching, learning and research; and fulfiling the needs of communities.

As a Vice-Chancellor, I have focused my attention to respond to the challenges of ever-changing sector of higher education, identifying our strengths and building a distinctive character and identity.

The Salim Habib University offers work-integrated learning and emphasizes on continued professional development by providing the tools and support necessary to succeed in professional life. These aspects make SHU a challenging, exciting and competitive place to study and work with. If you are committed to the pursuit of excellence, SHU could be the best place to achieve your higher educational goals.

#### Prof. Dr. Syed Irfan Hyder

Vice Chancellor

# <sup>04</sup> SALIM HABIB UNIVERSITY

### The Policy Makers

#### **The Board of Governors**

Dr. M S Habib

Life Chairperson The Salim Habib Education Foundation & Barrett Hodgson Pakistan (Pvt) ltd.

Dr. Iram Afaq Chancellor Salim Habib University Chief Executive Officer and Founding Member The Salim Habib Education Foundation Chief Executive Officer and Deputy Chairman Barrett Hodgson Pakistan

#### Prof. Dr. Syed Irfan Hyder

Vice Chancellor Salim Habib University

Justice Muhammad Karim Khan Agha

Judge High Court of Sindh

Dr. A Q Mughal (SI) A nominee of HEC

Mr. Tariq Amin Director The Salim Habib Education Foundation

**Dr. Jonathan Addleton** Rector Forman Christian College University, Lahore

Mr. Fazl ur Rehman

Ex-Chief Secretary Government of Sindh

Mr. Ali Naqvi Principal Architect Ali Arshad Associates

**Dr. Hasan Tharani** Managing Director Barrett Hodgson Pakistan (Pvt) Ltd.

#### Mr. Muhammad Abbas

Executive Director Salim Habib University Chief Operating Officer The Salim Habib Education Foundation

Dr. Muhammad Hussain Habib Registrar

Salim Habib University Mr. Noor Ahmed Samoo

Secretary, Universities & Boards Department, Government of Sindh

**Dr. Lubna Ayub** Nominee, Sindh Higher Education Commission (SHEC)

Two Members of the Provincial Assembly of Sindh

Academic Council, Salim Habib University

#### Chairman

**Prof. Dr. Syed Irfan Hyder** Vice Chancellor Salim Habib University

#### Members

**Prof. Dr. M. Shakeel Ahmed Khan** Dean Faculty of Science

**Prof. Dr. Noor Kamil** Dean Faculty of Pharmacy

Prof. Dr. Rizwan Ahmed Khan Dean Faculty of Information Technology Prof. Dr. Muhammad Zeeshan Ul Haque Dean Faculty of Engineering

**Prof. Dr. Aqeel Ahmad** Professor, Department of Biosciences, Faculty of Science

**Prof. Dr. Hafiz Mushtaq Ahmad** Professor, Department of Business Administration, Faculty of Management Sciences

**Prof. Dr. Kaleem Raza Khan** Chairperson, Department of Social Sciences & Humanities

Dr. Sheeraz Arif Associate Professor & Chairperson, Department of Computer Science

Prof. Dr. Lakhi Muhammad Chairperson, Department of Business Administration, Faculty of Management Sciences Dr. Arshad Mahmood

Associate Professor & Chairperson, Department of Biosciences

**Dr. Mudassar Azhar** Chairperson, Department of Basic Medical Sciences, Faculty of Pharmacy

Dr. Kashif Arif Chairperson, Department of Accounting & Finance, Faculty of Management Sciences

Mr. Muhammad Saleem Khan Controller of Examination

Dr. Muhammad Hussain Habib Registrar Mr. Syed Waqar Ul Hasan

Director QEC

#### **External members**

Prof. Dr. Abid Azhar Director Dr. Abdul Qadeer Khan Institute of Biotechnology & Genetic Engineering, Karachi Dr. Izhar Hussain Pharmacist & Director

Pharmacist & Director Institute of Business and Health Management (IBHM) Dow University of Health Sciences (DUHS), Karachi Engr. Prof. Dr. Johar Khurshid Farooqi Director QEC DHA Suffa University, Karachi.



### Objectives

#### **The Salim Habib Education Foundation**

- To impart quality education with state-of-the-art facilities across Pakistan
- To lure domestic and international educationists into the system to ensure quality education
- To inculcate curiosity, creativity and confidence among the Pakistani youth, the future leaders

#### Salim Habib University

- To be a leader in the fields of Biomedical Engineering, Biosciences, Pharmaceutical Sciences, Information Technology and Management Sciences
- To promote recognition and support of important interdisciplinary areas in the selected departments to ensure excellence in all disciplines
- To encourage mutually beneficial collaboration between the faculties as well as other universities
- To attract high profile faculty for undertaking thematic research in strategically important academic areas
- To develop and maintain infrastructure for research and creativity through grants, including government and corporate funding
- To create a culture that promotes teaching excellence and pedagogical innovations in academic environments
- To nurture the well-being of our students for lifelong success



### Vision

To serve the society through education, advancement of learning by teaching and research of highest quality and its dissemination.



### Mission

To provide quality and accessible education, effective research, creative thinking abilities and hands-on experience. This will be planned in a manner to benefit society at local, regional, national and international levels. The University is committed to position itself as a distinctive institution; using innovative educational models, exceptional values, and ability to prepare diverse student population with open-minded trust, exemplary service, motivated leadership and personal values.





### Core Values

- Integrity through honoring our commitments
- Communicate, Connect and Compete at all levels
- Discipline with Time Management
- Zero Tolerance to Corruption
- Passion with Positive Mindsets and Initiatives
- Value Teamwork Winning All The Way



### The SHU Philosophy

At SHU we believe that the difference between good and great curricula is the methodology adopted to transfer knowledge to the ultimate stakeholders – our students. We bring this difference to the fore through the adoption of the 'SPICES' curriculum model as a guiding philosophy with the following elements: Student-centered/active learning, Problem/practice based, Integrated, Community/systems-based, Electives, and Systematic approaches. In addition, our curricula through all our programs incorporate research and inter-professional experiences.

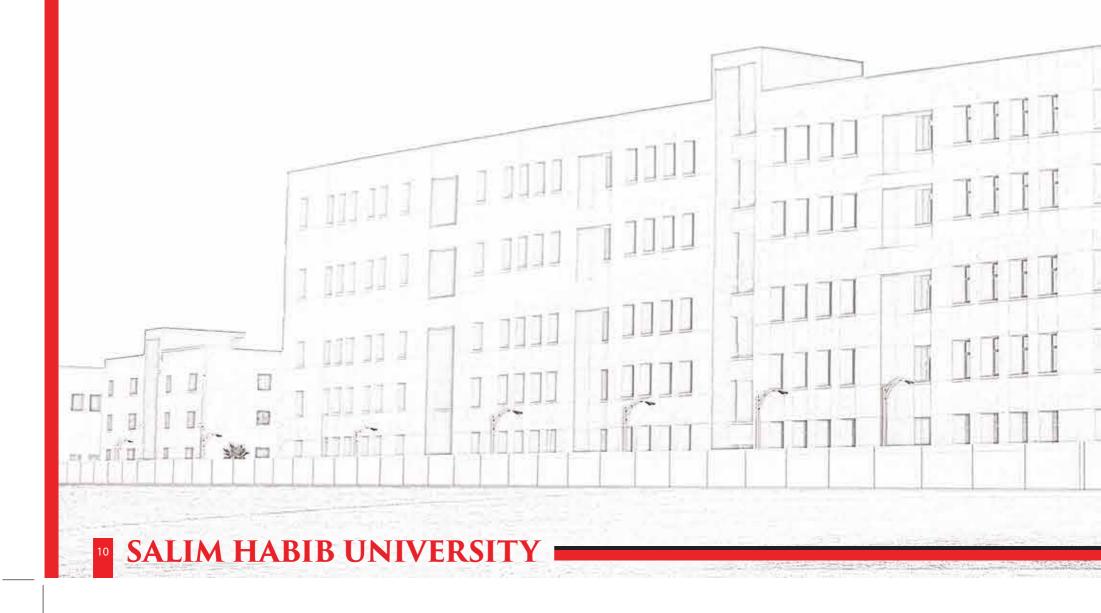
Case-based seminars that employ case-based collaborative learning approach; a hybrid of problem-based learning, and team-based learning approaches are offered in the early professional phase of our programs to promote learning in both; small groups to prepare for 'case-based seminars'; and in tutorial settings with student-directed learning.

#### Key components of the curriculum philosophy:

- Systematic curriculum that builds upon a solid foundation of basic courses in the early years
- Utilize active-learning in different settings including web-supported technologies in both large and small class sizes as well as laboratory settings
- Incorporation of case-based learning in a seminar course sequence that runs parallel to the integrated course sequences
- Incorporation of practicum and simulation in a series of courses beginning with the early professional phase of the curriculum with emphasis on skills development and demonstrating effective communication skills
- Integration of research principles and application with a required capstone research project
- Incorporation of elective didactic and experiential education courses
- Design of inter-professional education and practice experiences within the didactic and experiential settings across multiple settings in the healthcare system
- Extensive experiential education



An Artist's Impression of



# Salim Habib University



### Messages from the Deans



#### **Faculty of Science**

Salim Habib University is committed to transform society through education, learning, and research at the high quality. As Dean Faculty of Science, I am pleased to welcome you to the University.

Faculty of Science presently has one department – Biosciences, which is a fascinating area of biology that is driving major advances in energy, environment, metagenomics, system biology, molecular biology, immunology, virology, tissue culture technology, health, food and nutrition, bio-manufacturing, and the like.

The curriculum for BS-Biosciences is designed to promote innovative learning styles and a solid foundation in applied biosciences. The curriculum is dynamic, internationally aligned, and evolves with the changing requirement of the healthcare, agriculture and industry. Biosciences is applied in almost every field where biological material is handled or tested.

The laboratories of Biosciences, are well-equipped to provide a flexible knowledge and practical skills, giving students a chance to maximize their potential and develop a successful career in academia, industry or commerce.

Department of Biosciences has highly qualified faculty with diversified expertise and experience who facilitates your development by providing deep insights into the discipline of Bioscience. The faculty will develop your technical proficiency to the level that allows you to resolve issues related to life and allied fields, not only at national but also at international level.

Hoping that your stay at SHU campus will be pleasant and stimulating, I wish you every success in future.

#### **Dr. Arshad Mahmood**

Associate Professor Dean, Faculty of Science

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#### **Faculty of Pharmacy**

Welcome to SHU, Faculty of Pharmacy. SHU greatest assets are the students specially our future Pharmacists who can play a significant role in healthcare. We at SHU intend to deliver the best to our students of Pharmacy since the profession of Pharmacy has expanded its role towards patient counselling, drug monitoring, consultation with the physician and are also taking the responsibilities of patient outcome. We apply a multifaceted approach to provide our students with holistic education so that they develop into young professionals, fully cognizant of the Pharmaceutical, clinical and social aspects of their profession. Pharmacy education requires close integration of clinical aspects of Pharmacy with scientific knowledge and practice hence we have developed strong academic collaborations with a number of hospitals and community pharmacies to incorporate clinical visits and provide internships for our students as per our curriculum. Since industries are a backbone in Pharmacy profession, therefore we have developed industrial labs in our campus as well as we shall expose our students to internships and training in different areas of Pharmaceutical industries. We aim to equip our students with knowledge skills and tools that will give them a distinct standing in professional market.

I will expect you to participate in all healthy and academic activities of the Faculty.

Dr. Noor Kamil Professor Dean, Faculty of Pharmacy





#### **Faculty of Information Technology**

Computing and computer technology are part of just about everything touching our lives today, from the cars we drive to the movies we watch to the many ways we all interact with each other. At times computer science is often confused with the everyday use of computers, such as using internet and web services, downloading and installing different services / apps, playing games etc. Rather, it is the study of principles, applications, and technologies of computing and computers. It involves the systematic study of data and data structures and the algorithms to process these structures; of principles of computer architecture; of addressing particular challenges in areas such as robotics, computer vision, or digital forensics; and of language design and structure.

At SHU, we provide a niche program in computer science. consistent with our vision to be a leader in innovation, research, and dissemination of knowledge we aspire to impart education in an effective and contemporary manner so we can prepare our students to cope with the rapid changes in the market needs. We offer tracks in Data Science / Artificial Intelligence, Network and Security, and Software Engineering. Our faculty consists of members with local and international research and industry experience. What makes us unique is our cross disciplinary collaboration in research and development. SHU will offer flexible study environment where students will be empowered to focus on inter-disciplinary areas as per their motivation.

Dr. Rizwan Ahmed Khan Professor Dean, Faculty of Information Technology



#### **Faculty of Engineering**

Faculty of Engineering is currently offering a four-year undergraduate degree program in Biomedical Engineering which is based on globally competitive curricula combining theoretical knowledge with hands-on training that allow the students to explore and solve complex engineering problems.

We have highly qualified and experienced faculty members to ensure that the program learning outcomes are achieved. Our teaching methodology accentuate on student-teacher interaction for providing optimal learning environment. We place strong emphasis on Industry-Academia collaboration for which we have set up an Industrial Advisory Board that facilitates the provision of insights on current trends in healthcare industry by arranging guest lectures, seminars, and workshops for the students.

Department of Biomedical Engineering at SHU aims to train and produce the next generation of biomedical engineers, researchers, innovators, and entrepreneurs with analytical and problem solving skills required for the success in the health care industry.

Dr. M. Zeeshan Ul Haque Professor Dean, Faculty of Engineering

### Full Time Faculty

#### **Department of Biomedical Engineering**



#### Dr. M. Zeeshan Ul Haque Professor

**Dean, Faculty of Engineering** Ph.D. (Bioengineering), University of Auckland, New Zealand MSc (Medical Electronics & Physics), Queen Mary and Westfield College, University of London, U.K

#### **Department of Biomedical Engineering**



#### **Mr. M. Wasim Munir** Assistant Professor

MSc (Biomedical Engineering), Tampere University of Technology Finland MSc (Computer Science) SZABIST, Karachi



#### **Dr. Munsif Ali Jatoi** Associate Professor

Ph.D. (Electrical & Electronic Engineeirng) Universiti Teknologi Petronas Perak, Malaysia MSc (Advanced Photonics and Communication) University of Warwick, UK



#### **Dr. Irfan Ahmed Usmani** Assistant Professor

Ph.D. (Electronic Engineering) Sir Syed University of Engineering & Technology, Karachi



#### **Dr. Syed Mehmood Ali** Associate Professor Ph.D. (Biomedical Engineering) Dublin Institute of Technology, Ireland



#### Engr. Hassan Ali Lecturer

MS (Biomedical Engineering) SSUET, Karachi



#### **Department of Biomedical Engineering**



#### Ms. Madiha Imdad Lecturer

MS (Applied Mathematics) NEDUET, Karachi



**Engr. Gul Munir** Lecturer MS (Biomedical Engineering) SSUET, Karachi



#### **Department of Biomedical Engineering**



#### Mr. Muhammad Sayem Hanif Lecturer

MS (Applied Mathematics), NED University of Engineering and Technology, Karachi MSc (Mathematics), University of Karachi



#### **Engr. Muhammad Aamir** Lecturer MSc (Biomedical Engineering),

University of Glasgow, England



### **Engr. Muhammad Shaheer Mirza** Lecturer

MS (Biomedical Engineering), Ziauddin University, Karachi



#### **Engr. Tooba Khan** Lecturer

ME (Biomedical Engineering) NEDUET, Karachi



#### **Engr. Abdul Moiz** Lecturer MS (Biomedical Engineering), Ziauddin University, Karachi

#### **Department of Biosciences**



#### **Dr. Arshad Mahmood** Associate Professor

**Dean, Faculty of Science** Ph.D. (Medical Science), University of Toyama, Japan BEMS (Eastern Medicine), Islamia University, Bahawalpur



#### **Dr. Aqeel Ahmad** Professor

Ph.D. (Immunology), University of Birmingham, UK Ph.D. (Microbiology), University of Karachi Msc (Microbiology), University of Karachi



#### **Dr. Affhan Shoaib** Assistant Professor

Ph.D. (Biochemistry and Molecular Biology), Dalian Medical University, China M.Sc. (Microbiology) University of Karachi



#### **Dr. Shaheena Anwar** Assistant Professor

Ph.D. (Health Sciences), Aga Khan University, Karachi M.Sc. (Microbiology), University of Karachi

#### **Department of Biosciences**







#### **Dr. Marriam Yamin**

Assistant Professor Ph.D. (Microbiology & Biotechnology) State University of Campinas (UNICAMP), Brazil

Dr. Afira Waqar Assistant Professor Ph.D. (Biotechnology) MPhil (Biotechnology) Govt. College University Lahore (GCUL) M.Sc. (Biochemistry) The University of Lahore (TUOL)

**Dr. Madiha Kanwal** Assistant Professor Ph.D. Biotechnology University of Karachi

Ms. Hajira Karim Lecturer MS (Biochemistry) Jinnah University for Women M.Sc. (Biochemistry), University of Karachi



#### **Department of Pharmacy**



#### Dr. Noor Kamil Professor Chairperson, Department of Basic Medical Sciences Ph.D. (Pharmacology) University of Karachi MPhil (Biochemistry) University of Karachi



**Dr. Jamshed Arslan** Assistant Professor Ph.D. (Health Sciences) Aga Khan University, Karachi



**Dr. Mudassar Azhar** Associate Professor

Ph.D. (Pharmacology) University of Karachi



**Dr. Farhana Tasleem** Assistant Professor Ph.D. (Pharmacognosy) University of Karachi



#### **Dr. Ghazala Ishrat** Assistant Professor

Ph.D. (Pharmaceutics) University of Karachi MBA (TQM), MPharm (Pharmaceutics), University of Karachi



**Dr. Nida Umar** Medical Officer Cum Lecturer MBBS, Sindh Medical College, Karachi

#### **Department of Pharmacy**



#### Ms. Kiran Amir Ali Lecturer

M.Phil. (Pharmaceutical Chemistry) University of Karachi



#### Ms. Syeda Tabassum Zehra Lecturer M.Phil. (Pharmaceutical Chemistry)

University of Karachi



Ms. Rabia Noor Preceptor Cum Lecturer

M.Phil. (Pharmacy Practice) Jinnah University for Women, Karachi



#### Ms. Sumbal Saeed Lecturer MS (Biotechnology) Muhammad Ali Jinnah University (MAJU)



Ms. Memona Fatima Lecturer M.Phil. (Pharmacognosy) University of Karachi



Ms. Aqsa Khurram Lecturer M.Phil. (Pharmaceutical Chemistry) University of Karachi



#### **Department of Pharmacy**



#### Ms. Hina Furqan

Lecturer M.Phil. (Pharmaceutical Chemistry) University of Karachi



#### Ms. Uroosa Kanwal Lecturer

M.Phil. (Pharmacy Practice) University of Karachi



Ms. Shadab Kashif Lecturer MS (Medical Management and Pharmacotherapy) University of Sunderland, England



Mr. Muhammad Ali Lecturer M.Phil. (Pharmaceutics) Riphah International University Islamabad, Pakistan



Ms. Farah Ahmed Lecturer MS (Pharmaceutical Analysis) National University of Malaysia



Mr. Ali Asghar Shuja Lecturer M.Phil. (Pharmacology) Dow University of Health Sciences

Karachi



Ms. Saba Razzak Lecturer M.Phil. (Pharmaceutical Chemistry) Jinnah University for Women, Karachi



Ms. Asma Rafiq Lecturer M.Phil. {Pharmaceutics) Jinnah University for Women, Karachi

# <sup>20</sup> SALIM HABIB UNIVERSITY

#### **Department of Computer Science**



#### **Dr. Rizwan Ahmed Khan** Professor

Dean, Faculty of Information Technology Ph.D. (Computer Science), Universite' Claude Bernard, Lyon 1, France MS (Color in Informatics and Media Technology), Jean Monnet University, France/Gjøvik University College, Norway MS (Computer Engineering), NUST, Islamabad



**Dr. Sheeraz Arif** Professor Chairperson, Department of Computer Science

Ph.D. (Information and Communication Engineering) from Beijing Institute of Technology, Beijing, P.R. China MS (Telecommunication and Computer Networks Engineering) from London South Bank University, London, UK



#### Mr. Muhammad Umer Mehmood Lecturer

MS (Computer Science), Muhammad Ali Jinnah University, Karachi



Mr. Muhammad Rahil Lecturer MS (Computer Science), Muhammad Ali Jinnah University, Karachi



Dr. Samita Bai

Assistant Professor Ph.D. (Computer Science) Institute of Business Administration (IBA), Karachi M.E. (Information Technology), Mehran University, Jamshoro, Pakistan



Ms. Saadia Karim Lecturer MS (Computer Science) Muhammad Ali Jinnah University, Karachi



**Ms. Sumra Khan** Lecturer MS (Computer Science), Bahria University, Karachi



**Ms. Sidra Nasir Rajput** Lecturer MS (Computer Science), Bahria University, Islamabad



#### **Department of Computer Science**



#### Mr. Ateeque Rahman Lecturer

MS (Software Engineering) National University of Computer & Emerging Sciences Fast, Islamabad



M. Owais Ansari Lecturer MS (Information Security), NED University of Engineering and Technology, Karachi

Mr. Bilal Ahmad Lecturer MS (SE) Hamdard University, Karachi

#### **Department of Accounting and Finance**



#### **Dr. Kashif Arif** Associate Professor Acting Chairperson

PhD. (Finance) University of Malaya, Malaysia MS (Management Sciences), Shaheed Zulifqar Ali Bhutto Institute of Science & Technology, Karachi



#### Mr. Sheeraz YarKhan **Assistant Professor**

MBA (MIS) University of Houston, USA MBA (Marketing) IBA, Karachi





Mr. Muhammad Fahim Lecturer MS (CS & IT) NED University of Engineering & Technology Karachi



#### Mr. Salman Qayyum Galani Lecturer

MBA (Finance), Iqra University, Karachi M.A (Economics), University of Karachi

**Department of Business Administration** 



Dr. Lakhi Muhammad Professor Acting Chairperson Ph.D. (Marketing) Universiti Teknologi Malaysia (UTM) Malaysia



#### **Dr. Shamaila Burney** Associate Professor Acting HOD, BBA

Ph.D. (Supply Chain Management- Healthcare Service Supply Chains) University of Karachi MPA (Marketing & Human Resource Management) University of Karachi



#### **Dr. Hassaan Ahmed** Associate Professor Head of MBA

Ph.D. (Marketing) University of Karachi MBA (Marketing), Anglia Ruskin University, UK MPA, University of Karachi



#### Ms. Prinka Bai Lecturer MBA (Management Sci

MBA (Management Sciences) lqra University, Karachi

#### **Department of Business Administration**



#### Mr. Muhammad Fahad Anwer Lecturer

MBA (Management Sciences) lqra University, Karachi



#### Mr. Muhammad Abdullah Idress Lecturer

MBA (Management Sciences) Shaheed Zulifkar Ali Bhuatto Institute of Science and Technology (SZABIST) Karachi



Department of Social Sciences & Humanities Faculty of Management Sciences



**Prof. Dr. Kaleem Raza Khan** Chairperson Ph.D. (English Linguistics), University of Karachi

Department of Social Sciences & Humanities Faculty of Management Sciences



Mr. Zubair Khan Lecturer

M.Phil. (English) Iqra University Karachi



#### Mr. Muhammad Rizwan Akram Lecturer-Humanities

M.Phil. (Philosophy) University of Karachi



#### Ms. Sana Bint-e-Javaid Lecturer

MS (Applied Linguistics), NED University of Engineering and Technology, Karachi MA (English Linguistics), Jinnah University for Women, Karachi

# <sup>24</sup> SALIM HABIB UNIVERSITY

# 33 State-of-the-Art-LABORATORIES



# **Other FACILITIES**





# SHU Officials



Dr. Muhammad Hussain Habib Registrar



**Mr. Muhammad Abbas** Executive Director/Chief Operating Officer



**Mr. M. Saleem Khan** Controller of Examinations



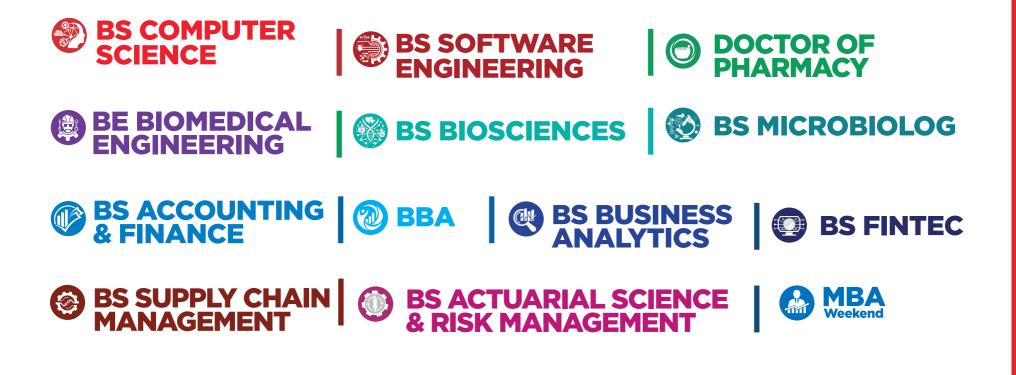
Dr. M. Shakeel Ahmed Khan Director ORIC



**Mr. Syed Waqar ul Hasan** Director QEC & Regulatory Affairs

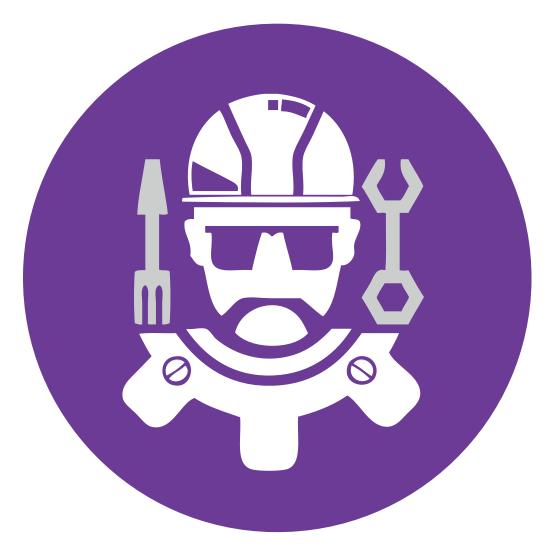
# <sup>26</sup> SALIM HABIB UNIVERSITY

Offering Programs in Faculties of





# **BE Biomedical Engineering**



### B.E. Biomedical Engineering

Biomedical Engineering (BME) is the fastest growing engineering discipline. This interdisciplinary field combines engineering with medicine and provides innovation to advance the quality of life. It utilizes problem solving skills to design and develop innovative diagnostic, therapeutic and surgical solutions for healthcare. With the increasing utilization of technology in healthcare, the demand for biomedical engineers has grown worldwide.

BME at SHU is a flagship program aimed to produce engineers who have an edge in knowledge and technical skills through enquiry, research and experimentation. Using the state-of-the-art laboratories for 'device-based learning' and hands-on training, the program integrates the core knowledge of engineering disciplines biomedical sciences and computer science to understand and resolve problems encountered in living systems. A broad spectrum of technical and professional skills is also offered through research and internship opportunities. The department is geared to facilitate and produce young scientists and entrepreneurs with self-directed learning traits.

Degree Offered		Entry Requirements		Internship Opportunities		
B.E. Biomedical Engineering Duration: 4 Years Semesters: 8 Credit Hours: 138		<ul> <li>Applicant should:</li> <li>Have atleast 60% marks in HSC (Pre-engineering/Pre-medical /Computer Science), A-levels, relevant DAE qualification.</li> <li>Qualify the Aptitude Test and Interview</li> </ul>		<ul> <li>Healthcare centers and hospitals</li> <li>Research laboratories</li> <li>Medical device industry</li> <li>Pharmaceutical industry</li> </ul>		
		1	<b>Tracks Offered</b>		1	
<b>Bio-Medical Instrumentation</b>	Biomechanics		Biomaterials	<b>Bio Signal Proc</b>	essing:	Biomedical Computing
Developing monitoring, diagnostic and therapeutic medical devices using electronic principles and techniques	Studying the mechani biological system to d assistive devices for p impaired patients	levelop	Studying suitable tissues and materials to interact with biological systems for repair, growth and augmentation	Studying of acquisition and processing of various bio signals to analyze physiological processes for clinical investigation		Apply knowledge of computer science and information technology with biology and medicine to reform healthcare systems
Program Objectives	1			Career Prospect	S	
<ul> <li>The program enables Biomedical Engineering graduates with ability to apply integrated knowledge of mathematics, biosciences, information technology, engineering and management to identify and solve complex engineering problems and generate novel concepts for the professional and technological development in the healthcare industry.</li> <li>To enable BME graduates to effectively work in multidisciplinary team environments; communicating with a variety of audience, making decisions that are socially and ethically responsible for exhibiting their interpersonal, management and leadership skills.</li> <li>Biomedical engineering graduates who will build and expand upon their undergraduate foundations of knowledge and ethical values by engaging in life-long and continuous learning opportunities for advance career and professional training.</li> <li>Graduates will find opportunities in:</li> <li>Biomedical engineering departments in hospitals</li> <li>Academics and higher education</li> <li>Medical device manufacturers' representatives components or processes</li> </ul>		partments in hospitals ation ers' representatives companies itutions d in analyzing, modeling and designin				

### Curriculum Plan

#### Year 1

Semester 1				
Course Code	Course Title	Credit Hours		
PHC101	Applied Physics	3		
BME101	Introduction to Biomedical Engineering	1		
BME102	Introduction to Computing	3		
ELE101	Basic Electrical Engineering	4		
IST101	Islamic Studies	2		
MTH101/BIO101*	Basic Mathematics / Biology	3		
ENG100**	Functional English	0		
Credit Hours		16		

#### Year 2

Semester 3				
Course Code	Course Title	Credit Hours		
MTH201	Linear Algebra and Differential Equations	3		
PHY201	Physiology I	3		
ELE201	Circuit Analysis	4		
BME201	Computer Aided Engineering Drawing	1		
BME202	Biomedical Electronics	4		
ANA201	Human Anatomy	3		
Credit Hours		18		

Semester 2				
Course Code	Course Title	Credit Hours		
ENG103	Communication Skills	2		
PST101	Pakistan Studies	2		
MTH103	Calculus and Analytical Geometry	3		
BSC102	Biochemistry	3		
CSC103	Object Oriented Programming	4		
ELE102	Basic Electronics	4		
Credit Hours		18		

Semester 4				
Course Code	Course Title	Credit Hours		
MTH202 ELE203 BME203	Complex Variables and Transformation Digital Logic Design Biomechanics	3 4 4		
PHY202 BME204	Physiology II Biomedical Instrumentation I	3 4		
Credit Hours		18		

#### Year 3

Course Code	Course Title	Credit Hours
BME301	Biomedical Instrumentation II	4
ELE302	Signals and Systems	4
MTH301	Statistics	3
MTH302	Numerical Analysis	3
ELE301	Microprocessors and Interfacing	3
Credit Hours		17

#### Year 4

Semester 7				
Course Code	Course Title	Credit Hours		
MGT401	Entrepreneurship	3		
MGT402	Engineering Management	3		
ENG401	Technical Report Writing & Presentation Skills	3		
BMExxx***	Elective II	3		
BMExxx***	Elective III	3		
BME449****	Final Year Design Project –I	3		
Credit Hours		18		

Internship I (Mandatory)

Semester 6			
Course Code	Course Title	Credit Hours	
BME303	Bio-signal Processing	4	
BME304	Modeling and Simulation	3	
BME305	Biomedical Control Systems	4	
CSCxxx***	Elective I	3	
BME306	Biomaterials	4	
BME300**	Internship Seminar	0	
Credit Hours		18	

Internship II	(Highly	Recommended	Ŋ
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Semester 8			
Course Code	Course Title	Credit Hours	
BME449****	Final Year Design Project –II	3	
BME401	Medical Imaging	3	
BME402	Professional Practices & Ethics	3	
BMExxx***	Elective IV	3	
	System and Standards)		
BMExxx***	Elective V	3	
Credit Hours		15	

\*Basic Mathematics for pre-medical students and Biology for pre-engineering students. \*\*Non-credit

\*\*\* Elective courses to be offered are subject to the availability of resources.

\*\*\*\*Final year project marks calculated in 8th semester

NB: This curriculum plan conforms to the NCRC 2017 guidelines of the Higher Education Commission of Pakistan (HEC). Please refer to SHU website for latest information.



# **BS BIOSCIENCES**



### **BS** Biosciences

Pakistan is on the cusp of a scientific revolution and the scope for a profession in Science has never been more exciting. At SHU we provide our students well-equipped laboratories and academic facilities with a focus on research.

The Department of Biosciences embraces the full breadth of modern, vibrant and internationally leading Biosciences program. The program covers all aspects of the field from atoms to the biospheres, that strongly supports multidisciplinary integration and empowering students with flexibility to tailor their education to their skills and interests.

BS Biosciences program offers a conceptual learning experience through interactive classroom sessions and hands on experience through lab work. The graduates will have a better understanding of science, in general, and biological science in particular and will be able to contribute at the national and international levels. They can go on to make a difference as leaders and innovators in academia, biotechnology and health care industry, research institutions, business and finance education and policy.

Twenty first century is the age of Biosciences. Discoveries of stem cells, development of new tools and technologies, advances in computations, and multi-disciplinary approaches have contributed to a biological revolution. Amazing progress is being made in this century. More recently, bioscientists have succeeded in manufacturing artificial organs including heart using 3D bio-printing. Advances in biosciences have helped mankind to save lives, extend the life-span, and improve the quality of life.

Recent Pandemic of Covid-19 has a created several opportunities for bioscientists in the area of health sciences including the development of equipment, sanitizers, PPE, vaccines, diagnostic tests, screening test, medicines, epidemiology and public health studies, etc.

Degree Offered	Entry Requiremen	ts	In	ternship Opportunities
BS Biosciences Duration: 4 Years Semesters: 8 Credit Hours: 131	Pre-Medical) /A-l	ld: in HSC(Pre-Engineering or evels or equivalent qualification de Test and Interview	•	Pharmaceutical companies Diagnostic laboratories Research institutes Food industry Health related organizations
Tracks Offered				
Molecular Biosciences	<b>Bioinformatics and</b>	Virology & Immunology		Applied Biosciences

Molecular Biosciences	Bioinformatics and Computational Biology	Virology & Immunology	Applied Biosciences
Diverse training in exciting areas of molecular biology for problem solving and evaluating clinical and translational research	Develop knowledge and skills for writing computer programs using simple language and their applications in biology	To develop an understanding of natural defense and its modulation. Knowledge about detailed understanding of viruses and viral infections	To explore in detail the applied and practical aspects of biosciences in biotechnology, food, agriculture, environment and health & diseases



Program Objectives	Career Prospects	
BS-Biosciences will help students equip with necessary knowledge, skill and aptitude to:	BS-Biosciences will provide a wide variety of career opportunities and attracti	ve

• Comprehend the concept of modern Biosciences and its practical aspects.

- Understand the relationship between various fields of life sciences.
- Develop analytical and critical thinking and enhance interpersonal skills and leadership qualities.
- Produce multi-disciplinarily trained graduates.
- Effectively communicate scientific issues with the bioscience fraternity and general public.

### Curriculum Plan

#### Year 1 (FRESHMEN)

#### Semester 1

Course Code	Course Title	Credit Hours
ENG101 PST101 MAT101 / BIO101 PHI101 BSC101 BSC105	Functional English Pakistan Studies Mathematics/ Basic biology Philosophy, Logic & Critical Thisnking Cell Biology Physiology	3 2 3 3 3 3 3
Credit Hours		17

Semester 2		
Course Code	Course Title	Credit Hours
ENG102	Communication/ Writing Skills	3
IST101	Islamic Studies	2
MTH201	Linear Algebra & Differential Equation	3
BSC102	Biochemistry	3
BSC103	Chemistry	3
BSC104	Fundamentals of Microbiology	3
Credit Hours		17

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BS-Biosciences will provide a wide variety of career opportunities and attractive jobs in:

- Agriculture sector
- Biocontrol and bioremediation
- Biotechnological industries
- Food and beverage industries
- Healthcare organizations (Hospitals and diagnostic labs)
- Nutrition and dietetics
- Pharmaceutical industries
- Research and academic organizations
- Various organizations where biological materials are handled or tested
- Nutrition & Dietetics

#### Year 2 (SOPHOMORE)

#### Semester 3

Course Code	Course Title	Credit Hours
CSC105	Programing Fundamentals	4
BSC201	Fundamentals of Classical Genetics	3
BSC205	Ecology & Biodiversity	3
BSC207	Cellular Metabolism & Regulation	3
BSC210	Biostatistics	3
PSY101	Psychology	3
Credit Hours		19

Semester 4			
Course Code	Course Title	Credit Hours	
BSC202	Molecular Biology	3	
BSC203	Structural Biology	3	
BSC204	Fundamentals of Immunlology	3	
BSC208	Introduction to Biotechnology	3	
BSC209	Enzymology	3	
ECO102	Microeconomics	3	
Credit Hours		18	

### Year 3 (JUNIOR)

Semester 5		
Course Code	Course Title	Credit Hours
BSC301	Bioinformatics	3
BSC304	General virology	3
BSC305	Pharmacology	3
BSC308	Human Nutrition & Dietetics	3
BSC311	Neuroscience	3
Credit Hours		15

### Year 4 (SENIOR)

Course Code	Course Title	Credit Hour
MGT401	Entrepreneurship	3
BSC401	Cell and Tissue culture	3
BSC	ELECTIVE-1	3
BSC422	FYP-I	3
ENG401	Technical Report Writing	3
Credit Hours	4	15

Semester 6		
Course Title	Credit Hours	
Epidemiology & Public Health Clinical & Laboratory Diagnostics Genetic Engineering & its Applications Stem cells & Developmental Biology Drug Designing & Development	3 3 3 3 3 3	
	15	
	Epidemiology & Public Health Clinical & Laboratory Diagnostics Genetic Engineering & its Applications Stem cells & Developmental Biology	

EL	ECTIVE COURSES	Credit Hours
1.	Probiotics & Microbiome	3
3.	Proteomics	3
5.	Inflammation: Acute & Chronic diseases	3
7.	Metagenomics in Health & Diseases	3
9.	Green Biotechnology	3

Semester 8		
Course Code	Course Title	Credit Hours
BSC404 BSC BSC423 BSC BSC	Contemporary Biosciences ELECTIVE-2 FYP - II ELECTIVE-3 ELECTIVE-4	3 3 3 3 3 3
Credit Hours		15

CTIVE COURSES	<b>Credit Hours</b>
Cellular and Molecular Biology of Cancer	3
Advance Epidemiology	3
Food Science & Technology	3
Introduction to Genomics and Proteomics in Medicine	3
	Advance Epidemiology Food Science & Technology



## **BS** Microbiology

#### **Program Introduction**

Microbiology is a diverse field encompassing both fundamental and applied sciences. To effectively identify microorganisms and harness their metabolic capabilities for commercial use, microbiologists need a solid understanding of microbial taxonomy, genetics, immunology, and physiology. This discipline focuses on the study of bacteria, viruses, algae, fungi, and protozoa present in our environment, offering insights into their cellular structures and metabolic pathways. Microbiology plays a crucial role in understanding the mechanisms behind infectious diseases, especially highlighted by recent epidemics and pandemics. This has underscored the significance of Microbiology as a promising career path.

Degree Offered	Entry Requirements		Internship Opp	oortunities	
BS Microbiology Duration: 4 Years Semesters: 8 Credit Hours: 136	<ul> <li>The applicants should:</li> <li>Have 45% marks in HSC /A-levels or equivalent qualification</li> <li>Qualify the Aptitude Test and Interview</li> </ul>		<ul> <li>Pathological La</li> <li>Pharmaceutica</li> <li>Food and Dairy Industries</li> <li>Marine Fisheri</li> </ul>	l Companies y Processing	<ul> <li>Water Treatment Facilities</li> <li>Biotechnological Firms</li> <li>Agriculture</li> <li>Research Organizations</li> <li>Academic Institutions</li> </ul>
	Tra	acks Offered	1		
Food Science & Technology	Pharmaceutical Sciences	Biotechnology		Immuno	logy Diagnostics
Prepare students to learn and apply online digital media marketing tools and techniques	Prepare students for the application of management skills for the proper use of technology	Designed to produce human resource pro equipped with requi	fessionals	various f	to encompass functional areas of and finance
Program Objectives		Career Prosp	Career Prospects		
<ul> <li>To prepare graduates with knowledge, skills and aptitude to:</li> <li>To provide students with a solid understanding of various branches of Microbiology including medical microbiology, immunology, fermentation technology, environmental microbiology.</li> <li>To expose students to advanced topics such as Nanobiotechnology and Marine Microbiology, fostering a deeper understanding of the field.</li> <li>To ensure students develop competencies in microbiological techniques, enabling them to analyze and address problems involving microorganisms effectively.</li> <li>To encourage collaboration across different scientific disciplines, recognizing the interdisciplinary nature of Microbiology.</li> <li>To equip students with the skills necessary for a successful career in Microbiology.</li> </ul>		y, Nanotechno Quality Con Environmen Quality Ass Product De Clinical Mi Food Techn Public Heal Industrial M	ntal Microbiologist surance velopment crobiologist nologist lth	esigning	



#### Curriculum Plan Year 1 (FRESHMEN)

Semester 1		
Course Code	Course Title	Credit Hours
ENG101	Functional English	2+1
IST101	Islamic Studies Islam world religions	2+0
MAT101/BIO101	Mathematics Basic biology	3+0
BSC 102	Biochemistry	2+1
BSC 103	Chemistry	2+1
MIC 101	Fundamentals of Microbiology I	2+1
Credit Hours		17

#### Year 2 (SOPHOMORE)

Semester 3		
Course Code	Course Title	Credit Hours
CSC105	Programming fundamentals	3+1
PSY101	Psychology	3+0
BSC-210	Biostatistics	2+1
MGT401	Entrepreneurship	3+0
BSC-207	Cellular Metabolism Regulation	2+1
MIC-202	Community Service	0+2
Credit Hours		18

Semester 2		
Course Code	Course Title	Credit Hours
ENG102	Communication/ Writing Skills	2+1
PST101	Pakistan Studies	2+0
MTH201	Linear Algebra Differential Equation	3+0
BSC 105	Physiology	2+1
PHI101	Philosophy, Logic and Critical Thinking	3+0
MIC102	Fundamentals of Microbiology II	2+1
Credit Hours		17

Semester 4		
Course Code	Course Title	Credit Hours
MIC-203	Medical Microbiology	2+1
MIC-204	Fundamentals of Immunology	2+1
MIC-205	Introduction to metagenomics	3+0
MIC-206	Microbial Taxonomy	2+1
MIC-207	Introduction to Biotechnology	2+1
MIC-208	Bacterial Genetics	2+1
Credit Hours		18

### Year 3 (JUNIOR)

Year 4	(SENIOR)
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<b>Course Code</b>	Course Title	Credit Hours
BSC-301	Bioinformatics	2+1
MIC-301	General virology	2+1
MIC-302	Soil Marine Microbiology	2+1
MIC-303	Biosafety Biosecurity	2+1
MIC-304	Antimicrobial Agents	2+1
Credit Hours		15

Semester 7		
Course Code	Course Title	Credit Hours
ENG401 MIC 401 MIC 411	Technical report writing Cell and Tissue culture FPY I Elective I Elective II	3+0 3+0 0+3 3+0 3+0
Credit Hours		15

Semester 6		
Course Code	Course Title	Credit Hours
MIC-305	Epidemiology Public Health	2+1
MIC-306	Food and Dairy Microbiology	2+1
MIC-307	Introduction to Parasitology	2+1
MIC-308	Genetic Engineering and Its Applications	2+1
MIC-309	Introduction to Mycology	2+1
Credit Hours		15

Semester 8		
Course Code	Course Title	Credit Hours
	Elective III	3
	Elective IV	3
MIC 402	Recent Advances in Microbiology	3
MIC 412	FPY II	0+3
MIC 413	Field Experience/Internship	0+3
Credit Hours		15





# **PHARMACY (PharmD)**





## Pharmacy (PharmD)

Faculty of Pharmacy is a part of Salim Habib University (SHU), founded by The Salim Habib Education Foundation and offering a unique 5 year's Doctor of Pharmacy (Pharm-D) program, for those candidates who are interested to pursue a career in the fields of Health & Pharmaceutical Sciences. The Faculty of Pharmacy is divided into five departments:

- Department of Basic Medical Sciences
- Department of Pharmaceutics
- Department of Pharmaceutical Chemistry
- Department of Pharmacognosy
- Department of Pharmacy Practice

Degree Offered	Entry Requirements	Internship Opportunities
Doctor of Pharmacy (PharmD) Duration: 5 Years Semesters: 10 Credit Hours: 206	<ul> <li>The applicants should:</li> <li>Have 60% marks in HSC (Pre-Medical) /A-levels or equivalent qualification</li> <li>Qualify the Aptitude Test and Interview</li> </ul>	<ul> <li>Hospital and Clinical setup</li> <li>Pharmaceutical Industry</li> <li>Regulatory and enforcement bodies</li> <li>Community Pharmacy</li> </ul>

Program Objectives	Career Prospects
The Doctor of Pharmacy (Pharm-D) program aims to produce Pharmacists who are:	Pharmacy Graduates will find opportunities in the job market but not limited to:
• Par excellence in the area of Pharmaceutical care, clinical care and research	<ul><li>Institutional (Hospital) Pharmacy</li><li>Clinical Pharmacy</li></ul>
Leaders in Pharmacy education, practice and industry	<ul> <li>Community Pharmacy</li> <li>Pharmaceutical Industry</li> </ul>
• Capable of Providing pharmaceutical care encompassing both the patient Care and community services with commitment, professionalism and ethical responsibilities	<ul><li>Academia</li><li>Research and Development</li><li>Allied Healthcare Industry</li></ul>
• Use information technology to integrate evidence from scientific studies into practice	<ul> <li>Technical Operations in the Pharmaceutical Industry</li> <li>Commercial Operation of Pharmaceutical Industry including sales and marketing</li> </ul>
• Able to develop and implement evidence-based programs and protocols, constructed upon the analysis, epidemiological data, pharmacoeconomics, medication-use data and risk reduction strategies	<ul> <li>Government Legislative Bodies</li> <li>Pharmacy Regulatory Affairs</li> <li>Pharmacy Entrepreneurship</li> <li>Healthcare Insurance Companies</li> </ul>

### Our Strengths

Our Pharm-D program is an exclusive, comprehensive and multi-faceted, designed to enhance the professional skills for the practical application in all disciplines of Pharmacy profession through a carefully developed curriculum inspired by ACPE (Accreditation Council for Pharmacy education) guidelines. We aim to provide academic excellence along with the best possible guidance to explore the clinical, community and industrial Pharmacy avenues with research opportunities in Pakistan and abroad.

The expanded role of profession of Pharmacy now requires close integration of clinical aspects of Pharmacy with scientific knowledge and practice. Hence, we have developed state of the art Skills and simulation lab which is the first of its kind, where we prepare our students with the help of simulators and simulating scenarios for both clinical and community pharmacy skills.

SHU is the first university in Pakistan to introduce IPP (introductory Pharmacy practice) and APP (Advanced pharmacy practice) as part of its curriculum. This improvisation connects the theoretical teaching of pharmacy to practice right from the initial years along with accommodating students at practice sites from the 2nd year of Pharmacy. To incorporate clinical visits and provide internships for our students as per our curriculum, we have collaborated with a number of hospitals and community pharmacies, as well as, industries.



## Curriculum Plan

#### Year 1

<b>Course Code</b>	Course Title	Credit Hours
ENG 111	English - A (Functional English)	2
PHM 101	Anatomy & Histology	3
PHM 101(Lab)	Anatomy & Histology	1
PHM 103	Physiology - A	3
PHM 103 (Lab)	Physiology - A	1
PHM 105	Pharmaceutics - IA (Physical Pharmacy)	3
PHM 105 (Lab)	Pharmaceutics - IA (Physical Pharmacy)	1
PHM 107	Pharmaceutical Chemistry - IA (Organic)	2
PHM 107 (Lab)	Pharmaceutical Chemistry - IA (Organic)	1
PHM 109	Pharmaceutical Chemistry - IIA (Biochemistry)	3
PHM 109 (Lab)	Pharmaceutical Chemistry - IIA (Biochemistry)	1
Credit Hours		21

Semester 2		
Course Code	Course Title	Credit Hours
ENG 112	English - B (Communication & Writing skills)	4
PHM 102	Physiology - B	3
PHM 102 (Lab)	Physiology - B	1
PHM 104	Pharmaceutics - IB (Physical Pharmacy)	3
PHM 104 (Lab)	Pharmaceutics - IB (Physical Pharmacy)	1
PHM 106	Pharmaceutical Chemistry - IB (Organic)	2
PHM 106 (Lab)	Pharmaceutical Chemistry - IB (Organic)	1
PHM 108	Pharmaceutical Chemistry - IIB (Biochemistry)	3
PHM 108 (Lab)	Pharmaceutical Chemistry - IIB (Biochemistry)	1
PHM 110	Pharmacy Practice - IA (Pharmaceutical Mathematics)	3
Credit Hours		22



#### Year 4

Semester 7			
Course Code	Course Title	Credit Hours	
PHM 401	Pharmaceutical Chemistry - IIIA) (Pharmaceutical Analysis)	3	
PHM 401 (Lab)	Pharmaceutical Chemistry - IIIA) (Pharmaceutical Analysis)	1	
PHM 403 PHM 403 (Lab)	Pharmacy Practice -VIA (Advanced Clinical Pharmacy II) Pharmacy Practice -VIA (Advanced Clinical Pharmacy II)	3	
PHM 405	Pharmaceutics - IVA (Industrial Pharmacy)	3	
PHM 405 (Lab)	Pharmaceutics - IVA (Industrial Pharmacy)	1	
PHM 407	Pharmaceutics - VA (Biopharmaceutics & Pharmacokinetics)	3	
PHM 407 (Lab)	Pharmaceutics - VA (Biopharmaceutics & Pharmacokinetics)	1	
PHM 409	Pharmaceutics - VIA (Pharmaceutical Quality Management)	3	
PHM 409 (Lab)	Pharmaceutics - VIA (Pharmaceutical Quality Management)	1	
Credit Hours		20	

#### Year 5

<b>Course Code</b>	Course Title	Credit Hours
PHM 501	Pharmaceutics-VIIA (Pharmaceutical Technology)	3
PHM 501 (Lab)	Pharmaceutics-VIIA (Pharmaceutical Technology)	1
PHM 503	Pharmacy Practice -VIIA (Forensic Pharmacy)	3
PHM 505	Pharmacy Practice -VIIIA (Pharmaceutical Management & Marketing)	3
PHM 507	Pharmaceutical Chemistry - IVA (Medicinal Chemistry)	3
PHM 507 (Lab)	Pharmaceutical Chemistry - IVA (Medicinal Chemistry)	1
PHM 509	Pharmacy Practice - XII A (Advanced Clinical Pharmacy III)	2
PHM 511 (Lab)	Pharmacy Practice - XIA (Advanced Pharmacy Practice Experience)	2
PHM 513 (Lab)	Pharmacy Practice - IX (Research Methodology)	1
<b>Credit Hours</b>		19

Semester 10		
Course Code	Course Title	Credit Hours
PHM 502	Pharmaceutics - VIIB (Pharmaceutical Technology)	3
PHM 502 (Lab)	Pharmaceutics - VIIB (Pharmaceutical Technology)	1
PHM 504	Pharmacy Practice - VIIB (Forensic Pharmacy)	3
PHM 506	Pharmacy Practice - VIIIB	
	(Pharmaceutical Management and Entrepreneurship)	3
PHM 508	Pharmaceutical Chemistry - IVB (Medicinal Chemistry)	3
PHM 508 (Lab)	Pharmaceutical Chemistry- IVB (Medicinal Chemistry)	1
PHM 510	Pharmacy Practice - XII B (Advanced Clinical Pharmacy III)	2
PHM 512 (Lab)	Pharmacy Practice - XI B (Advance Pharmacy Practice Experience)	2
Credit Hours		18

**NB:** This curriculum plan conforms to the current guidelines of the Higher Education Commission of Pakistan (HEC) for the program. These are subject to change by the HEC. Please refer to SHU website for latest information.

Semester 8		
Course Code	Course Title	Credit Hours
PHM 402	Pharmaceutical Chemistry - IIIB (Pharmaceutical Analysis)	3
PHM 402 (Lab)	Pharmaceutical Chemistry - IIIB (Pharmaceutical Analysis)	1
P1HM 404	Pharmacy Practice - VIB (Advanced Clinical Pharmacy-II)	3
PH3M 404 (Lab)	Pharmacy Practice - VIB (Advanced Clinical Pharmacy-II)	1
PHM 406	Pharmaceutics - IVB (Industrial Pharmacy)	3
PHM 406 (Lab)	Pharmaceutics - IVB (Industrial Pharmacy)	1
PHM 408	Pharmaceutics - VB (Biopharmaceutics & Pharmacokinetics)	3
PHM 408 (Lab)	Pharmaceutics - VB (Biopharmaceutics & Pharmacokinetics)	1
PHM 410	Pharmaceutics - VIB (Pharmaceutical Quality Management)	3
PHM 410 (Lab)	Pharmaceutics - VIB (Pharmaceutical Quality Management)	1
Credit Hours		20

# **BS COMPUTER SCIENCE**





## **BS** Computer Science

The BS Computer Science program at SHU offers an exceptional blend of theoretical research and extensive practical training. It molds its students into skillful professionals ready to take up real-world challenges in their professional lives. A strong curriculum is offered by highly qualified PhD and MS faculty with reputable accomplishments in research, academic publications and industrial projects.

You are expected to develop an understanding of programming languages and acquire skills to coding creatively solve complex problems. You should develop expertise in state-of-the-art approaches to a diverse set of technologies and market-oriented skills and interact with internationally renowned research groups. You will be engaged in interdisciplinary activities to grasp fundamental technical knowledge. The program imparts the essential skills employers expect from top-quality computer science graduates and will prepare you for employment in a wide variety of industries as we envisage to see our graduates to be of diverse efficacy to higher education and in almost every sphere of life where computer skills are required.

Degree Offered	Entry Requirements		Internship Opportunities
BS Computer Science Duration: 4 Years Semesters: 8 Credit Hours: 131	<ul> <li>The applicants should have:</li> <li>"Minimum 50% marks in HSC (Pre Eng Pre-Medical, Computer Science), or equiv qualifications recognized by IBCC"</li> <li>Qualify the Aptitude Test and Interview</li> </ul>		<ul> <li>Software houses</li> <li>Technology incubators</li> <li>E-Commerce startups</li> <li>Pharmaceutical companies</li> <li>Financial institutions/banks</li> </ul>
Software Engineering	Tracks	ffered	
	Network and Security		Artificial Intelligence
Develops knowledge and skills in computer programming, mobile programming, web development, and information security	Develops knowledge and skills in understanding network, routing, switching and security management		Develops knowledge and skills in the field of big data analytics, data mining and Machine learning
Program Objectives		Career	Prospects
<ul> <li>computational skills that make them able</li> <li>Demonstrate a sound understanding of exercise critical judgment across a rang</li> <li>Critically analyze and design solutions practices and use of modern tools and t</li> </ul>	computing fundamentals with an ability to ge of related issues. for complex computing problems with best echniques. as an individual and as a leader / member of a onal ethics and social responsibility.	<ul> <li>Techn</li> <li>Data S</li> <li>Game</li> <li>Mobil</li> <li>Softw</li> <li>Ethica</li> <li>Inform</li> <li>Netwo</li> <li>Busin</li> </ul>	tes will find opportunities in: nology Entrepreneurship Science/Machine Learning and Artificial Intelligence based Industry Development/Graphic Designing le Application/Web Development vare Engineering al Hacking nation System Security Analysis ork and System Administration tess Intelligence Development Design and Development

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## Curriculum Plan For Pre-Engineering Students

#### Year 1

#### Year 2

Course Code	Course Title	Credit Hours
CSC105	Programming Fundamentals	3+1
CSC104	Introduction to Information and Communication Technologies	2+1
MTH103	Calculus and Analytical Geometry	3
ENG101	Functional English	2+1
PST101	Pakistan Studies	2
<b>Credit Hours</b>		15

Semester 3		
Course Code	Course Title	Credit Hours
ELE204 CSC201 ENG106 MTH208 XXXX	Digital Logic Design (Prerequisites: PHC103) Data Structures and Algorithms (Prerequisites: CSC103) Presentation and Communication Skills (Prerequisites ENG101) Linear Algebra General Elective – I	3+1 3+1 2+1 3 3
<b>Credit Hours</b>		17

Semester 2		
Course Code	Course Title	Credit Hours
CSC103 CSC210 PHC103 MTH111 IST102	Object Oriented Programming (Prerequisites: CSC105) Discrete Structures Applied Physics Multivariate Calculus (Prerequisites: MTH103) Islam and World Religions	3+1 3 3 3 2
Credit Hours		15

\* Non Credit

Semester 4		
<b>Course Code</b>	Course Title	Credit Hours
CSC202 MTH301 MTH302 XXXX MTH209 HUS201	Computer Organization and Assembly Language (Prerequisites: CSC105) Statistics Numerical Analysis (Prerequisites:MTH103) General Elective – II Differential Equations (Prerequisites: MTH103) Community Service	3+1 3 3 3 3 1
<b>Credit Hours</b>		17



#### Year 3

#### Year 4

Semester 5		
Course Code	Course Title	Credit Hour
CSC303 CSC301 CSC302 CSC304 CSC407	Theory of Automata Operating Systems (Prerequisites: CSC201) Software Engineering Database Systems (Prerequisites: CSC201) Artificial Intelligence (Prerequisites: CSC201)	3 3+1 3 3+1 3+1 3+1
Credit Hours		18

Semester 7		
<b>Course Code</b>	Course Title	<b>Credit Hours</b>
CSC401	Final Year Project – I (Prerequisites: CSC302, CSC304)	3
CSC402	Parallel and Distributed Computing (Prerequisites: CSC301)	3
CSC404	Information Security	3
CSCXXXX	CS Elective – III	3
ENG201	Technical and Business Writing (Prerequisites: ENG106)	3
CSC405	Professional Practices	3
<b>Credit Hours</b>		18

Semester 6		
Course Code	Course Title	Credit Hours
CSC305 CSC306 CSCXXXX CSCXXXX XXXX	Computer Networks Design & Analysis of Algorithms (Prerequisites: CSC201) CS Elective – I CS Elective – II General Elective – III	3+1 3 3 3 3
Credit Hours		16

Semester 8		
Course Code	Course Title	Credit Hours
CSC403 CSC406 CSCXXXX CSCXXXX XXXX	Final Year Project – II (Prerequisites: CSC401) Compiler Construction (Prerequisites: CSC303) CS Elective – IV CS Elective – V General Elective– IV	3 3 3 3 3 3
Credit Hours		15

**NB:** This curriculum plan conforms to the current guidelines of the Higher Education Commission of Pakistan (HEC) for the program. These are subject to change by the HEC. Please refer to SHU website for latest information.

## Curriculum Plan For Pre-Medical Students

#### Year 1

Semester 1		
Course Code	Course Title	Credit Hours
CSC105	Programming Fundamentals	3+1
CSC104	Introduction to Information and Communication Technologies	2+1
MTH110 *	Basic Mathematics I	0
ENG101	Functional English	2+1
PHC103	Applied Physics	3
PST101	Pakistan Studies	2
Credit Hours		15

Year 2	2
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<b>Course Code</b>	Course Title	Credit Hours
MTH103	Calculus and Analytical Geometry	3
CSC201	Data Structures and Algorithms (Prerequisites: CSC103)	3+1
XXXX	General Elective – II	3
CSC210	Discrete Structures	3
XXXX	General Elective – III	3
<b>Credit Hours</b>		16

Course Code	Course Title	Credit Hours
	Course little	Crean mours
CSC103	Object Oriented Programming Prerequisites: CSC105	3+1
ENG106	Presentation and Communication Skills (Prerequisites: ENG101)	2+1
ELE203	Digital Logic Design (Prerequisites: PHC103)	3+1
MTH120 *	Basic Mathematics II	0
XXXX	General Elective – I	3
IST102	Islam and World Religions	2
Credit Hours		16

Semester 4		
Course Code	Course Title	Credit Hours
CSC202	Computer Organization and Assembly Language (Prerequisites: CSC105)	3+1
MTH111	Multivariate Calculus (Prerequisites: MTH103)	3
CSC304	Database Systems (Prerequisites: CSC201)	3+1
MTH208	Linear Algebra	3
MTH301	Statistics	3
HUS201	Community Service	1
<b>Credit Hours</b>		18

\* Non Credit



#### Year 3

#### Year 4

Course Code	Course Title	Credit Hour
CSC303	Theory of Automata	3
CSC301	Operating Systems (Prerequisites: CSC201)	3+1
CSC302	Software Engineering	3
MTH209	Differential Equations (Prerequisite: MTH103)	3
CSC407	Artificial Intelligence (Prerequisites: CSC210)	3+1
Credit Hours		17

<b>Course Code</b>	Course Title	Credit Hour
CSC401	Final Year Project-I Prerequisites: CSC304, CSC302	3
CSC402	Parallel and Distributed Computing (Prerequisites: CSC301)	3
CSC404	Information Security	3
CSCXXX	CS Elective – III	3
ENG201	Technical and Business Writing (Prerequisites: ENG106)	3
CSC405	Professional Practices	3
Credit Hours		18

Semester 6		
Course Code	Course Title	Credit Hours
CSC305 CSC306 CSCXXXX CSCXXXX MTH302	Computer Networks Design & Analysis of Algorithms (Prerequisites: CSC201) CS Elective – I CS Elective – II Numerical Analysis (Prerequisites: MTH103)	3+1 3 3 3 3
Credit Hours		16

<b>Course Code</b>	Course Title	Credit Hours
CSC403	Final Year Project-II (Prerequisites: CSC401)	3
CSC406	Compiler Construction (Prerequisites: CSC303)	3
CSCXXX	CS Elective – IV	3
CSCXXX	CS Elective – V	3
XXXXXX	General Elective – IV	3
Credit Hours		15

**NB:** This curriculum plan conforms to the current guidelines of the Higher Education Commission of Pakistan (HEC) for the program. These are subject to change by the HEC. Please refer to SHU website for latest information.

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# **LIST OF ELECTIVES**

S. No	Courses	Domain	Credit Hours
1	Mobile Application Development	Software Engineering	3
2	Web Engineering	Software Engineering	3
3	Software Quality Assurance	Software Engineering	3
4	Enterprise Resource Planning	Software Engineering	3
5	Simulation and Modelling	Software Engineering	3
6	DevOps	Software Engineering	3
7	Computer Vision	Artificial Intelligence	3
8	Data Science	Artificial Intelligence	3
9	Big Data Analytics	Artificial Intelligence	3
10	Machine Learning	Artificial Intelligence	3
11	Natural Language Processing	Artificial Intelligence	3
12	Human Computer Interaction	Artificial Intelligence	3
13	Deep Learning	Artificial Intelligence	3
14	Internet of Things	Network and Security	3
15	Digital Forensics	Network and Security	3
16	Cloud Computing	Network and Security	3
17	Ethical Hacking	Network and Security	3
18	Blockchain Technologies	Network and Security	3



# **BS ACCOUNTING AND FINANCE**



## BS Accounting and Finance

The program includes: one, the body of knowledge of major accounting certifications offered by ICAP, ACCA, ICMAP and CIMA; two, the functional areas of the business necessary for developing a holistic understanding of a business enterprise; and three, courses within the realm of humanities, social sciences, and personal development that provide students with the intellectual grounding needed for creative thinking and strategy development.

The program focuses on developing technical knowledge and skills associated with Accounting and Finance, and their auxiliary areas like Audit, Banking, and Taxation. Hands-on understanding of the operations of national and international financial markets and instruments, including Pakistan Stock Exchange, Pakistan Mercantile Exchange, NYSE, NASDAQ, CBOT, LSE, forms a primary learning competency of the program. Intellectual grooming necessary for critical thinking, brainstorming and idea generation, and insight into the real business environment through experiential learning courses based on action-learning methodological approach are also major components of the program.

Degree Offered	Entry Requirements	Internship Opportunities
BS Accounting and Finance Duration: 4 Years Semesters: 8 Credit Hours: 136	<ul> <li>The applicant should:</li> <li>Have 45% marks in HSC/A-level or equivalent qualification</li> <li>Qualify the Aptitude Test and Interview</li> </ul>	<ul> <li>Commercial Banks</li> <li>Audit firms</li> <li>Brokerage houses</li> <li>Insurance companies</li> <li>Multinational corporations</li> <li>Corporate treasuries</li> <li>Multinational corporations</li> <li>Regulatory bodies</li> <li>Management consultancies</li> <li>Venture Capital Firms</li> </ul>

Tracks Offered				
Corporate Finance	Capital Markets and Investment Management	Auditing and Taxation	Banking and Risk Management	
This track features a platform for discussing the value impact of tactical and strategic financial activities such as working capital management, capital structure decision, capital budgeting decisions, and important business decisions in corporate acquisitions and restructuring	This track focuses on areas such as Equity and Fixed-income Analysis, Institutional and Private Wealth Management, Financial Derivatives, and various types of money management frameworks	The track covers the concepts, practices, and regulations in the fields of auditing and taxation	<ul> <li>This track deals with:</li> <li>Management of financial institutions with an emphasis on credit management, asset liability management, and regulatory compliances.</li> <li>Risk management of financial and non-financial institutions with an emphasis on interest rate risk management, credit risk management, market risk management, operational risk management, currency risk management, and related regulations</li> </ul>	
Program Objectives			Career Prospects	
<ul> <li>To equip graduates with contemporary and marketable knowledge, skill-sets, and personality traits to:</li> <li>Enable them to work Proficiently in an accounting or finance department at an entry level managerial position</li> <li>Embark on studies at post graduate and doctorate levels</li> <li>Pursue accounting certifications such as CFA, CA, ACCA, ACMAP, ACMA(UK) CMA(USA), FRM(USA), and CIA(USA).</li> </ul>		<ul> <li>Graduates will find opportunities in:</li> <li>Commercial banks, Insurance companies, and Finance companies</li> <li>Investment banks, AMCs, and brokerage houses</li> <li>Audit firms and tax advisory consultancies</li> <li>Accounting and finance departments</li> <li>Risk management and Compliance departments</li> <li>Management consultancies</li> <li>Consumer banking departments</li> <li>Structured product departments</li> </ul>		
	This track features a platform for discussing the value impact of tactical and strategic financial activities such as working capital management, capital structure decision, capital budgeting decisions, and important business decisions in corporate acquisitions and restructuring	Corporate FinanceCapital Markets and Investment ManagementThis track features a platform for discussing the value impact of tactical and strategic financial activities such as working capital management, capital structure decision, capital budgeting decisions in corporate acquisitions and restructuringThis track focuses on areas such as Equity and Fixed-income Analysis, Institutional and Private Wealth Management, Financial Derivatives, and various types of money management frameworkstemporary and marketable knowledge, skill-sets, and Stion graduate and doctorate levels cations such as CFA, CA, ACCA, ACMAP, ACMA(UK)	Corporate FinanceCapital Markets and Investment ManagementAuditing and TaxationThis track features a platform for discussing the value impact of tactical and strategic financial activities such as working capital management, capital structure decision, capital budgeting decisions in corporate acquisitions and restructuringThis track focuses on areas such as Equity and Fixed-income Analysis, Institutional and Private Wealth Management, Financial Derivatives, and various types of money management frameworksThe track covers the concepts, practices, and regulations in the fields of auditing and taxationKeeping decisions, and important business decisions in corporate acquisitions and restructuringCareer ProspectsKeeping decisions in corporate acquisitions and restructuringGraduates will find op • Commercial banks, • Audit firms and tax • Audit firms and tax • Accounting and find • Risk management a • Management a • Management consu • Consumer banking	

## Curriculum Plan

#### Year 1

Semester 1		
Course Code	Course Title	Credit Hours
CSC106	Introduction to Computer Applications	3
ENG101	Functional English	3
ACC101	Introduction to Accounting	3
MGT101	Principles of Management and Leadership	3
HUM101	Foundation of Human Behavior	3
Credit Hours		15

Semester 2		
Course Code	Course Title	Credit Hours
ECO102	Microeconomics	3
MTH107	Business Mathematics	3
MKT101	Principles of Marketing	3
ACC106	Financial Accounting and Corporate	3
	Reporting	
IST102	Islam and World Religions	2
PDV103	Personal Development and Career Planning	2
Credit Hours		16

Summer Semester			
Course Code	Course Title	Credit Hours	
IIP100	Industry Immersion Project - I (Community Service)	0	
Credit Hours		0	

#### Year 2

Semester 3				
Course Code	Course Title	Credit Hours		
ENG105	Presentation and Communication Skills	3		
MTH104	Introduction to Business Analytics	3		
FIN206	Introduction to Finance	3		
PHI101	Philosophy, Logic, and Critical Thinking	3		
ACC202	Computerized Accounting Applications	3		
PST101	Pakistan Studies	2		
Credit Hours		17		

Semester 4				
Course Code	Course Title	Credit Hours		
ACC201	Advanced Financial Accounting and Reporting	3		
ACC203	Cost Management	3		
FIN204	Financial Management	3		
FIN207	Emerging Trends in Accounting & Finance	2		
ECO203	Macroeconomics	3		
PDV203	Arts and Literature	2		
Credit Hours		16		

Summer Semester				
Course Code	Course Title	Credit Hours		
IIP200	Industry Immersion Project - II (Corporate)	0		
Credit Hours		0		

#### Year 3

Course Code	<b>Credit Hours</b>	
ENG306	Applied Business Communication	3
FIN302	Financial Institutions and Markets	3
LAW202	Legal Environment for Business in Pakistan	3
ACC303	Performance Management	3
MTH304	Business Analytics	3
	(Modelling & Forecasting)	
ACC210	Audit & Assurance	3
Credit Hours		18

<b>Course Code</b>	Course Title	Credit Hours
MGT401	Entrepreneurship	3
FIN411	Islamic Finance	3
ACC402	Principles of Taxation	3
FIN409	Derivatives and Risk Management	3
XXXxxx*	Accounting/Finance Elective-I	3
MGT407	ELP -1	3
Credit Hours		18

Semester 6				
Course Code	Course Title	Credit Hours		
FIN303	FIN303 Regulations & Financial Markets			
CSC307	Introduction to MIS and ERP	3		
ACC304	Financial Statement Analysis	3		
FIN304	Investment Analysis	3		
ACC302	Data Analytics for Accounting & Finance	3		
MGT305	Business Research Methods	3		
Credit Hours		18		

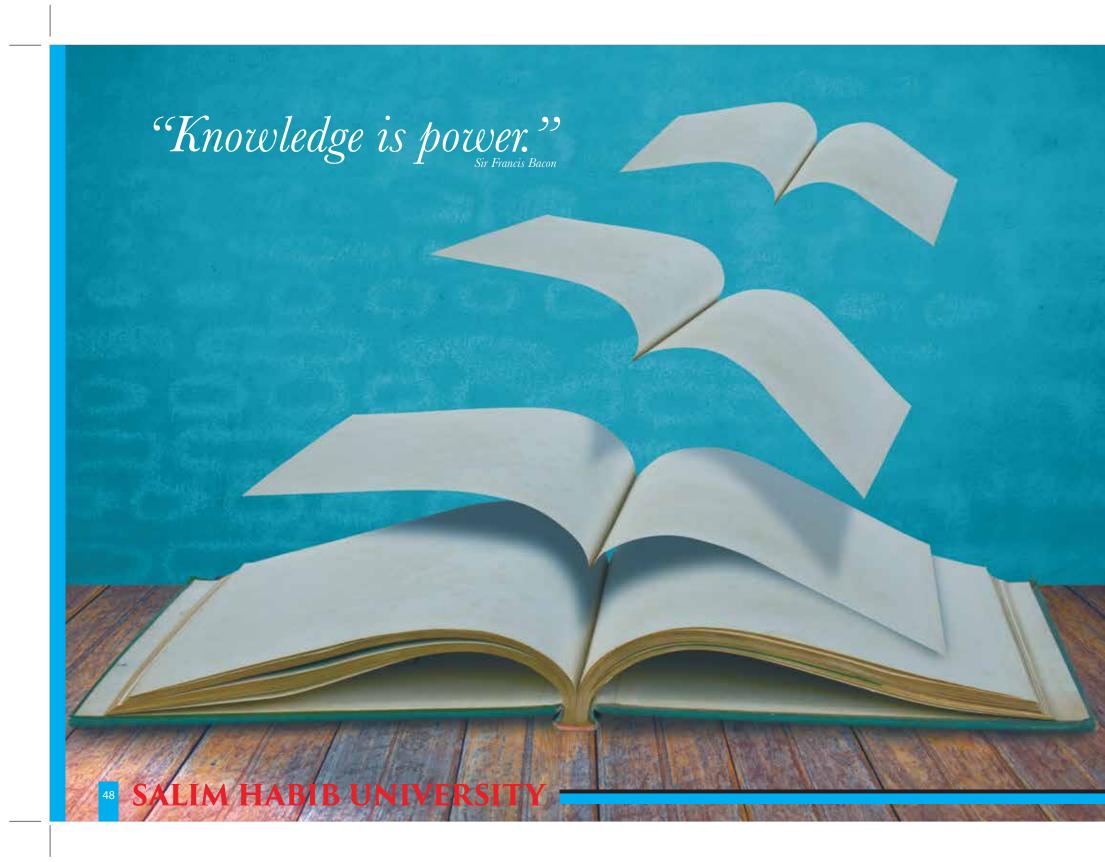
Semester 8		
Course Code	Course Title	Credit Hours
MGT406	Business Strategy	3
FIN412	Fintech: Foundations & Applications	3
XXXxxx*	Accounting/Finance Elective-II	3
XXXxxx*	Accounting/Finance Elective- III	3
XXXxxx*	Accounting/Finance Elective- IV	3
MGT408	ELP-2	3
Credit Hours		18

\*Every elective course has a unique course code.

NB: This curriculum plan conforms to the current guidelines provided by the Higher Education Commission of Pakistan (HEC). However, these guidelines are subject to changes made by the HEC. Please refer our SHU websites for latest information.

Year 4





# **BACHELOR OF BUSINESS ADMINISTRATION**





## BBA

The program has been developed based on a comprehensive evaluation of the curriculums of BBA programs offered at international universities, and those in Pakistan. The objective of the program is to develop foundational knowledge of the students in all major areas of business as well as to develop their personal competencies to understand, appreciate, think, and act strategically in a fast paced environment.

The program incorporates a number of innovative elements in its curriculums which include: the allowance for electives in the area of liberal sciences, natural sciences, computer sciences, and law. The programs also includes workshops on arts and literature, and workshop on personal development and career planning. Additionally, there is the provision for trading lab to introduce students to the environment and valuation of securities and derivatives; use of language lab for teaching languages and business communications; and the provision of experiential learning courses involving operational enterprise assignments are also a core competencies of the program.

Degree Offered	Entry Requirements				Internship Opportuni	ties
BBA Duration: 4 Years Semesters: 8 Credit Hours: 136	<ul> <li>The applicants should:</li> <li>Have 45% marks in HSC qualification</li> <li>Qualify the Aptitude Tes</li> </ul>	×.			<ul> <li>FMCGs</li> <li>Banks</li> <li>Multinational compares</li> <li>Advertising agencies</li> <li>Media houses</li> </ul>	1
		Tracks Of	fered			
Digital Marketing	Technology Management and Innovation	Human Resource Man	agement	Fin	ance and Banking	Intrapreneurship and Startup Management
Prepare students to learn and apply online digital media marketing tools and techniques	Prepare students for the application of management skills for the proper use of technology	Designed to produce competent human resource professionals equipped with requisite soft skills Designed to encompass various functional areas o banking and finance		ous functional areas of	Grooms students to take initiatives within established organizations, or initiate their own business ventures	
Program Objectives Car				rospe	cts	
To prepare graduates with knowledge, skills and aptitude to: Graduates will find opportunities in:						
<ul> <li>Be acquainted with business dy</li> <li>Understand the role of econom</li> <li>Acquire awareness of local and</li> <li>Develop effective business con</li> </ul>	tices and processes	<ul> <li>Techno</li> <li>Finance</li> <li>Operati</li> <li>Sales m</li> <li>Digital</li> <li>Social n</li> <li>Human</li> <li>Project</li> <li>Entrepr</li> <li>Market</li> </ul>	ing m logy r e man anage marke media resou mana eneur analy	anagement management agement management ement eting planning irce management igement ship and startup manager	nent	

## Curriculum Plan

#### Year 1

Semester 1			
Course Code	Course Title	Credit Hours	
CSC106	Introduction to Computer Applications	3	
ENG101	Functional English	3	
ACC101	Introduction to Accounting	3	
MGT101	Principles of Management and Leadership	3	
HUM101	Foundation of Human Behavior	3	
Credit Hours		15	

### Year 2

Semester 3				
Course Code	Course Title	Credit Hours		
ENG105	Presentation and Communication Skills	3		
MGT201	Organizational Behavior and Leadership	3		
FIN206	Introduction to Finance	3		
PHI101	Philosophy, Logic, and Critical Thinking	3		
MTH104	Introduction to Business Analytics	3		
PST101	Pakistan Studies	2		
Credit Hours		17		

Semester 2		
Course Code	Course Title	Credit Hour
ECO102	Microeconomics	3
MTH107	Business Mathematics	3
MKT101	Principles of Marketing	3
ACC106	Financial Accounting and Corporate Reporting	3
IST102	Islam and World Religions	2
PDV103	Personal Development and Career Planning	2
Credit Hours		16

Summer Semester			
Course Code	Course Title	Credit Hours	
IIP100	Industry Immersion Project - I (Community Service)	0	
Credit Hours		0	

Semester 4				
Course Code	Course Title	Credit Hours		
MKT201	Consumer Behavior	3		
MGT205	Human Resource Management	3		
FIN204	Financial Management	3		
MTH203	Calculus with Applications	3		
ECO203	Macroeconomics	3		
PDV203	Arts and Literature	2		
Credit Hours		17		

Summer Semester		
Course Code	Course Title	Credit Hours
IIP200	Industry Immersion Project - II (Corporate)	0
Credit Hours		0



#### Year 3

Semester 5			
Course Code	Course Title	Credit Hours	
ENG306	Applied Business Communication	3	
MTH304	Business Analytics (Modelling & Forecasting)	3	
ECO301	Financial Institutions and Markets	3	
LAW202	Legal Environment for Business in Pakistan	3	
ACC306	Accounting for Management Decisions	3	
FIN306	Securities Trading & Applied Economics	2	
Credit Hours		17	

#### Year 4

Course Code	Course Title	Credit Hour
MGT401	Entrepreneurship	3
MKT401	Marketing Research	3
MGT404	Business Simulations	3
MGT407	ELP - 1	3
XXXxxx*	Business Majors Elective-II	3
XXXxxx*	Business Minors Elective-I	3

Semester 6		
Course Code	Course Title	Credit Hours
MGT305	Business Research Methods	3
MGT301	Operations and Project Management	3
XXXxxx*	Business Majors Elective I	3
ECO401	Pakistan Economy	3
XXXxxx*	Natural Science/Social Science/Humanities Elective-I	3
LAN304	Foreign Language	3
Credit Hours		18

Semester 8			
<b>Course Code</b>	Course Title	Credit Hours	
MGT406	Business Strategy	3	
HUM401	Business Ethics	3	
XXXxxx*	Business Majors Elective-III	3	
XXXxxx*	Business Majors Elective-IV	3	
XXXxxx*	Business Minors Elective-II	3	
MGT408	ELP - 2	3	
Credit Hours		18	

\*Course code for the electives is subject to the course offered

**NB:** This curriculum plan confIrms to the current guidelines provided by the Higher Education Commission of Pakistan (HEC) for the program. However, these are subject to change by the HEC. Please refer to SHU websites for latest information.



## **MASTER OF BUSINESS ADMINISTRATION**



### MBA

The Salim Habib University MBA program aims to be a transformational master's degree program where the students end up with so much more than a master's degree. Careers often change, industries disrupt and the world changes itself, with the offerings at MBA program at SHU the students will not only keep pace with that pervasive change, in fact will drive it as wholesome individuals who know their unique place in the global community.

The MBA program at SHU has been designed to be highly competitive, versatile, and pragmatic in its orientation and pedagogical approaches. It will cater to the current demands of the private sector, non-profit non-government, as well as government agencies. It has all the scientifically recognized scaffoldings to instill internationally recognized competencies among students of diverse backgrounds to succeed as managers, public sector's administrators, non-profit organization employees, sociopreneuers, and entrepreneurs in assorted careers of their choosing.

The program offers a range of competitive higher level curricula on top of core courses to give strong foundations to its students. Students will have numerous options to configure the combination of their higher-level electives to choose from multiple majors and minors. The value-added feature of the program is its methodological approach to inculcate academic knowledge through industry immersion projects; a feature derived from cutting edge American Universities' curricula for MBA programs. Another distinguishing feature of the MBA program at Salim Habib University is the inclusion of a course on Action Research which comprises of various tools and methodologies for systematically examining industry problems, and the development of their solutions; and the capstone project which involves the application of this learning to a real industry problem, thus providing the students with experiential basis of practical implications and subtleties of a real world scenario.

Degree Offered	Entry Requirements	Internship Opportunities
MBA Duration: 1.5 years Semesters: 3 Credit Hours: 30	<ul> <li>Candidates should have 16 years of business discipline 50% marks in last acquired degree with minimum of 2.0 CGPA</li> <li>Aptitude test and interview</li> </ul>	<ul> <li>FMCG</li> <li>Banks</li> <li>Brokerage Companies</li> <li>Asset Management Companies</li> <li>Multinationals</li> </ul>
MBA Duration: 2 years Semesters: 4 Credit Hours: 60	<ul> <li>16 years of education in non-business disciplines; e.g. BS, MSc or equivalent with minimum 50% marks in last acquired degree or 2.0 CGPA</li> <li>Aptitude test and interview</li> </ul>	<ul> <li>Advertising Agencies</li> <li>Market Research Firms</li> <li>Media Houses</li> <li>Health and Pharma Companies</li> <li>NGOs</li> <li>Public Sector Enterprises</li> </ul>
BBA Duration: 2 years Semesters: 4 Credit Hours: 75	<ul> <li>14 years of education in non-business disciplines; e.g. BA, BSc, Bcom, with 50% marks in last acquired degree or 2.0 CGPA</li> <li>Aptitude test and interview</li> </ul>	• Startups



		Tracks Offered *		
Pharmaceutical Management & Marketing	Supply Chain Management	Management Information Systems	Integrated Human Resource Management	Marketing in Digital Age
This specialization is designed to fulfill the demand of pharmaceutical industry for managerial positions and making students instrumental for catering a competitive edge.	This track will connect the student to the decision making regarding the procurement, logistics, product forecasting, and ERP.	Management information systems track will familiarize students with the use of technology to manage huge volumes of business-relevant information to assist in strategic decision-making and to improve a company's operation.	This track will help students to be instrumental and making them competent human resource professionals who have significant human skills	This specialization covers various functional areas of marketing as per requirement of modern age along with marketing solutions of real time and will prepare students for modern technology management in Marketing.
Finance			Program Objectives	
Finance track will train students with analytical skills and knowledge for use of financial information in business decision making, global financial systems and market, and learn to examine and evaluate source of finance and access to capital markets.		<ul> <li>Our students will master the followi</li> <li>They will understand the forces the environment, and thus appreciate</li> <li>They will have effective writing a</li> <li>They will understand team dynam</li> <li>They will have a commitment to a</li> <li>They will acquire skills for effect</li> <li>They will develop personal and p exhibit through their conduct the</li> <li>They will appreciate social, legal, employee of an organization, und</li> <li>They will develop insight and ski quantitative analysis.</li> </ul>	hat shape a particular economic the impact of one's decisions of and speaking skills. hics while exercising their lead fostering up-to-date, cutting ed ive employment of technology rofessional interest in developi belief that every person deserv , and ethical responsibilities as er the ambit of Corporate Soci	c, legal and regulatory on society at large. lership skills. lge knowledge of business disciplin in organizational setting. ing others, and will res space and dignity. an individual, and as an al Responsibility (CSR).

#### **Career Prospects**

Our MBA Program is aimed at being more than a resume enhancement or a means to an end. It is aimed as an experience that will shape the entire career of the students, and prepare them to navigate the economic, social, and other complex changes of the future. The scope of opportunities available for MBA graduates goes beyond the needs of the business enterprises to cover governmental agencies, and non-governmental welfare enterprises which are increasingly becoming cognizant of the enhanced efficacy that a business professional brings to an organization. The following are a few of the areas that define scope of the MBA Program.

- Entrepreneurial Management
- Product/Brand Marketing
- Sales Management
- Marketing Management
- Market Analytics/Data Science
- Advertising
- Media Management

- Marketing Research
- Supply Chain Management
- Business Development
- Human Resource Management
- Operations/Production Management
- Regulatory Affairs Management
- Real Estate Management

- Project Management
- Strategy Consulting
- Computer and Information Systems Management
- Technology Management
- Investment Banking
- Risk Management

- Sales, Trading, and Brokerage
- Private Equity
- Insurance, Pension Funds
- Health Care Management
- Pharmaceutical Management
- Governmental Service Management

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#### Master of Business Administration (MBA) Semester-wise Study Plan MBA-1.5 Years (30 Credit Hours)

#### Year 1

Semester 1			
Course Code	Course Title	Credit Hours	
FIN501	Strategic Finance and Investment	3	
MTH501	Business Analytics (Modelling & Forecasting)	3	
MKT511	Strategic Marketing	3	
MGT 516	Research Methods for Business Managers	3	
Total Credit Hour		12	

#### Year 2

Course Code	Course Title	<b>Credit Hours</b>	Pre-requisite
ELVXXX	Business Elective-III	3	MKT511 or FIN501
XXXX	Thesis II/ Industrial Project II	3	MGT516, MBM701(I)

Semester 2			
Course Code	Course Title	Credit Hours	Pre-requisite
MGT515	Strategic Management	3	
ELVXXXX	Business Elective-I	3	MKT511 or
ELVXXXX	Business Elective-II	3	FIN501 MKT511 or
	Dusiness Elective-II	5	FIN501
MBM701(I)	Thesis I Industrial Project-1	3	MGT516
Total Credit Hour		12	



#### Master of Business Administration (MBA) Semester-wise Study Plan MBA-2 Years (60 Credit Hours)

#### Year 1

Semester 1			
Course Code	Course Title	Credit Hours	
ACC401	Financial Accounting and Corporate Reporting	3	
MTH401	Introduction to Business Analytics	3	
MGT403	Business Management and Leadership	3	
ENG405	Applied Business Communication	3	
MKT402	Marketing (Theory & Application)	3	
Total Credit Hour		15	

#### Year 2

Semester 3	Semester 3				
<b>Course Code</b>	Course Title	Credit Hours	Pre-requisite		
ECO302	Business Economics	3			
FIN501	Strategic Finance and Investment	3	FIN301		
MTH501	Business Analytics (Modeling & Forecasting)	3	MTH401		
XXXX	Business Elective – I	3	MGT403 or MKT402		
MBM701(I)	Thesis I / Industrial Project I	3	MGT517		
Total Credit	Hour	15			

Semester 2				
Course Code	Course Title	<b>Credit Hours</b>	Pre-requisite	
MGT303	Organizational Behavior & HR Practices	3	MGT403	
LAW301	Legal Environment for Business in	3		
	Pakistan			
FIN301	Finance for Business Managers	3	ACC401	
ACC305	Accounting for Management Decisions	3	ACC401	
MGT517	Methods for Business Research	3	MTH401	
Total Credit	Hour	15		

Semester 4				
Course Title	<b>Credit Hours</b>	Pre-requisite		
Strategic Marketing	3	MKT402		
Strategic Management	3	MGT403		
Business Elective – II	3	MGT403 or		
		MKT402		
Business Elective – III	3	MGT403 or		
		MKT402		
Thesis II/ Industrial Project II	3	MGT517,		
		MBM701(I)		
Hour	15			
	Strategic Marketing Strategic Management Business Elective – II Business Elective – III	Strategic Marketing3Strategic Management3Business Elective – II3Business Elective – III3Thesis II/ Industrial Project II3		

**Bachelor of Business Administration Two Years Weekend Program Semester-wise Study Plan (75 Credit Hours)** 

#### Year 1

<b>Course Code</b>	Course Title	Credit Hour
ACC401	Financial Accounting and Corporate Reporting	3
MTH401	Introduction to Business Analytics	3
MGT403	Business Management and Leadership	3
ENG405	Applied Business Communication	3
MKT402	Marketing (Theory & Application)	3
Credit Hours		15

Semester 2			
Course Code	Course Title	Credit Hours	Pre-req
MGT303	Organizational Behavior & HR Practic	ces 3	MGT403
LAW301	Legal Environment for Business in Pal	kistan 3	
FIN301	Finance for Business Managers	3	ACC401
ACC305	Accounting for Management Decision	is 3	ACC401
ECO302	Business Economics	3	
<b>Credit Hours</b>		15	

Summer Semester			
Course Code	Course Title	Credit Hours	
IIP401	Industry Immersion Project (Mandatory Supervised Internship)	3	
PST401	Pakistan Studies	3	
PDV403	Arts & Literature	3	
Credit Hours		9	

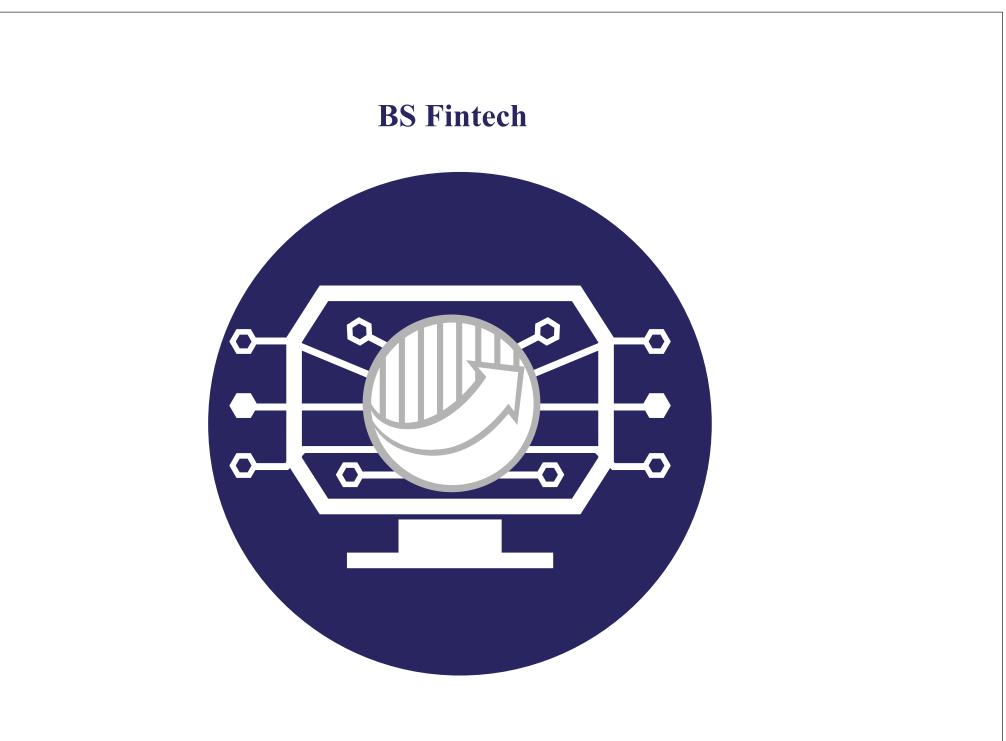
#### Year 2

<b>Course Code</b>	Course Title	Credit Hours	Pre-req
MGT503	Application of Quantitative	3	MTH401
	Techniques in Research		
ENG406	Presentation & Communication Skills	3	ENG405
SCM402	Supply Chain Management	3	MGT403
PHI401	Philosophy, Logic & Critical Thinking	3	
MIT410	Introduction to MIS & ERP	3	
Credit Hours		15	1

Semester 4				
Course Code	Course Title	Credit Hours	Pre-req	
MGT513 ENG407 MKT512	Entrepreneurship Communication Skills for Negotiations Marketing Research	3 3 3 3	FIN301, MGT303, ECO406 ENG406 MKT402,	
MGT515 MGT514	Strategic Management Business Ethics	3	MGT503 MKT402, MGT503, MGT303, LAW301, FIN301, ACC301 PHI401, MGT303	
Credit Hours		15		

Summer Semester			
<b>Course Code</b>	Course Title	Credit Hours	Pre-req
IST401 FIN402	Islam & World Religions Securities Trading & Applied Economics	33	ACC305 FIN301
<b>Credit Hours</b>		6	

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## **BS** Fintech

The BS (Fintech) program at Salim Habib University is a dynamic four-year degree designed to blend finance and technology. It provides students with a robust foundation in financial principles alongside advanced technological skills. The curriculum covers 140 credit hours, including an internship, and integrates financial management, programming, data analytics, and blockchain technology.

Graduates are prepared for a range of roles such as Financial Technology Specialist, Data Analyst, Blockchain Developer, and Risk Manager. The program emphasizes practical experience and real-world projects, ensuring students can effectively apply their knowledge to solve contemporary financial challenges.

In today's rapidly evolving global economy, the ability to combine financial expertise with technological innovation is crucial. This program equips students to navigate complex financial landscapes, utilize emerging technologies, and drive innovation within the fintech industry. By aligning with current industry standards, the BS (Fintech) program ensures that graduates are well-prepared to meet employer demands and excel in various sectors.

Moreover, the program promotes entrepreneurial thinking, providing students with the tools to start their own fintech ventures or contribute to technological advancements in existing companies. This focus on entrepreneurship and innovation supports economic growth and addresses modern business challenges, preparing graduates not just to seek employment but to create impactful opportunities in the financial technology sector.

Degree Offered	Entry Requirements	Internship Opportunities
BS FinTech Duration: 4 Years Semesters: 8 Credit Hours: 140	<ul> <li>The applicants should:</li> <li>Have 45% marks in HSC/A-levels or equivalent qualification</li> <li>Qualify the Aptitude Test and Interview</li> </ul>	<ul> <li>Financial Institutions</li> <li>Fintech Companies</li> <li>Technology Companies</li> <li>Blockchain Firms</li> <li>Consulting Firms</li> <li>Regulatory and Government Agencies</li> <li>Venture Capital Firms</li> </ul>

Tracks Offered			
Financial Analytics and Data Science	Blockchain and Cryptocurrency	Financial Cybersecurity	AppliDigital Banking and Payment Systemsnces
Focus on quantitative analysis, big data, and predictive modeling.	Emphasis on blockchain technology, digital currencies, and decentralized finance	Concentration on securing financial data and transactions	Study of online banking, mobile payment systems, and fintech solutions.



#### Curriculum Plan Year 1 (FRESHMEN)

Semester 1			
Course Code	Course Title	Credit Hours	
CSC106 ENG101	Introduction to Computer Applications Functional English	2+1 2+1	
ACC101	Introduction to Accounting	2+1	
MGT101 HUM101	Principles of Management and Leadership Foundation of Human Behavior	3+0 3+0	
Credit Hours		15	

Semester 2		
Course Code	Course Title	Credit Hours
ECO102	Microeconomics	3+0
MTH107	Business Mathematics	3+0
MKT101	Principles of Marketing	3+0
ACC106	Financial Accounting and Corporate Reporting	2+1
IST102	Islam and world Religions	2+0
CSC109	Introduction to Computer Science	2+1
Credit Hours		17

Year 1 Semester Summer			
Course Code	Course Title	<b>Credit Hours</b>	
IIP100	Industry Immersion Project I ( Community Service)	0+2	
Credit Hours		2	

#### Year 2 (SOPHOMORE)

Semester 3		
Course Code	Course Title	Credit Hours
ENG105	Presentation and Communication Skills	3+0
MTH104	Introduction to Business Analytics	3+0
FIN206	Introduction to Finance	3+0
PST101	Pakistan Studies	2+0
FTE201	Data Structures and Algorithms	2+1
Xxxxx	Natural Science (Elective)	3+0
Credit Hours		17

Semester 4			
Course Code	Course Title	Credit Hours	
FIN204	Financial Management	3+0	
ECO203 PDV203	Macroeconomics Arts and Literature	3+0 0+2	
FTE202 MTH304	Introduction to Fintech Business Analytics (Modelling & Forecasting)	3+0 2+1	
MTH210	Calculus with Applications	3+0	
Credit Hours		17	

Year 2 Semester Summer			
Course Code	Course Title	<b>Credit Hours</b>	
IIP200	Industry Immersion Project II (Corporate)	0+3	
Credit Hours		3	

### Year 3 (JUNIOR)

Semester 5		
Course Code	Course Title	Credit Hours
FIN302 ENG306 FTE203 FTE204 ACC302 FTE205	Financial Institutions and Markets Applied Business Communication Blockchain Technology Fintech: Finance Industry Transformation and Regulations Data Analytics for Accounting & Finance Programming for Fintech I	3+0 3+0 2+1 3+0 2+1 2+1
Credit Hours		18

### Year 4 (SENIOR)

Semester 7		
Course Code	Course Title	Credit Hours
FTE210 FTE211 FIN409 XXXxxx* XXXxxx* TBA	Artificial Intelligence in Finance Managing Technology and Innovation Derivative and Risk Management Elective I Elective II ELP -1 / FYP-1	2+1 3+0 3+0 3+0 3+0 0+3
Credit Hours		18

Semester 6		
Course Code	Course Title	Credit Hours
FIN312 FTE206 FTE207 MGT305 FIN313 FTE209	Fintech Start-ups: Financing and Valuation Database Management Systems Programming for Fintech II Business Research Methods Investment Management Web & Mobile Application Development	2+1 2+1 2+1 3+0 3+0 1+2
Credit Hours		18

Course Code	Course Title	Credit Hours
MGT406 FTE212 XXXxxx* XXXxxx* MGT408	Business Strategy Fintech Entrepreneurship Elective-III Elective- IV ELP – 2/ FYP-2	3+0 3+0 3+0 3+0 0+3
Credit Hours		15





# **BS** Business Analytics

Welcome to the Bachelor of Science in Business Analytics program. This innovative four-year degree is designed to equip students with the skills and knowledge needed to succeed in today's data-driven business world – and beyond.

Business analytics is the process of using data and analytical techniques to drive business decision-making. It involves using tools and methods from statistics, computer science, and business to analyze complex data sets and gain insights that can inform business strategy.

Our BS Business Analytics program provides students the opportunity for hands-on learning experiences while emphasizing the need for good communication and negotiation skills in a commercial context, as well as the ethical and social aspects associated with data analysis and decision-making.

Through a combination of coursework, case studies, hands-on projects, and freelance training, students will gain the skills and knowledge needed to succeed in a variety of roles - from business analyst to data scientist to freelance consultant. Our expert faculty will guide students through a curriculum that is both rigorous and relevant, ensuring that graduates are prepared to make an impact in the business world and beyond.

Join us in the BS Business Analytics program and discover the power of data-driven decision-making.

Degree Offered	Entry Requirements	Internship Opportunities		
BS Business Analytics Duration: 4 Years Semesters: 8 Credit Hours: 136	<ul> <li>The applicant should:</li> <li>Have 45% marks in HSC or equivalent marks in or other qualifications</li> <li>Qualify the Aptitude Test and Interview</li> </ul>	<ul> <li>Insurance Companies</li> <li>Food and Beverage Companies</li> <li>Technology Firms</li> <li>Marketing Firms</li> <li>Financial Firms</li> <li>Trading Firms</li> </ul>		
Tracks Offered				
Marketing Analytics	HR Analytics	Financial Analytics		
Develop understanding and skills to perform market research using advance analytics tools for consumers and competitors.	To develop data-driven HR skills to elevate decision-making for recruitment, training, development, compensation, and performance.	To create understanding of advance synthesis of financial data using advance data analytics tools, simulations and modelling.		



### Curriculum Plan

#### Year 1 (FRESHMEN)

Semester 1		
Course Code	Course Title	Credit Hours
CSC106	Introduction to Computer Applications	2+1
ENG101	Functional English	2+1
ACC101	Introduction to Accounting	2+1
MGT101	Principles of Management and Leadership	3+0
HUM101	Foundation of Human Behavior	3+0
Credit Hours		15

Semester 2		
Course Code	Course Title	Credit Hours
ECO102	Microeconomics	3+0
MTH107	Business Mathematics	3+0
MKT101	Principles of Marketing	3+0
ACC106	Financial Accounting and Corporate Reporting	2+1
IST102	Islam and World Religions	2+0
PDV103	Personal Development and Career Planning	0+2
Credit Hours		16

Summer Semester		
Course Code	Course Title	Credit Hours
IIP100	Industry Immersion Project - I (Community Service)	0+0
Credit Hours		0

#### Year 2 (SOPHOMORE)

Semester 3		
Course Code	Course Title	Credit Hours
ENG105	Presentation and Communication Skills	3+0
FIN206	Introduction to Finance	3+0
PHI101	Philosophy, Logic, and Critical Thinking	3+0
MTH104	Introduction to Business Analytics	2+1
BAN201	Computer Programming - I	2+1
MTH203	Calculus with Applications	3+0
Credit Hours		18

Semester 4		
Course Code	Course Title	Credit Hours
PST101 BAN202 FIN204 BAN203 ECO203 PDV203	Pakistan Studies Computer Programming - II Financial Management Data Structures Macroeconomics Arts and Literature	2+0 2+1 3+0 2+1 3+0 0+2
Credit Hours		16

Summer Semester		
Course Code	Course Title	Credit Hours
IIPXxx	Industry Immersion Project - II (Corporate)	0+3
Credit Hours		3

### Year 3 (JUNIOR)

### Year 4 (SENIOR)

Semester 5		
Course Code	Course Title	Credit Hours
ENG306	Applied Business Communication	3+0
MTH304	Business Analytics – Modeling and Forecasting	3+0
ECO301	Financial Institutions and Markets	3+0
LAW202	Legal Environment for Business in Pakistan	3+0
BAN301	Basic Econometrics	3+0
XXXxxx*	Natural Science Elective	2+1
Credit Hours		17

Course Code	Course Title	Credit Hours
MGT401	Entrepreneurship	3+0
MGT404	Business Simulations	3+0
MGT407	ELP – I/Capstone - I	3+0
BAN401	Decision Science for Business	3+0
XXXxxx*	Majors Elective-II	3+0
XXXxxx*	Minors Elective-I	3+0
Credit Hours		18

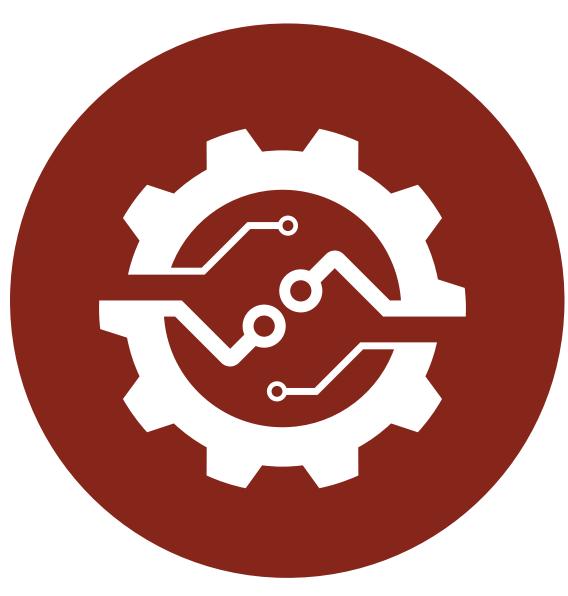
Semester 6			
Course Code	Course Title	Credit Hours	
MGT305	Business Research Methods	3+0	
XXXxxx*	Majors Elective-I	3+0	
BAN302	Database Systems	3+0	
BAN303	Machine Learning for Business Analytics	3+0	
BAN304	Business Data and Text Mining	3+0	
BAN305	Business Intelligence	3+0	
Credit Hours		18	

Summer Semester			
Course Code	Course Title	Credit Hours	
-	-	-	
Credit Hours		-	

Semester 8			
Course Code	Course Title	Credit Hours	
MGT406	Business Strategy	3+0	
BAN402	Predictive Analytics	3+0	
XXXxxx*	Majors Elective-III	3+0	
XXXxxx*	Majors Elective-IV	3+0	
XXXxxx*	Minors Elective-II	3+0	
MGT408	ELP - II/ Capstone - II	3+0	
Credit Hours		18	



# **BS Supply Chain Management**



## BS Supply Chain Management

The supply chain is a complex system that involves business strategists predicting consumer demand and making goods accessible to producers, manufacturers, and consumers. Supply chain management coordinates businesses and suppliers in transferring goods to the right locations, with technology driving procedures and tactics to provide a competitive edge.

Our BS Supply Chain Management program equips students with the knowledge and skills to efficiently manage the complex systems of people, resources, and information involved in delivering products and services. This program focuses on optimizing delivery processes while minimizing costs, preparing graduates to excel in roles within large companies, smaller organizations, and start-ups.

Students will gain expertise in areas such as logistics, warehousing, inventory management, risk management, project management, procurement, transportation, and distribution. The curriculum includes foundational business courses in accounting, finance, marketing, MIS, and management, with a specialized focus on supply chain management. Through experiential learning, students will develop interpersonal communication, teamwork, and diversity management skills.

The program also offers elective courses in cross-cultural management, planning for customer demands and inventory, supply chain operations, local and global procurement, contracts and negotiation, transportation, logistics and leveraging industry 4.0 technologies in supply chain. A required internship and a capstone project provide practical, field-based experience, ensuring graduates are well-prepared to enter the workforce in various supply chain positions across industries such as manufacturing, distribution, transportation, and retailing.

Degree Offered	Entry Requirements	Internship Opportunities	
BS Supply Chain Management Duration: 4 Years Semesters: 8 Credit Hours: 142	<ul> <li>The applicant should:</li> <li>Have 45% marks in HSC or equivalent marks in A-levels, or other qualifications</li> <li>Qualify the Aptitude Test and Interview</li> </ul>	<ul> <li>Manufacturing</li> <li>FMCG</li> <li>Retail</li> <li>Oil, gas and energy</li> <li>Healthcare</li> <li>IT</li> </ul>	<ul> <li>E-commerce</li> <li>Logistics and transportation</li> <li>Import and export</li> <li>Consultation</li> <li>Government institutions</li> <li>Humanitarian projects</li> </ul>

•	•	Parcel	services

Tracks Offered				
Demand and inventory planning	Operations management	Procurement planning and resource management	Delivery and logistics	
To develop knowledge and skills needed in predicting customer demand, fulfilment, managing supply base while maintaining service, financial, customer goals.	To provide diverse understanding of end-to-end supply chain and plant-level operations management.	Provide skills in procurement from strategic to operational level, supplier partnerships, contracts, negotiations and optimum allocation of money, human resources and technology.	Develop competencies to understand complex delivery and logistics network, service levels, innovations in first-mile and last mile delivery, carbon footprint and optimize the balance between responsiveness and efficiency.	



• Others

## Curriculum Plan

#### Year 1 (FRESHMEN)

Semester 1				
Course Code	Course Title	Credit Hours		
CSC106	Introduction to Computer Applications	2+1		
ENG101	Functional English	2+1		
ACC101	Introduction to Accounting	2+1		
MGT101	Principles of Management and Leadership	3+0		
HUM101	Foundation of Human Behavior	3+0		
Credit Hours		15		

#### Semester 2

Course Code	Course Title	Credit Hours
ECO102	Microeconomics	3+0
MTH107	Business Mathematics	3+0
MKT101	Principles of Marketing	3+0
ACC106	Financial Accounting and Corporate Reporting	2+1
IST102	Islam and World Religions	2+0
PDV103	Personal Development and Career Planning	0+2
Credit Hours		16

Summer Semester			
Course Code	Course Title	Credit Hours	
IIP1XX	Industry Immersion Project - I (Community Service)	0+2	
Credit Hours		2	

#### Year 2 (SOPHOMORE)

Semester 3			
Course Code	Course Title	Credit Hours	
ENG105	Presentation and Communication Skills	3+0	
FIN206	Introduction to Finance	3+0	
PHI101	Philosophy, Logic, and Critical Thinking	3+0	
MTH104	Introduction to Business Analytics	3+0	
PST101	Pakistan Studies	2+0	
SCM201	Introduction to Supply Chain Management	3+0	
Credit Hours		17	

Semester 4			
Course Code	Course Title	Credit Hours	
SCM202	Introduction to Procurement Management	3+0	
SCM203	Introduction to Transportation and Warehouse Management	3+0	
FIN204	Financial Management	3+0	
MTH210	Calculus with Applications	3+0	
ECO203	Macroeconomics	3+0	
PDV203	Arts and Literature	0+2	
Credit Hours		16	

Summer Semester			
Course Code	Course Title	Credit Hours	
IIPXxx	Industry Immersion Project - II (Corporate)	0+3	
Credit Hours		3	

### Year 3 (JUNIOR)

### Year 4 (SENIOR)

Semester 5			
Course Code	Course Title	Credit Hours	
ENG306	Applied Business Communication	3+0	
MTH304	Business Analytics (Modeling and Forecasting)	3+0	
FIN302	Financial Institutions and Markets	3+0	
LAW202	Legal Environment for Business in Pakistan	3+0	
SCM301	Introduction to SCM Sustainability	3+0	
XXXxxx*	Natural Science Elective	2+1	
Credit Hours		18	

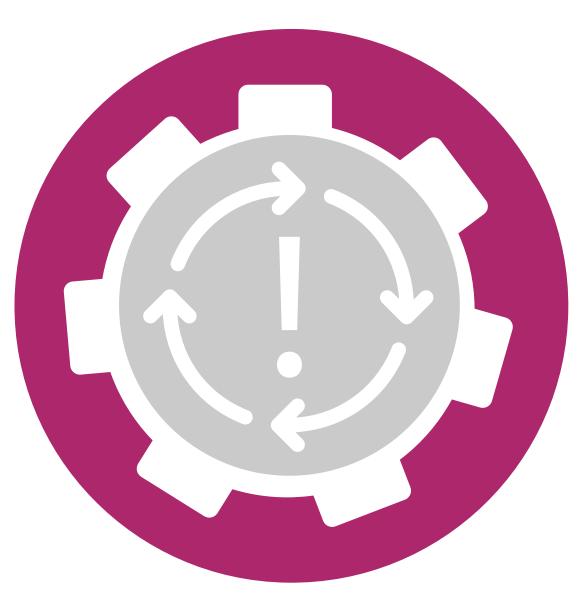
Semester 7			
Course Code	Course Title	Credit Hours	
MGT401	Entrepreneurship	3+0	
MGT404	Business Simulations	3+0	
MGT407	ELP-I/Capstone-I	3+0	
SCM409	Supply Network Planning and Design	3+0	
XXXxxx*	Majors Elective-II	3+0	
XXXxxx*	Minors Elective-I	3+0	
Credit Hours		18	

Semester 6			
Course Code	Course Title	Credit Hours	
MGT305	Business Research Methods	3+0	
XXXxxx*	Majors Elective-I	3+0	
SCM302	Supply Chain Analytics and Information Systems	3+0	
SCM303	Innovations in SC Ecommerce	3+0	
MGT301	Operations and Project Management	3+0	
SCM304	Import and Export Management	3+0	
Credit Hours		18	

Semester 8			
<b>Course Code</b>	Course Title	Credit Hours	
MGT406 SCM410 XXXxxx* XXXxxx* XXXxxx* MGT408	Business Strategy Quality Management and Lean Thinking Majors Elective-III Majors Elective-IV Minors Elective-II ELP-2/Capstone-II	$ \begin{array}{r} 3+0 \\ 3+0 \\ 3+0 \\ 3+0 \\ 3+0 \\ 3+0 \\ 3+0 \\ 3+0 \end{array} $	
Credit Hours		18	



# **BS** Actuarial Science & Risk Managementement



# <sup>72</sup> SALIM HABIB UNIVERSITY

# BS Actuarial Science & Risk Managementement

#### Introduction

The BS in Actuarial Science & Risk Management is tailored for those interested in the intersection of mathematics, statistics, and finance. This program focuses on assessing and managing risk across various sectors. Students learn to apply mathematical models to analyze financial uncertainty and develop strategies for risk mitigation. Graduates are ready for successful careers in insurance, consulting, and risk management.

#### Program Objectives

- 1. To equip students with the mathematical, statistical, and analytical skills necessary for assessing and managing risk.
- 2. To provide an understanding of financial theories and their application to insurance and risk management.
- 3. To prepare students for professional actuarial examinations and careers in insurance, consulting, and financial risk management.
- 4. To develop critical thinking and problem-solving abilities specific to financial uncertainty and risk analysis.

Degree Offered	Entry Requirements	Career Prospects	Internship Opportunities
<ul> <li>BS ACTUARIAL SCIENCE</li> <li>&amp; RISK MANAGEMENT</li> <li>Duration: 4 Years</li> <li>Semesters: 8</li> <li>Credit Hours: 137</li> </ul>	<ul> <li>The applicant should:</li> <li>Have 45% marks in HSC or equivalent marks in A Levels, or other qualifications</li> <li>Qualify the Aptitude Test and Interview</li> </ul>	<ul> <li>Actuarial Analyst</li> <li>Financial Analyst</li> <li>Pension Actuary</li> <li>Investment Analyst</li> <li>Risk Manager</li> <li>Data Scientist</li> <li>Compliance Analyst</li> </ul>	<ul> <li>Insurance Companies</li> <li>Consulting Firms</li> <li>Asset Management Companies</li> <li>Brokerage Firms</li> <li>Healthcare Organizations</li> <li>Banks and Financial Institutions</li> <li>Government Agencies</li> </ul>



### Curriculum Plan

#### Year 1 (FRESHMEN)

Semester 1		
Course Code	Course Title	Credit Hours
CSC106	Introduction to Computer Applications	2+1
ENG101	Functional English	2+1
ACC101	Introduction to Accounting	2+1
MGT101	Principles of Management and Leadership	3+0
MTH107	Business Mathematics	3+0
Credit Hours		15

#### Semester 2

Course Code	Course Title	Credit Hours
ECO102	Microeconomics	3+0
MTH108	Calculus with Application	3+0
MKT101	Principles of Marketing	3+0
ACC106	Financial Accounting and Corporate Reporting	2+1
IST102	Islam and World Religions	2+0
HUM101	Foundations of Human Behavior	3+0
Credit Hours		17

Summer Semester		
Course Code	Course Title	Credit Hours
IIP100	Industry Immersion Project I (Community Service)	0+2
Credit Hours		2

#### Year 2 (SOPHOMORE)

Semester 3			
Course Code	Course Title	Credit Hours	
ENG105	Presentation and Communication Skills	3+0	
ACT201	Probability and Statistics – I	3+0	
FIN206	Introduction to Finance	3+0	
PST101	Pakistan Studies	2+0	
ACT203	Introduction to Actuarial Science	3+0	
XXXx	Natural Science (Elective)	3+0	
<b>Credit Hours</b>		17	

Semester 4		
Course Code	Course Title	Credit Hours
FIN204 ECO203 PDV203 ACT204 RM201 RM202	Financial Management Macroeconomics Arts & Literature Probability and Statistics – II Insurance Products and Practices Principles of Risk Management	$ \begin{array}{c} 3+0\\ 3+0\\ 2+0\\ 2+1\\ 3+0\\ 3+0 \end{array} $
Credit Hours		17

Summer Semester			
Course Code	Course Title	Credit Hours	
IIP200	Industry Immersion Project - II (Corporate)	0+3	
Credit Hours		3	

### Year 3 (JUNIOR)

Semester 5		
Course Code	Course Title	Credit Hours
FIN302	Financial Institutions and Markets	3+0
ENG306	Applied Business Communication	3+0
FIN409	Derivatives and Risk Management	3+0
RM301	Takaful and Islamic Risk Management	3+0
FTE202	Introduction to Fintech	3+0
Credit Hours		15

### Year 4 (SENIOR)

Course Code	Course Title	Credit Hours
FIN412	Financial Mathematics	3+0
ACT402	Actuarial Models	2+1
RM401	Financial Risk Management -II	3+0
RM402	Programming for Risk Management	2+1
TBA	ELP/FYP - I	0+3
Xxxx	Elective I	3+0
Credit Hours		18

Semester 6		
Course Code	Course Title	Credit Hours
MGT305	Business Research Methods	3+0
XXXxxx*	Majors Elective-I	3+0
SCM302	Supply Chain Analytics and Information Systems	3+0 t
SCM303	Innovations in SC Ecommerce	3+0
MGT301	Operations and Project Management	3+0
SCM304	Import and Export Management	3+0
Credit Hours		18

Semester 8		
Course Code	Course Title	Credit Hours
MGT406 FIN413 TBA Xxxx Xxxx Xxxx	Business Strategy Institutional Wealth Management ELP / FYP – II Elective II Elective III	3+0 3+0 0+3 3+0 3+0
Credit Hours		15

































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# **Admissions Policy**

#### General

To obtain admission candidates must meet the minimum academic eligibility requirements for the concerned program, clear the Aptitude Test and interview and pay the prescribed fee. Applicants who are waiting for the announcement of their results will be granted provisional admission, based on the result of first year equivalent exam or awaiting result for the 2nd year of HSC/A-Level examination as specified by the admission policy.

#### **Requirements for Admission**

To gain admission, candidates must meet the following requirements:

- Apply online and register for appearing in the Aptitude Test
- Pay the Admission processing fee before of collection of the admit card for the Aptitude Test
- Qualify the Aptitude Test OR provide proof for exemption by providing transcripts of SAT I/SAT II (score of 1200 or above) as applicable
- Appear for an interview
- · Provide equivalence certificate in case of holders of degrees/certificates issued by non-Pakistani Universities/Boards
- Salim Habib University acknowledges the merit of all meritorious students through scholarships and provide financial support to all deserving students to meet their demonstrated financial need. For further details please visit our website https://www.shu.edu.pk/fee-structure-financial-aid
- Entrance scholarships are granted between 50% to 100%, depending upon the candidate's merit score.

#### **Objectives**

Aptitude Test: To evaluate the candidate's abilities in quantitative, analytical and logical reasoning, communications skills, reading comprehension, grammatical and general aptitude for the program.

Interview: To ascertain whether the candidate has the qualities needed to succeed in the chosen program of study along with the potential to contribute positively to society. Weightage Criteria

#### **Previous Academic Performance** Weightage Criteria for Biomedical Engineering 30% SHU Entrance Testing 70% 10% Passing marks on entry test SSC SHU Aptitude Test (ETS / SAT) 50% 33% HSC 20% Essay Writing 10% HSSC/A-level / relevant DAE 50% Interview 10% SSc/ 0-level 10% or O-A Level (or Equivalent) 30% Interview 07% 70%

#### **Provisional Offer**

All offers of admission made to successful candidates will be provisional and subject to candidate's meeting the minimum eligibility criteria, verification of academic credentials, and paying the prescribed fee.



# Academic Eligibility Requirements for Admission

Program	Eligibility Criteria	Required Percentage
BS Biosciences	HSC Pre-Medical or Pre-Engineering O/A Level (Physics, Chemistry, Math or Biology)	45 45
BS Accounting & Finance	HSC O/A Level	45 45
BBA	HSC O/A Level	45 45
BS Computer Science	HSC Pre-Engineering / Pre-Medical / Computer Science or equivalent qualification with mathematics certified by IBCC.	50 50
BE Biomedical Engineering	HSC Pre-Engineering & Pre-Medical & Computer Science O/A Level (Physics, Chemistry and Biology/Math/D.A.E) D.A.E, or B.Sc. or Equivalent	60 60 60
Pharm D	HSC Pre-Medical O/A Level (Physics, Chemistry and Biology)	60 60
MBA	16 years of Education / 4 years Bachelor's Degree	50 or 2 CGPA

# Exemption and Transfer of Credits

- Eligible candidates may apply for transfer of courses/credits and professional certification (where required) from other HEC recognized universities to the degree programs at SHU
- The University reserves the right to accept or reject any or all of such requests
- The University may consider waiving off SHU Aptitude Test for those candidates who have already cleared an equivalent test; however, the concerned candidates will be required to appear for interview and provide valid transcripts in original of the courses undertaken/credit achieved from their previous institution
- A minimum of 50% of total degree credits must be completed at SHU
- The courses transferred shall be recorded in the final transcript as being transfer of credits
- The transfer of credit will be subject to the SHU policy and approval of Deans' committee

### Fee Structure

		Amount in Rupees
Programs	<b>Tuition Fee</b>	Lab Fee
PharmD,	132,000	10,000
BBA, BS (Accounting & Finance) & BS (Computer Science)	121,000	Nil
BME & BS (Biosciences)	121,000	10,000
MBA (Per Credit Hours)	6,150	

Other Charges	Rupees
Admission Fee (Non-Refundable)	15,000
Security Deposit (Refundable)	10,000
Exam Fee (Per Semester)	5,000
Student Activity Fund (Per Semester)	5,000



# SHU Scholarship and Financial Assistance Schemes

Salim Habib University, with the generous support of its parent organization, The Salim Habib Education Foundation, offers comprehensive Scholarship and Financial Assistance Schemes. The aim of the Scholarship Scheme is to encourage meritorious students to pursue their educational goals at SHU.

For details please access.

#### http://www.shu.edu.pk/fee-structure

Sibling's Discount, Student Loans, Fee Installments and **HEC** mandated Need Based Financial Assistance options are also available *(terms & conditions apply)* 



# **Examination Policy**

The following grading scheme will be used for the overall evaluation and assessment of the students:

The University adopts a Semester system of education consisting of:

- Two regular semesters (Fall and Spring)
- One short Summer semester

Regular semesters consist of 16 weeks of teaching including one week for midterm examinations and an additional two weeks for the final semester examinations. The Summer Semester consists of 8 weeks of teaching including midterm and final examinations.

Students are required to finish all their degree requirements within the stipulated time period:

- Undergraduate program 4 years (7 years maximum)
- Undergraduate program (Pharmacy) 5 years (8 years maximum)

#### **Attendance Policy**

Students are required to maintain a minimum of 80% attendance in each subject to be eligible to appear in the final semester examinations. Students who fall short on attendance may be awarded 'F' grade.

#### Methods of Assessment and Evaluation

Student assessment and evaluation is based on the following techniques for theory courses with distribution of marks as mentioned against each:

- Midterm Examinations (1<sup>1</sup>/<sub>2</sub> Hours) 20%
- Quizzes/assignments/mini projects/presentations etc. 30%
  Final Semester Examinations (2½ Hours) 50%

As a policy, students will be shown marked answer scripts for all of their examinations.



#### **Grading Scheme**

System of Education

Percentage of Marks	Grade	Grade Point	Remarks
85-100	А	4.0	Outstanding
80-84	A-	3.66	Excellent
75-79	B+	3.33	Very good
71-74	В	3.0	Good
68-70	В-	2.66	Average
64-67	C+	2.33	Satisfactory
61-63	С	2.0	Adequate
58-60	C-	1.66	Pass
54-57	D+	1.30	Pass
50-53	D	1.0	Pass
Below 50	F	0.0	Fail
	W	-	Withdrawal of course
	Ι	-	Incomplete

# Facilities and Services

At Salim Habib University, students are at the heart of everything that we do. The essence of the University begins with the overall campus, which has been developed to provide a balance of curricular, co-curricular and extra-curricular spaces aesthetically blend to give an ambiance of openness, greenery and grandeur architecture.

#### **Academic Block**

The largest of the building structures; the Academic block houses all the instructional spaces; comprising classrooms, seminar halls, science and engineering laboratories, equipped with state-of-the-art teaching and learning equipment and aids. All spaces are centrally air-conditioned; well spread out and provide enough circulation area. The Block also houses community spaces such as three lecture theatres to seat up to 100 students each, a multi-purpose hall cum auditorium with capacity of 350 students and a well-appointed cafeteria built to international standards to serve as many as 350 persons at a time.

#### **Sports Complex**

An ideal location for extra-curricular activities and recreation, the facility houses an indoor swimming pool, basketball, badminton and squash courts along with professional level cross training equipment. For those students who like to spend time outdoors, the lush green football ground and the volleyball court provide exciting options, while the walking track presents yet another option.

#### Connectivity

At SHU, technology is at the forefront of all that we do. From our classrooms to the state-of-the-art computer labs our emphasis is on providing our students with the best quality resources. All computer labs are equipped with 'All in One' computers, while campus-wide WIFI connectivity and a large bandwidth of internet supports all kinds of ICT activities.

#### Library

The uniquely designed split-level Library forms the central knowledge repository at SHU. Forming the epicenter amidst the academic block, the Library is spread over 4 floors housing in excess of 15,000 volumes of curriculum books and several international journals with notable impact factor. Administered by an online system, students can inquire about book availability and reserve books without having to physically come to the library.

#### **Student Affairs**

At SHU, the student experience is characterized not only by academics but also through a host of co-curricular activities in the form of clubs, societies and sports. The Student Affairs department is committed to ensuring that the time spent on campus is meaningful and memorable for all our students. Aside from recreational activities, the department also provides career counseling services to all our students ensuring that the decisions they make are informed ones.

#### Security

Constructed in a composite manner, the SHU campus is surrounded by high barbed wire equipped perimeter walls on all four sides. Physical security is bolstered with the presence of electronic surveillance devices, a vigilant section of security guards and SOPs to ensure that contraband and unauthorized presence is deterred and promptly prosecuted where required.

# SHU Centre for Learning and Teaching (CLT)

SHU firmly believes that students deserve the best possible knowledge from the teaching faculty. It has hired teachers based not only on their advanced degrees but also expect them to enhance their teaching potential on a regular basis. The Center will fulfill this requirement by having CLT assigned a twin role, first as Quality Enhancement Cell and secondly being instrumental in providing opportunities for enhancing their pedagogical skills. CLT is thus specifically charged to the following:

- Work with permanent and visiting faculty, departments, and co-curricular units to advance best practices in all aspects of curriculum, instruction, and assessment.
- Share knowledge of evidence-based, student-centered, and outcomes-guided pedagogy.
- Help improve the quality of education; providing expertise and build collective knowledge in teaching and learning; and leveraging resources and opportunities for faculty enrichment.
- Promote iterative experimentation and transformation across curriculum to enhance student learning and engagement.
- Support teaching methodologies that recognize the diversity of learning styles, responding to the differences in learning styles, and creating an inclusive learning environment.
- Bring together and build dialogues and mutually beneficial partnerships and cross-functional teams.
- Recognize and value teaching excellence; make high quality pedagogy visible; and reward faculty for their contributions to teaching and learning.

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### Marketing in the Digital Era

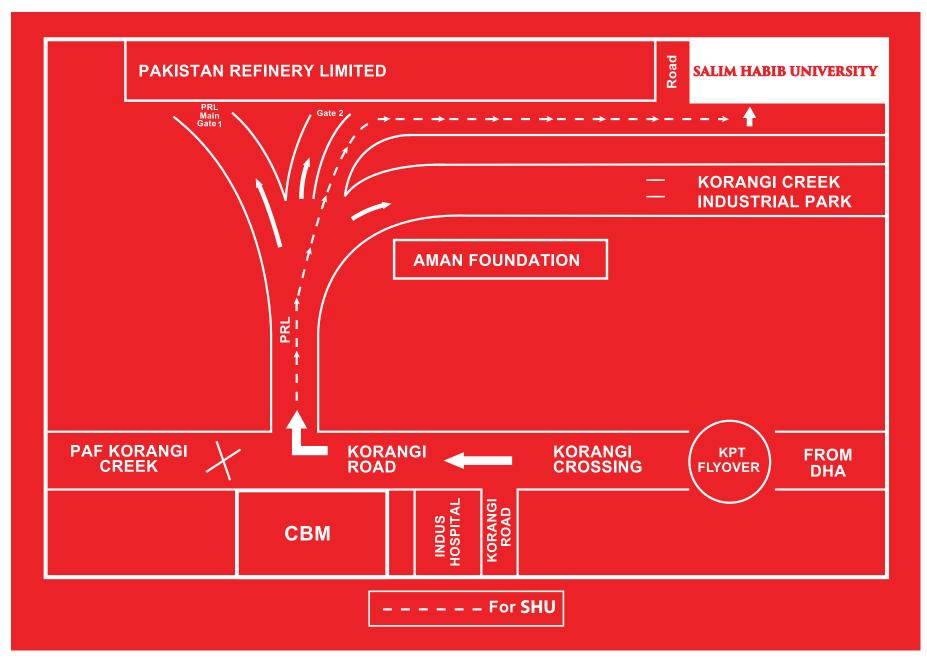




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