



INSTITUTE OF  
BUSINESS MANAGEMENT



Catalog  
2021-2022

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**Institute of Business Management**

**Catalog 2021-2022**

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## VISION / MISSION STATEMENT

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### **Vision**

The Institute of Business Management aims to be one of the leading institutes nationally and internationally for imparting knowledge, skills, confidence, and values to its students, thereby, enabling them to become successful professionals globally.

### **Mission**

The mission of the Institute of Business Management is to foster a learning environment where students are motivated to make learning an on-going life-long process. We see ourselves as a multi-dimensional educational institution. Our aim is to:

- Use the best teaching and training methodologies
- Prepare students to excel academically as well as in management skills to function ethically and take effective rational decisions in all endeavors of life
- Pursue leading-edge research
- Engage in the development of innovative ideas and analytical, interpersonal and leadership skills
- Allow freedom of thought and expression
- Encourage both faculty and students to be independent and creative thinkers
- Commit to our students and other stakeholders to create responsible future global leaders

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# AN INTRODUCTION TO THE INSTITUTE OF BUSINESS MANAGEMENT

This catalog will provide you with valuable, up-to-date information about the programs of study and courses offered by the Institute, as well as information about the fee structure, facilities and student services available to students.

The catalog gives an introduction to life at IoBM as well as detailed information on all undergraduate and graduate level programs along with core courses, electives and specialized courses. Every effort is made to update information on courses in the catalog. However, changes in curricula may be necessary as part of a process of continuous improvement and the need to keep each program fully aligned with academic and professional developments. For this reason, the Institute reserves the right to make necessary alterations in courses and/ or course structures, after clearing them with the concerned Boards of Studies. Teaching methodology, academic and research programs, assessment procedures and course descriptions also form part of the catalog.

The catalog also lists the facilities at computer labs, library resources, student support services besides providing information relating to and course registration procedures. Information regarding opportunities for financial assistance and stipends for students is also included. The latter part of the catalog contains brief profiles of academic and administrative personnel.

## **IoBM: 1994 - 2021**

The Foundation for Higher Education was established as a non-profit institution in 1994 by a group of dedicated citizens of Karachi, and was registered under the Societies Registration Act of 1860. The Foundation promotes the dissemination of quality education. Its first project was the setting up of a management university designed to serve trade, industry and commerce by producing highly competent and talented business executives. Teaching began at the College of Business Management (CBM), IoBM's first constituent college, in September, 1995.

In January 1998, a bill was unanimously approved by the Sindh Provincial Assembly for establishing a university known as the Institute of Business Management in the private sector. At present, the Institute has four constituent colleges, the College of Business Management (CBM), the College of Computer Science & Information Systems (CCSIS), the College of Economics & Social Development (CESD) and the College of Engineering and Sciences (CES). Since 2006, the Institute has been ranked as one of the top universities in the private sector, both by the Higher Education Commission of the Federal Government and the Sindh Provincial Government. From 2010 to 2015, we have been honored with prestigious awards of EDUNIVERSAL Palms given for meritorious evaluation and certification of educational institutions around the world. The Institute is a member of the International Association of Universities (IAU), Association to Advance Collegiate Schools of Business (AACSB) and other international and national organizations.



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The Governor of Sindh is an ex-officio Patron and the Chancellor, Mr. M. Bashir Janmohammad is also the Chairman of the Board of Governors and Chancellor of the Institute. The other members of the Board are:

- Mr. Talib Syed Karim, President
- Chairman, Higher Education Commission
- Secretary, Universities & Boards Department, Government of Sindh
- Mr. Jahangir Siddiqui
- Mr. S.M. Muneer
- President, Pakistan Stock Exchange
- President, Federation of Pakistan Chambers of Commerce & Industry
- President, Karachi Chambers of Commerce & Industry
- Mr. Muhammad Ali Tabba
- Mr. Masood Hashmi
- Dr. Waqar Masood Khan
- Mr. Justice<sup>®</sup> Shahid Anwar Bajwa
- Mr. Muhammad Sharif
- Dr. Zafar Saied Saifee
- Ms. Ameenah Saiyid
- Mr. Sikandar Sultan
- Prof. Dr. Tariq Rahim Soomro
- Prof. Dr. Mehtab Syed Karim
- Mr. M. W. Jahangir, Secretary to the Board

The Institute offers, through its College of Business Management (CBM), a four year BBA (Honors) and a two/three year MBA degree program with specialization in Marketing, Finance, Human Resource Management and Management Information Systems, Health & Hospital Management, Pharmaceutical Administration, Media Management, Industrial Management and Telecommunication Management. BS (Honors) Economic & Finance, Accounting & Finance and BS Social Entrepreneurship and Social Leadership are also offered. A research degree, an MPhil leading to PhD, is offered in Finance, Human Resource Management, Marketing, Education, Psychology and Management Information Systems. A four year Bachelor of Computer Science (Honors), followed by a two years Master of Computer Science and MBA in Finance & Risk Management, BS in Mathematics & Economics and BS Data Science are offered through the College of Computer Science & Information Systems (CCSIS). The College also offers programs in Industrial Engineering & Management, Actuarial Science & Risk Management, Telecommunication Engineering & Management and Financial Mathematics & Statistics. The College of Economics and Social Development offers a BS program in Commerce, Media Studies, B.Ed, MBA in Educational Management and MSc leading to MPhil in Economics. College of Engineering and Sciences (CES) offers a program in Electrical Engineering.



The emphasis of IoBM is on research. It publishes the country's first business policy and research journal, Pakistan Business Review, which is recognized by the HEC as well as internationally recognized as Pakistan's first business policy and research journal, Pakistan Business Review. Pakistan's Journal of Engineering Technology and Science is accordingly brought out by the College of Computer Science & Information Systems whereas the CESD is responsible for yet another publication: the Journal of Education and Educational Development. Students and faculty contribute regularly to its pages. A research seminar is organized on a weekly basis. IoBM is the first business school where foreign language courses, Arabic, French, Spanish, Italian or Chinese were made compulsory in the BBA and BCS programs. The Institute has competent and dedicated faculty with the majority holding foreign degrees. An international seminar funded by the HEC is organized on an annual basis. IoBM Academic programs are up to date and comprehensive in concept and structure, resembling honors programs offered in the UK and graduate programs of US Universities. IoBM has extensive links with a number of global universities. Professors from these universities have served as Chief Academic Officers of IoBM.

Since 1998, more than 9,000 students have graduated from IoBM. Most of them occupy key positions in leading national and multinational firms including Habib Bank, Faysal Bank, Standard Chartered, PIA, Engro, Berger Paints, Geo TV, National Bank of Pakistan, Unilever, IBM, ICI, SmithKline & Beecham, Aga Khan University Hospital, Karachi Stock Exchange and different provincial and federal government departments. Many graduates have proceeded for their post-graduate program to reputable universities in the UK and USA. More than 400 students go for compulsory internships every year to national and multinational organizations.

Office of Research Innovation & Commercialization - Entrepreneurship & Management Excellence Center (ORIC) / (EMEC) of the Institute organizes professional education, training and research programs with a view to serving the corporate sector to enhance both its profitability and contribution to society. Support is provided in the areas of banking and finance, marketing, human resource development and information systems management.

The Institute has come a long way since its inception. There are over 5500 students on our campus which is large, purpose-built and located at Korangi Creek on an 11 acre site and comprises the Business College building, the Administration and Entrepreneurship & Management Excellence Center building, CCSIS building, a Convocation Center, the Student Activity Center, a five-storeyed library building, Industrial Engineering and Management building, a mosque and CESD building. Another nine acre site has been acquired at a distance of 1 km from the present campus. Shahjehan S. Karim Center of Excellence, a basement, ground plus five storeyed building was completed in June 2017.

At the Institute's fourth convocation in December, 2001, an honorary degree of Doctorate of Philosophy was conferred upon Dr. Nafees Sadik, former Executive Director, United Nations Population Program. At the fifth convocation held in December, 2002, an honorary degree was conferred on our keynote speaker, Mr. Babar Ali, Pro-Chancellor, Lahore University of Management Sciences (LUMS), and at the ninth convocation an honorary degree was conferred on Dr. Goolam Mohamedbhai, President, International Association of Universities (IAU). The sixth convocation was held in December 20, 2003 with Dr. Atta-ur-Rahman, Chairman, Higher Education Commission and Minister for Science & Technology as the Chief Guest and Ms. Musharaf Hai, Chairperson, Unilever Pakistan Limited as the keynote speaker. The seventh convocation was held on December 18, 2004 with the Governor of Sindh as the Chief Guest and Mr. Hameed Haroon, Chief Executive Dawn Group of Newspapers as the keynote speaker. Over 300 students were awarded BBA (Hons), BCS (Hons), BS (Accounts), MBA and MCS degrees at this convocation.



The eighth convocation was held on December 17, 2005 with the Minister for Education, Sindh, as the chief guest and Syed Ali Raza, President, National Bank of Pakistan, as the keynote speaker. Over 400 students were awarded degrees on the occasion. The ninth convocation of the Institute was held on December 16, 2006 with the Education Minister as the Chief guest and Dr. Goolam Mohamedbhai President, IAU, as the keynote speaker. Over 450 students were awarded degrees. The tenth convocation was held on December 8, 2007, where Mr. Jose Manuel Salazar-Xirinachs, Executive Director of the International Labour Organization, Geneva was the keynote speaker and over 500 students were awarded degrees.

The eleventh convocation was held on December 6, 2008 where the Governor, State Bank of Pakistan was the keynote speaker and Governor Sindh, Dr. Ishrat ul Ebad was the Chief guest. Over 700 degrees were awarded on the occasion. Syed Qaim Ali Shah, Chief Minister of Sindh and Mr. Nisar Ahmed Khuhro, Speaker Sindh Assembly attended the twelfth convocation of the Institute, held on December 05, 2009. The keynote speaker was Mr. Shaharyar Muhammad Khan, former Foreign Secretary and former Chairman of the Pakistan Cricket Board. As many as 927 graduates were awarded degrees. The thirteenth convocation was held on December 4, 2010. The Chief guest on the occasion was Dr. Abdul Hafeez Shaikh, Minister for Finance, Revenue, Economic Affairs & Statistics and the keynote speaker was Dr. Javaid R. Laghari, Federal Minister / Chairperson of the Higher Education Commission of Pakistan.

The fourteenth convocation was held on December 10, 2011. Over 983 degrees were awarded to students. The Chief guest on the occasion was Dr. Shamsh Kassim-Lakha, Founding President and Trustee of AKU and the keynote speaker was Mr. Javed Jabbar, Chairman and Chief Executive, JJ Media (Pvt.) Ltd. The fifteenth convocation was held on December 08, 2012. Over 825 degrees were awarded to students. The keynote speaker was Mr. Shahid Aziz Siddiqui, Chairman and CEO, State Life Insurance Corporation of Pakistan. The sixteenth convocation was held on December 07, 2013. Over 850 degrees were awarded to students on the occasion. The Chief guest was Mr. Nisar Ahmed Khuhro, Senior Minister for Education, Govt. of Sindh, the keynote speaker was Dr. Kakha Shengelia, President, Caucasus University Republic of Georgia and Mr. Munir Kamal, Chairman National Bank of Pakistan was the guest of honor.

The seventeenth convocation was held on December 07, 2014. Over 850 degrees were awarded to students on the occasion. The Chief guest was Mr. Nisar Ahmed Khuhro, Senior Minister for Education, Govt. of Sindh, the keynote speaker was Mr. Muhammad Aliuddin Ansari, President & Chief Executive Officer of Engro Corporation. The eighteenth convocation was held on December 12, 2015. Over 900 degrees were awarded to students. The Chief guest was Mr. Muhammad Mian Soomro, Former President of Pakistan and the keynote speaker was Mr. Kamal A. Chinoy, Chief Executive of Pakistan Cables Limited at the event. The nineteenth convocation was held on December 10, 2016. Over 950 degrees were awarded to students. The guest of honor was Mr. Jam Mehtab Hussain Dahar, Minister for Education & Literacy, Government of Sindh, and the keynote speaker was Mr. Sirajuddin Aziz, President Habib Metropolitan Bank Ltd. Dr. Mukhtar Ahmed, Chairman Higher Education Commission (HEC) also attended the convocation. The twentieth convocation was held on December 09, 2017. Over 1000 degrees were awarded to students. The Chief guest was Mr. Muhammad Zubair, Governor of Sindh and keynote speaker was Mr. Khalid Nawaz Awan, Chairman of TCS at this Convocation.

The twenty-first Convocation was held on December 08, 2018. Over 1000 degrees were awarded to students. The keynote speaker was Mr. Kimihide Ando, Senior Vice President and CEO, Mitsubishi Corporation. The twenty-second Convocation was held on December 07, 2019. Over 1000 degrees were awarded to students. The keynote speaker was Mr. Shazad Dada, CEO/Executive Director, Standard Chartered Bank, Pakistan. The twenty-third convocation was held on January 30, 2021, this Convocation was hybrid where only PhD, MS/MPhil Graduates and Gold Medalists were invited, over 1450 degrees were awarded to students. Mr. Imran Ismail, Governor Sindh, delivered his recorded speech. The Keynote Speaker was Mr. Muhammad Ali Tabbba, CEO, Lucky Cement.

## **Shahjehan S. Karim Center of Excellence**

A six storeyed (basement, ground plus five floors) centrally air-conditioned building with a covered area of 152,000 sq.ft and an open area of 15,000 sq.ft. houses 22 classrooms, 68 faculty offices, examination department with two examination halls of 11000 sq.ft, laboratories, media studio of 2,576 sq.ft, seminar rooms, training halls, gymnasium, 8 (food) kiosks with 180 seating capacity and 22 hostel rooms for students and faculty.

## WHY CHOOSE IOBM?

IoBM is one of the premier universities of the country. Not only does it offer academic excellence but its peaceful location - part city, part countryside - is ideal for reflection as well as camaraderie. The lay-out of the campus, where the buildings are connected by a leafy and partially winding driveway, has a charm of its own. The buildings themselves, a rich terracotta pink, are spacious and attractively designed. The breezy interior of the CBM building, with its twists and turns and its 'all-hands-on-deck' sense, is especially appealing. Tastefully landscaped with the help of nature - and sculpture - the IoBM campus is both homely and gracious. To the many students who form part of its fraternity, it is a home away from home.

The academic laurels IoBM has won are equally impressive. IoBM was rated one of the country's top universities by the Higher Education Commission of the Federal Government as well as the Government of Sindh. IoBM has also been the proud recipient of two Eduniversal Palms, awarded to it at the international convention of Deans of Business Colleges in recognition of its being one of the two best Business Schools since 2010.

IoBM is also an active member of the International Association of Universities (IAU), the International Association of University Presidents (IAUP), the Association to Advance Collegiate Schools of Business (AACSB), the Association of Commonwealth Universities (ACU), besides being associated with other international academic organizations. IoBM has also established links and made a name for itself among reputed foreign business schools in relation to the sharing and contributing of ideas on and insights into business education and research.

The programs we offer include MBA and MBA (Evening) programs in diverse fields. These are held at weekends and lay a special emphasis on the requirements of busy executives and those who, having come to the end of one career, wish to move to a new one. IoBM also offers programs in Health and Hospital Management, Finance and Risk Management, Industrial Management, Telecommunication Management, Environment and Energy Management, Organizational Psychology, Economics and many other disciplines. IoBM faculty excel in their different fields. They transmit their expertise in scholarship and research to students, providing them with a developed understanding of their respective disciplines.

Students have access to excellent facilities and learning resources as IoBM continually invests in its library, gym, sports facilities, computer equipment, Wi-Fi facility, video conferencing, state-of-the-art campus buildings and subsidized transport facilities.

IoBM has earned its reputation through an excellent internship and graduate employment record. Rigorous degree courses enable graduates to acquire depth in their chosen subjects and open up wide career choices. A large number of IoBM graduates join top business schools in Europe, USA and Canada.

Research is a core competence at IoBM and is carried out in diverse fields. IoBM publishes the research quarterly, Pakistan Business Review (PBR) which is recognized by the Higher Education Commission (HEC) as category 'X' and ECONLIT, the Journal of Economic Literature, USA.

Annually held, HEC- financed international conferences provide a platform for the presentation of research undertaken at IoBM. The Pakistan Journal of Engineering Technology & Science and the Journal of Education & Educational Development recognized by HEC as Category 'X' are also brought out by IoBM. IoBM is connected with PERN2, a high-speed dedicated National Research & Education Network (NREN) for universities and other academic institutions of Pakistan.

**"The essence of IoBM's academic programs pertains to career focused education towards Individual fulfillment, professional excellence, institutional credibility, family welfare and social responsibility. The net result is reflected in the net product. IoBM's credibility speaks for itself."**

**Shahjehan S. Karim**  
Founder President  
Institute of Business Management



## IoBM's Academic Strategies

21st century has seen explosion of knowledge and has forced integration of disparate fields: Social interactions connect with digital networks; philosophy connects with computer science, psychology with clicks and likes, education with virtualization, robotics with medicine, banking with mobile companies, and so on. Environmental future is now linked with social sustainability, which in turn is linked with economic and financial sustainability. These linkages have been created with the exponential growth of IT and communication technologies, that have stimulated multi-dimensional interactions among businesses, industry, social-life and governance. To study these interactions, IoBM as a multi-dimensional educational institution offers cross-disciplinary programs and specializations. These include Business Psychology, Education Management, Finance and Economics, Islamic Finance and Banking, Engineering Management, Accounting and Law, Health and Hospital Management, Environment and Energy Management, Economics and International Relations etc. These and other discipline-based programs in business, computer science, engineering, economics, education and media are offered by the four colleges or faculties of IoBM.

Convergence of previously separate fields is also causing massive disruption and displacement of jobs accompanied by obsolescence of skills and knowledge requirements. Disruption of 20th century life-long career jobs in brick and mortar companies are also creating massive entrepreneurial opportunities for innovative business ventures, social enterprises and rethinking and reorganization of government, industry and society. This is reflected in IoBM's strategic focus on creativity and innovation through business entrepreneurship, social entrepreneurship and leadership, technology entrepreneurship and entrepreneurial engineering through EMEC.

Knowledge is doubling every 12 months and soon would be doubling every 12 hours. Hence, regurgitation of the knowledge obtained from a traditional classroom lecture is fast becoming obsolete before it is absorbed. Hence, IoBM's mission focuses on the development of graduates who are life-long self learners, who can quickly learn new knowledge and customize it to meet the fast changing requirements of their careers. Hence, IoBM has a strategic focus on blended, experiential, project based, and case based and other learning technologies.

IoBM's vision is to be among the leading educational institution locally and internationally. To achieve this vision, IoBM strives to contribute to the development of economy and society through innovative research, faculty development, and impactful engagement with industry and society; nationally and globally. Hence, it is actively pursuing international accreditations such as AACSB and QS Ranking, and its programs are accredited by national accreditation councils such as PEC, NBEAC, NCEAC, NACTE and regulatory bodies such as HEC and CIEC.



# COLLEGE OF BUSINESS MANAGEMENT

**CBM Vision:** To be among the leading business school, recognized for producing ethical, transformational and change leaders and managers, nationally and internationally

**CBM Mission:** To provide transformative and change leadership and management for the development of economy and society through excellence in character, professionalism, education and research

**Motivation for CBM Mission:** Most of the SMEs and large enterprises are family owned enterprises which constitute over 80% of businesses in Pakistan (and have “seth” family culture). Hence, CBM focuses on developing graduates who are street smart and go-getters who can take on the challenge to create startups and move, change and transform a startup into a small enterprise, a small enterprise to medium enterprise and a medium enterprise to large enterprise. We strive to provide “leadership” skills to affect the “change and transformation” of current culture of existing organizations to a professional growth-oriented organizational culture.

**Strategic focus of CBM** includes major accreditations such as AACSB, making entrepreneurship as major career choice of our graduates, adoption of experiential and blended learning, mentoring by well reputed industry executives, impactful intellectual contributions and industry and societal engagements as determinants of faculty qualifications, and development of critical skills and innovation through specially designed courses and a lively and thriving culture of student activities.

## BBA (HONORS)

The Bachelor of Business Administration (Honors) is a professional and comprehensive management degree program that provides conceptual knowledge and in-depth exposure to functional areas in business management including accounting, marketing, finance, human resource management, supply chain management, Islamic banking and finance, entrepreneurship and data analytics along with special emphasis on leadership, social awareness, creativity and innovation. The program employs the latest approaches in experiential learning to develop skills for interpersonal communication, team work, foreign languages and managing diversity. Students learn to think critically and to apply conceptual knowledge to real-world challenges and design solutions. Graduates of the BBA program distinguish themselves with their personal and professional excellence as managers and entrepreneurs in their areas of specialization. They are well-rounded professionals known as “doers” and “go-getters” and are in great demand in the industry. BBA is a four-year program that requires completion of 144 credit hours of course work and an internship of at least nine weeks in a firm approved by the Institute. A student must complete 48 courses of 3 credit hours each to meet the degree requirements. Students must maintain a CGPA of 2.5 for the conferment of the degree. Graduates from this program are usually recruited from reputable companies of the country in various fields.

Students must complete 13 general education in first four semesters otherwise the student will not be allowed to proceed to the fifth semester. Students also need to do 4 hours of lab session every week for four semesters in order to complete the requirement to graduate. By the end of the second year student need to decide their major and minor discipline. Students are required to take 11 major elective courses as well as 2 minor elective courses apart from core courses. Our BBA program offer majors and minors in the following disciplines:

- Accounting\*
- Data Sciences
- Finance and Banking
- Human Resource Management
- Islamic Banking and Finance
- Logistics and Supply Chain Management
- Marketing
- Organizational Entrepreneurship

Students need to take two compulsory electives from 11 major elective courses. One compulsory elective course is a capstone project of the discipline, which the student has taken a major.

Courses are divided into general education, business core, distribution courses and electives courses.

### General Education Courses

SSC101 Introduction to Psychology  
SSC301 History of Ideas  
ECO101 Principles of Micro Economics  
ECO102 Principles of Macro Economics  
MTH102 Business Mathematics  
STA104 Quantitative Techniques in Business  
COM107 Academic English  
COM205 Persuasive & Analytical Writing for Business Communication  
COM202 Business & Professional Speech  
REL101 Islamic Studies  
PSC301 Pakistan Studies

*\*BBA program is recognized by ACCA which offers up to 5-course exemptions (F1 - F5) to BBA students of IoBM.*

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic

\*2 = Introduction to French

\*4 = Introduction to German

\*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic

\*\*2 = Intermediate French

\*\*4 = Intermediate German

\*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

MTH 100 Basic Mathematics \*\*\*

COM100 Foundation English\*\*\*

(\*\*\* Remedial non-credit course to be taken by those students who have not been able to reach the desired level of competence in the admission test.)

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the BBA (Honors) degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.

## Business Core Courses

ACC101 Introduction to Financial Accounting

ACC201 Intermediate Financial Accounting

FIN201 Introduction to Business Finance

FIN202 Financial Management

MAN302 Organizational Behavior

HRM301 Human Resource Management

MIS402 Computer Concepts and Applications

BDS101 Introduction to Data Sciences

SCM501 Supply Chain Management

SCM400 Introduction to ERP

ISF101 Introduction to Islamic Banking & Finance

ISF201 Islamic Financial Accounting

MKT302 Marketing Management

MKT404 Methods in Business Research

ENT201 Entrepreneurial Society & Social Impact

ENT202 Entrepreneurial Business Operations

## Distribution Courses

MAN101 Principles of Management

MAN309 Leadership Journey

ECO402 Pakistan Economic Policy

MAN405 Strategic Management

SSC401 Business Ethics

LAW409 Corporate & Business Law

**Major – 11 courses**

**Minor – 2 courses**



## Elective Courses

### Accounting

- ACC302 Accounting and Financial Information Systems
- ACC350 Cost & Mgmt. Accounting (Compulsory elective)
- ACC405 Internal Audit & EDP Accounting
- ACC501 Advanced Financial Accounting
- ACC503 Taxation (Compulsory elective)
- ACC505 Auditing
- ACC520 Managerial Analysis & Decision Making
- ACC521 International Financial Reporting Standards
- ACC524 Corporate Governance & Reporting
- ACC532 Readings in Accounting Research
- ACC533 Accounting for Specialized Businesses
- LAW202 Banking Laws in Pakistan
- LAW203 Insurance Laws in Pakistan
- ACC591 Capstone Project

### Data Sciences

- BDS417 Artificial Intelligence (Compulsory elective)
- BDS419 Design & Analysis of Algorithms (Compulsory elective)
- BDS410 Stochastic Processes
- BDS411 Time Series Analysis & Forecasting
- BDS412 Business Analytics
- BDS413 Bioinformatics
- BDS414 Game Theory
- BDS415 Financial Data Analytics
- BDS416 Introduction to Data Warehousing
- BDS418 Health Informatics
- MIS591 Capstone Project

### Finance & Banking

- FIN301 Financial Institutions (Compulsory elective)
- FIN503 Corporate Finance (Compulsory elective)
- FIN504 International Finance
- FIN505 Treasury & Fund Management
- FIN506 Investment Banking & Security Analysis
- FIN507 Portfolio Management
- FIN509 Financial Derivatives
- FIN511 Analysis of Financial Statements
- FIN513 Project Appraisal
- FIN514 Asset Liability Management
- FIN520 Financial Risk Management
- FIN530 Commercial & Corporate Banking
- FIN534 Retail & Consumer Banking
- FIN536 FINTECH
- FIN538 Financial Economics
- FIN539 Quantitative Finance
- FIN540 Managerial Economics
- FIN541 Technical Analysis
- FIN542 Financial Forecasting & Planning
- FIN543 Asset Pricing Models
- FIN544 Digital Finance
- FIN545 Financial Management in Not-for-Profit Organization

### Human Resource Management

- HRM501 Recruitment & Selection (Compulsory elective)
- HRM503 Employee Training & Development
- HRM504 Negotiation Skills
- HRM505 Organization Change & Development
- HRM508 Salary & Compensation
- HRM511 Performance Appraisal & Management
- HRM513 HR Automation (Compulsory elective)
- HRM514 Occupational Health & Safety
- HRM515 Employee Engagement & Wellbeing
- HRM516 Career Planning & Management
- HRM517 Digital Recruitment & Gamification
- HRM518 HR for Startups & SMEs
- HRM519 E Learning Instructional Design
- HRM521 Workforce Planning & Analytics
- HRM522 Employment & Industrial Law
- HRM523 Internal Communication & Employer Branding
- HRM591 Capstone Project

### Islamic Banking and Finance

- ISF501 Economics for Islamic Finance
- ISF502 Shariah Foundations of Business and Finance (Compulsory elective)
- ISF503 Islamic Banking Deposit Products & Treasury Op.
- ISF504 Islamic Banking Financing Products
- ISF505 Islamic Business Ethics
- ISF506 Shariah Standards
- ISF507 Pool Management in Islamic Banking (Compulsory elective)
- ISF508 Islamic Financial Institutions & Markets
- ISF509 Islamic Law of Sales & Contract
- ISF510 Takaful Practices in Islamic Finance
- ISF511 Islamic Wealth Planning & Management
- ISF591 Capstone Project

### Logistics and Supply Chain Management

- SCM505 Storage and Warehouse Techniques (Compulsory)
- SCM506 Transportation Techniques and Management
- SCM523 Import Export Management
- SCM524 Supply Chain Design
- SCM525 Supply Chain Analytics
- SCM526 Supply Chain Finance and Costing
- SCM527 Supply Chain I4.0 & Data Sciences
- SCM529 Supply Chain Technology, Systems and Innovation
- SCM532 Operational Research and Simulation
- SCM533 Procurement Management
- SCM551 Quantitative Methods in Production and Logistics
- SCM553 Packaging Design and Environmental Aspects
- SCM591 Capstone Project
- INM203 Introduction to Production Management (Compulsory)
- INM304 Introduction to Project Management



## Marketing

MKT403 Sales Management (compulsory elective)  
MKT506 International Marketing  
MKT507 Services Marketing  
MKT508 Personal Selling  
MKT509 Consumer Behavior  
MKT510 Direct and Digital Marketing  
MKT511 Brand Management (compulsory elective)  
MKT513 Media Planning  
MKT520 Merchandising and Sales Promotion  
MKT521 Distribution and Channel Management  
MKT526 Public Relations and Event Management  
MKT530 New Product Management  
MKT531 Retail Management  
MKT532 Principles of Advertising  
MKT533 Marketing Strategies for Bottom of Pyramid  
MKT537 Customer Relationship Management  
MKT539 Entrepreneurial Marketing  
MKT540 Artificial Intelligence in Marketing Facing Functions  
MKT541 Marketing for Hospitality and Tourism

## Organizational Entrepreneurship

ENT401 Seminar in Org. Entrepreneurship (Compulsory)  
ENT402 Intro. to Design Thinking Methodology (Compulsory)  
ENT501 Cost Effective Design and Innovation  
ENT502 Green Entrepreneurship  
ENT503 Competitive Strategies for Startups  
ENT504 Scalability & Sustainability in Startups  
ENT505 Establishing Startup Ecosystem  
ENT506 Innovative Internet Based Business Models  
ENT507 Stakeholder Analysis  
ENT591 Capstone Project

## Course Structure

<b>Semester One</b> Introduction to Psychology Principles of Micro Economics Business Mathematics Islamic Studies Academic English Principles of Management	<b>Semester Two</b> History of Ideas Principles of Macro Economics Quantitative Techniques in Business Foreign Language I Persuasive & Analytical Writing for Business Communication Introduction to Financial Accounting
<b>Semester Three</b> Entrepreneurial Society & Social Impact Marketing Management Foreign Language II Pakistan Studies Business & Professional Speech Intermediate Financial Accounting	<b>Semester Four</b> Organizational Behavior Entrepreneurial Business Operations Supply Chain Management Computer Concepts & Applications Introduction to Islamic Banking & Finance Introduction to Business Finance
<b>Semester Five</b> Human Resource Management Methods in Business Research Introduction to ERP Introduction to Data Sciences Islamic Financial Accounting Financial Management	<b>Semester Six</b> Leadership Journey Major 1 (compulsory elective) Major II (compulsory elective) Major III Major IV Major V
<b>Semester Seven</b> Pakistan Economic Policy Major VI Major VII Minor I (compulsory elective) Minor II (compulsory elective) Business Ethics	<b>Semester Eight</b> Major VIII Major IX Major X Major XI (Capstone) Strategic Management Corporate & Business Law



## BS (JOINT) HONORS IN ECONOMICS & FINANCE

BS (Joint) Honors in Economics and Finance is a joint program of CBM and CESD, prepares graduates for professional careers in economics and finance in the corporate sector, financial sector and public sector regulatory and planning organizations. It requires the completion of 144 credit hours of course work and relevant internship of at least nine weeks in an approved firm. The program offers 66 credit hours of business and social sciences courses with an intensive coverage of 78 credit hours of Economics and Finance related courses designed to develop well-rounded professionals regarded as “go-getters” in industry. Graduates of this program are usually recruited as Economists and Financial Analysts in reputable financial institutions across the country.

Students are required to complete 13 general education courses in the first four semesters otherwise student will not be allowed to proceed to the fifth semester. 4 hours of lab session are required every week for four semesters to complete the requirement to graduate. BS (Eco and Fin) is a double major program in which students are required to take 6 major elective courses of Economics and 6 major elective courses of Finance.

### General Education Courses

SSC101 Introduction to Psychology  
SSC301 History of Ideas  
SSC401 Business Ethics  
LAW409 Corporate & Business Law  
MTH102 Business Mathematics  
STA203 Probability Theory & Statistics  
COM107 Academic English  
COM205 Persuasive & Analytical Writing for Business Communication  
COM202 Business & Professional Speech  
REL101 Islamic Studies  
PSC301 Pakistan Studies

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic      \*2 = Introduction to French

\*4 = Introduction to German      \*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic      \*\*2 = Intermediate French

\*\*4 = Intermediate German      \*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

MTH100 Basic Mathematics \*\*\*

COM100 Foundation English\*\*\*

(\*\*\* Remedial non-credit course to be taken by those students who have not been able to reach the desired level of competence in the admission test.)

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the BBA (Honors) degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.

## Core Courses

### Economics

ECO101	Principles of Micro Economics
ECO102	Principles of Macro Economics
ECO301	Managerial Economics
ECO303	Financial Economics
ECO316	Macroeconomic Analysis
ECO304	Introduction to Econometrics
ECO506	Business Research Project

### Finance

FIN201	Introduction to Business Finance
FIN202	Financial Management
FIN301	Financial Institution
FIN503	Corporate Finance
FIN613	Financial Modeling for Decision Making
ISF101	Introduction to Islamic Banking & Finance
FIN537	Business Research Project

### Distribution Courses

MAN306	Principles of Management and Organizational Behavior
MAN309	Leadership Journey
ECO402	Pakistan Economic Policy
MAN405	Strategic Management
MIS402	Computer Concepts and Application
MKT302	Marketing Management
ACC101	Introduction to Financial Accounting
ACC201	Intermediate Financial Accounting
STA301	Model and Inferences

## Major Elective Courses

### Economics Major Electives 6

ECO206	Mathematical Economics
ECO207	Game Theory
ECO208	Development Economics
ECO302	International Trade & Globalization
ECO307	Monetary Theory & Policy
ECO311	General Welfare & Equilibrium
ECO322	Applied Econometrics
ECO407	Analysis of Pakistani Industries
ECO411	Islamic Economics
ECO412	Public Finance

### Finance Major Electives 6

FIN504	International Finance
FIN505	Treasury & Fund Management
FIN506	Investment Banking & Security Analysis
FIN507	Portfolio Management
FIN509	Financial Derivatives
FIN511	Analysis of Financial Statements
FIN513	Project Appraisal
FIN514	Asset Liability Management
FIN520	Financial Risk Management
FIN530	Commercial & Corporate Banking
FIN534	Retail & Consumer Banking
FIN536	FINTECH
FIN538	Financial Economics
FIN539	Quantitative Finance
FIN540	Managerial Economics
FIN541	Technical Analysis
FIN542	Financial Forecasting & Planning
FIN543	Asset Pricing Models
FIN544	Digital Finance
FIN545	Financial Mgmt. in Not-for-Profit Organization



## Course Structure

<b>Semester One</b> Introduction to Psychology Islamic Studies Business Mathematics Business Ethics Academic English Principles of Micro Economics	<b>Semester Two</b> Principles of Macro Economics Foreign Language I Probability Theory & Statistics Corporate & Business Law Persuasive & Analytical Writing for Business Communication Introduction to Financial Accounting
<b>Semester Three</b> History of Ideas Model & Inferences Foreign Language II Pakistan Studies Business & Professional Speech Intermediate Financial Accounting	<b>Semester Four</b> Computer Concepts and Application Macroeconomic Analysis Principles of Management & Organizational Behavior Managerial Economics Introduction to Econometrics Introduction to Business Finance
<b>Semester Five</b> Financial Economics Financial Institutions Economics Elective I Economics Elective II Marketing Management Financial Management	<b>Semester Six</b> Leadership Journey Economics Elective III Economics Elective IV Economics Elective V Introduction to Islamic Banking and Finance Corporate Finance
<b>Semester Seven</b> Pakistan Economic Policy Financial Modeling for Decision Making Finance Elective I Economics Elective VI Business Research Project (Economics) Finance Elective II	<b>Semester Eight</b> Finance Elective III Finance Elective IV Finance Elective V Finance Elective VI Strategic Management Business Research Project (Finance)

## BS (JOINT) HONORS IN ACCOUNTING & FINANCE

BS (Joint) Honors in Accounting and Finance prepares graduates for professional careers in finance and accounting in the corporate and financial sectors. It requires the completion of 144 credit hours of course work and relevant internship of at least nine weeks in an approved firm. The program offers 66 credit hours of business and social sciences courses with intensive coverage of 78 credit hours of Finance and Accounting related courses designed to develop well-rounded professionals who are regarded as go-getters in the industry. Graduates of this program are usually recruited in the field in investment, portfolio, debt and equity market, audit, banking, research as well as other fields offered by financial institutions.

Students are required to complete 13 general education courses in first four semesters otherwise the student will not be allowed to proceed to the fifth semester. 4 hours of lab session are required every week for four semesters in order to complete the requirement to graduate. BS (ACF) is a double major program in which students are required to take six major elective courses of Accounting and 6 major elective courses of Finance.

Students of this program can avail up to 8 module exemption in ACCA from ACCA Accelerated Program with IoBM. The curriculum is also mapped with CFA Institute USA. Students can avail CFA scholarship given under the University Affiliation Program of CFA Institute.

### General Education Courses

SSC101 Introduction to Psychology  
SSC301 History of Ideas  
SSC401 Business Ethics  
LAW409 Corporate & Business Law  
MTH102 Business Mathematics  
STA203 Probability Theory & Statistics  
COM107 Academic English  
COM205 Persuasive & Analytical Writing for Business Communication  
COM202 Business & Professional Speech  
REL101 Islamic Studies  
PSC301 Pakistan Studies

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic      \*2 = Introduction to French

\*4 = Introduction to German      \*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic      \*\*2 = Intermediate French

\*\*4 = Intermediate German      \*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

MTH100 Basic Mathematics \*\*\*

COM100 Foundation English\*\*\*

(\*\*\* Remedial non-credit course to be taken by those students who have not been able to reach the desired level of competence in the admission test.)

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the BBA (Honors) degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.



## Core Courses

### Accounting

ACC101	Introduction to Financial Accounting
ACC201	Intermediate Financial Accounting
ACC350	Cost & Management Accounting
ACC530	Financial Regulation & Reporting
ACC501	Advanced Financial Accounting
ISF201	Islamic Financial Accounting
ACC531	Business Research Project

### Finance

FIN201	Introduction to Business Finance
FIN202	Financial Management
FIN301	Financial Institution
FIN503	Corporate Finance
FIN613	Financial Modeling for Decision Making
ISF101	Introduction to Islamic Banking & Finance
FIN537	Business Research Project

## Distribution Courses

MAN306	Principles of Management and Organizational Behavior
MAN309	Leadership Journey
ECO402	Pakistan Economic Policy
MAN405	Strategic Management
MIS402	Computer Concepts and Application
MKT302	Marketing Management
ECO101	Principles of Micro Economics
ECO102	Principles of Macro Economics
STA301	Model and Inferences

## Major Elective Courses

### Accounting Major Electives 6

ACC302	Accounting and Financial Information Systems
ACC405	Internal Audit and EDP Accounting
ACC501	Advanced Financial Accounting
ACC503	Taxation
ACC505	Auditing
ACC520	Managerial Analysis and Decision Making
ACC521	International Financial Reporting Standards
ACC524	Corporate Governance and Reporting
ACC532	Readings in Accounting Research
ACC533	Accounting for Specialized Businesses
LAW202	Banking Laws in Pakistan
LAW203	Insurance Laws in Pakistan

### Finance Major Electives 6

FIN504	International Finance
FIN505	Treasury & Fund Management
FIN506	Investment Banking & Security Analysis
FIN507	Portfolio Management
FIN509	Financial Derivatives
FIN511	Analysis of Financial Statements
FIN513	Project Appraisal
FIN514	Asset Liability Management
FIN520	Financial Risk Management
FIN530	Commercial & Corporate Banking
FIN534	Retail & Consumer Banking
FIN536	FINTECH
FIN538	Financial Economics
FIN539	Quantitative Finance
FIN540	Managerial Economics
FIN541	Technical Analysis
FIN542	Financial Forecasting & Planning
FIN543	Asset Pricing Models
FIN544	Digital Finance
FIN545	Financial Mgmt. in Not-for-Profit Organization

## Course Structure

<b>Semester One</b> Introduction to Psychology Islamic Studies Business Mathematics Business Ethics Academic English Principles of Micro Economics	<b>Semester Two</b> History of Ideas Foreign Language I Probability Theory & Statistics Corporate & Business Law Persuasive & Analytical Writing for Business Communication Introduction to Financial Accounting
<b>Semester Three</b> Principles of Macro Economics Computer Concepts and Application Foreign Language II Pakistan Studies Business & Professional Speech Intermediate Financial Accounting	<b>Semester Four</b> Principles of Management & Organizational Behavior Cost and Management Accounting Advanced Financial Accounting Financial Regulation and Reporting Model & Inferences Introduction to Business Finance
<b>Semester Five</b> Marketing Management Financial Institutions Accounting Elective I Accounting Elective II Accounting Elective III Financial Management	<b>Semester Six</b> Leadership Journey Accounting Elective IV Accounting Elective V Accounting Elective VI Introduction to Islamic Banking and Finance Corporate Finance
<b>Semester Seven</b> Pakistan Economic Policy Financial Modeling for Decision Making Finance Elective I Islamic Financial Accounting Business Research Project (Accounting) Finance Elective II	<b>Semester Eight</b> Finance Elective III Finance Elective IV Finance Elective V Finance Elective VI Strategic Management Business Research Project (Finance)

## BS ENTREPRENEURSHIP

The BS Entrepreneurship program is designed to take the students through various stages of the entrepreneurial and intrapreneurial process, the end-product of which would be a functioning enterprise. The program is designed to develop thought leaders with entrepreneurial spirit that can lead to the creation of new ventures within and outside existing enterprises. After completing the program, students would have designed, launched and managed their entrepreneurial ventures through the stages of ideation, networking, experimentation, execution, breakeven, growth, and investment. Students explore each of these stages through multiple courses using the project-based learning approach. Graduates of this program will be expected to become job creators, and would have to practice creativity, innovation and design with real projects, entrepreneurial ventures, and in real-life environments.

It requires completion of 144 credit hours of course work in a total of 8 semesters or 4 years and relevant internship of at least nine weeks in an approved firm. The program offers 66 credit hours of business and social sciences courses with intensive coverage of 78 credit hours of Entrepreneurship and Social Entrepreneurship. Students are required to complete 13 general education courses in first four semesters otherwise the student will not be allowed to proceed to the fifth semester. 4 hours of lab session are required every week for four semesters in order to complete the requirement to graduate. The program is based on a stage-wise transition of thematic semesters containing courses and projects that facilitate the entire entrepreneurial process. Each semester represents a stepping-stone, having embedded with courses from various business domains that revolve around an underlying business project.

### General Education Courses

SSC101 Introduction to Psychology  
SSC301 History of Ideas  
ECO101 Principles of Microeconomics  
ECO102 Principles of Macroeconomics  
MTH102 Business Mathematics  
STA104 Quantitative Techniques in Business  
COM107 Academic English  
COM202 Persuasive & Analytical Writing for Business Communication  
COM205 Business & Professional Speech  
REL101 Islamic Studies  
PSC301 Pakistan Studies

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic      \*2 = Introduction to French  
\*4 = Introduction to German      \*6 = Introduction to Italian  
\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic      \*\*2 = Intermediate French  
\*\*4 = Intermediate German      \*\*6 = Intermediate Italian  
\*\*8 = Intermediate Chinese

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the BS (Entrepreneurship) degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.



## Entrepreneurship Core Courses

ENP113	Effectuation Methods and Attributes Analysis
ENP114	Startup Garage I: Business Model Generation
ENP112	Startup Garage II: Affordable Startup Design
ENP103	System, Disruptive and Exponential Thinking
ENP206	Startup Garage III: Business Idea Prototyping
SEL415	Social Advocacy and Change
ENP305	Process Optimization
ENP212	Lean Launchpad I: Startup Launch
SCM501	Supply Chain Management
ENP306	Lean Launch Pad II: Startup Risk Mitigation
ENP414	Capstone I: Startup Acceleration & Co-creation
SEL413	Visual Storytelling
MKT404	Methods in Business Research
ENP116	Introduction to Entrepreneurship
ENP308	Legal Business Structures for Startups

## Distribution Courses

MAN101	Principles of Management
MKT302	Marketing Management
HRM301	Human Resource Management
MAN405	Strategic Management
SSC401	Business Ethics
SSC104	Principles of Sociology

## Entrepreneurship Major Electives

ENP207	Lean Marketing for Startups
ENP211	Digital Development for Startups
ENP301	Customer Acquisition for Startups
ENP210	Gig Economy and Strategy
ENP307	Growth Hacking Strategies for startups
ENP407	Advanced Entrepreneurial Strategy
SEL213	Philosophy of Development
SEL313	Social Transformation
SEL314	Creativity & Aesthetics
SEL414	Human Centricism, Environmental & Surrounding Concerns
ENP304	Sustainable Family Business
ENP404	Modes of Exchange

## Course Structure

<b>Semester One</b> Academic English Business Mathematics Islamic Studies Principles of Microeconomics History of Ideas Introduction to Entrepreneurship	<b>Semester Two</b> Persuasive & Analytical Writing for Business Communication Quantitative Techniques in Business Principles of Management Pakistan Studies Principles of Macroeconomics Effectuation Methods and Attributes Analysis
<b>Semester Three</b> Business and Professional Speech Human Resource Management Introduction to Psychology Foreign Language I Fundamentals of Accounting Startup Garage I: Business Model Generation	<b>Semester Four</b> Foreign Language II Fundamentals of Finance Marketing Management System, Disruptive and Exponential Thinking Introduction to Sociology Startup Garage II: Affordable Startup Design
<b>Semester Five</b> Social Advocacy and Change Process Optimization Strategic Management Elective I Elective II Startup Garage III: Business Idea Prototyping	<b>Semester Six</b> Business Ethics Supply Chain Management Elective III Elective IV Elective V Lean Launchpad I: Startup Launch
<b>Semester Seven</b> Elective VI Elective VII Elective VIII Legal Structures of Startups Business Research Methods Lean Launch Pad II: Startup Risk Mitigation	<b>Semester Eight</b> Elective IX Elective X Elective XI Elective XII Visual Storytelling Capstone: Startup Acceleration & Co-creation



## BS INDUSTRIAL MANAGEMENT

The BS Industrial Management degree program is a professional management degree program that prepares graduates to work in the manufacturing and process industries, contributing to the efficiency and streamlining of industrial processes. They study MRP, supply chain management, project management, industrial health, inventory management, quality, safety, and environmental issues. Our graduates will contribute to the growth of industry through various skills such as management, computer applications, supply chain management, project management, industrial health and safety, and so on after completing this program. In addition, students' entrepreneurial skills are given special attention. Another noteworthy aspect of this program is the continuous provision of hands-on training facilities in industrial units, which blends theory with practical experience.

The BS industrial management program requires 144 credit hours of course work and a minimum of 9 weeks of internship in a reputable industrial organization. To fulfill the degree requirements, students must complete 48 courses worth 3 credit hours each. To graduate, students must maintain a CGPA of 2.5.

Students are required to complete 13 general education courses in first four semesters otherwise the student will not be allowed to proceed to the fifth semester. 4 hours of lab session are required every week for four semesters in order to complete the requirement to graduate. Apart from core courses, students are required to take six major elective courses and two projects.

### General Education Courses

SSC101 Introduction to Psychology  
INM306 Social and Ethical Aspects in Industrialization  
MTH103 Calculus for Business Decisions  
COM107 Academic English  
COM205 Persuasive & Analytical Writing for Business Comm.  
(Pre req: COM107)

SSC301 History of Ideas  
INM103 Industrial Economics  
STA204 Industrial Applications of Statistics  
COM202 Business Speech  
PSC301 Pakistan Studies  
REL101 Islamic Studies

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic \*2 = Introduction to French \*4 = Introduction to German \*6 = Introduction to Italian \*8 = Introduction to Chinese  
\*\*1 = Intermediate Arabic \*\*2 = Intermediate French \*\*4 = Intermediate German \*\*6 = Intermediate Italian \*\*8 = Intermediate Chinese

MTH100 Basic Mathematics \*\*\*

COM100 Foundation English\*\*\*

(\*\*\* Remedial non-credit course to be taken by those students who have not been able to reach the desired level of competence in the admission test.)

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the B.S Industrial Management degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.

### Subject Foundation Core courses

INM101 Production Process (Pre req NA)  
INM102 Industrial Safety & Health (Pre req INM 101)  
INM104 Fundamentals of quality (Pre req NA)  
INM105 Introduction to Industrial management (Pre req NA)  
INM106 Foundation of Industrial Design and thinking (Pre req INM 101)  
INM201 Methods Analysis and Time Study (Pre req: INM101 & INM 105)  
INM202 Energy Management (Pre req NA)  
INM203 Introduction to Production & Operation Management (Pre req: INM105)  
INM204 Ergonomics (Pre req: INM201)

### Distribution Courses

ACC101 Fundamentals of Accounting  
MIS104 Computer Programming & Graphics  
FIN201 Fundamentals of Finance  
SSC202 Environmental studies  
MAN306 Principles of Management and OB  
MAN309 Leadership journey  
MKT302 Marketing management  
MAN405 Strategic management  
SSC401 Business Ethics

### Subject Major Core Courses

INM 301 Introduction to Facility Planning & Layout (Pre req: INM203)  
INM 303 Introduction to Planning and Scheduling (Pre req: INM203)  
INM 304 Introduction to Project Management (Pre req: INM203)  
INM 305 Inventory Management and Lean Six Sigma (Pre req: INM203)  
INM 307 Business Forecasting & Risk Analysis (Pre req; INM303)  
INM 308 Industrial Transformation and Technical Changes (Pre req: INM203)  
INM 401 Industrial supply chain management  
INM 402 Industrial Quality practices and management (Pre req: INM104)  
INM 404 Managing Research and Innovation (Pre req NA)

### Industrial Management Electives- (6 Courses)

INM404 Introduction to Enterprise Life Cycle Mgmt.  
INM405 Technology Management  
INM406 Operation Research  
INM407 Enterprise Risk Management  
INM408 Procurement Management  
INM409 Production Planning & Control  
INM412 Integrated Manufacturing Systems  
INM413 Manufacturing Processes  
INM414 E-Commerce for Manufacturing Industries

### Project: 2

INM501 Project I  
INM502 Project II

### Course Structure

<b>Semester One</b> Academic English Introduction to Psychology Islamic Studies Production Processes Introduction to industrial management Fundamentals of Quality	<b>Semester Two</b> History of Ideas Calculus for Business Decisions Business & Professional Speech Foreign Language I Foundations of Industrial Design Thinking Social and Ethical Aspects in Industrialization
<b>Semester Three</b> Pakistan Studies Industrial Applications of Statistics Foreign Language II Persuasive & Analytical Writing for Business Communication Methods Analysis and Time Study Industrial Economics	<b>Semester Four</b> Principles of Management and OB Environmental Studies Business Ethics Introduction to Production & Operation Management Ergonomics Industrial Safety & Health
<b>Semester Five</b> Marketing Management Fundamentals of Finance Computer Programming & Graphics Leadership Journey Energy Management Introduction to Facility Planning and Layout	<b>Semester Six</b> Strategic Management Industrial Transformation and Technical Changes Inventory Management and Lean Six Sigma Fundamentals of accounting Introduction to Project Management Introduction to Planning and Scheduling
<b>Semester Seven</b> Business Forecasting & Risk Analysis Industrial Supply Chain Management Project I Elective I Elective II Elective III	<b>Semester Eight</b> Industrial Quality Practices and Management Managing Research and Innovation Project II Elective IV Elective V Elective VI



## BS (JOINT) HONORS LOGISTICS AND SUPPLY CHAIN

BS (Joint) Honors in Logistics and Supply Chain prepares graduates for professional careers in Logistics and Supply Chain in the corporate sectors. It requires the completion of 144 credit hours of course work and relevant internship of at least nine weeks in an approved firm. The program offers 66 credit hours of business and social sciences courses with intensive coverage of 78 credit hours of Logistics and Supply Chain related courses designed to develop well-rounded professionals who are regarded as go-getters in the industry. Graduates of this program are usually recruited in the fields of supply chain design, supply chain management, supply chain analysis, warehousing, distribution management, data analytics, Logistics management, ERP systems designs, ERP implementation and operations, production and operations, as well as other fields related to Logistics and Supply Chain offered by corporate institutions.

Students are required to complete 13 general education courses in first four semesters otherwise the student will not be allowed to proceed to the fifth semester. 4 hours of lab session are required every week for four semesters in order to complete the requirement to graduate. BS (LSCM) is a double major program in which students are required to take six major elective courses of logistics and 6 major elective courses of supply chain.

In a BS (Joint) Honors – Logistics and Supply Chain, students explore multiple aspects of Logistics and Supply Chain activities of various corporations. This program employs the latest approaches in experiential learning to develop skills for interpersonal communication, team work, foreign languages and managing diversity.

### General Education Courses

SSC101 Introduction to Psychology  
SSC301 History of Ideas  
SSC401 Business Ethics  
LAW409 Corporate & Business Law  
MTH102 Business Mathematics  
STA203 Probability Theory & Statistics  
COM107 Academic English  
COM205 Persuasive & Analytical Writing for Business Communication  
COM202 Business & Professional Speech  
REL101 Islamic Studies  
PSC301 Pakistan Studies  
LAN 10\* Foreign Language I  
LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic \*2 = Introduction to French

\*4 = Introduction to German \*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic \*\*2 = Intermediate French

\*\*4 = Intermediate German \*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

MTH100 Basic Mathematics \*\*\*

COM100 Foundation English\*\*\*

(\*\*\* Remedial non-credit course to be taken by those students who have not been able to reach the desired level of competence in the admission test.)

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the BBA (Honors) degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.

### Supply Chain Core Courses

SCM700 Essentials of Supply Chain Management  
SCM701 Introduction to ERP Systems  
SCM702 Supply Chain Design  
SCM703 Supply Chain Analytics  
SCM704 Procurement Management  
SCM705 Supply Chain Project Management  
SCM706 Business Research Project (Supply Chain)

### Logistics Core Courses

LOG700 Logistics and Operations Management  
LOG701 Transportation Techniques and Management  
LOG702 Fundamentals in Logistics Research  
LOG703 Storage and Warehouse Techniques  
LOG704 Quantitative Methods in Production and Logistics  
LOG705 Distribution Management in Logistics and Supply Chain  
LOG706 Business Research Project (Logistics)

### Distribution Courses

MAN306 Principles of Management and Organizational Behavior  
MAN309 Leadership Journey  
ECO402 Pakistan Economic Policy  
MAN405 Strategic Management  
MIS402 Computer Concepts and Application  
MKT302 Marketing Management  
ECO409 Business Economics  
ACC206 Fundamentals of Accounting  
FIN310 Fundamentals of Finance

### Supply Chain Major Electives – 6

SCM751 Supply Chain Finance and Costing  
SCM752 Supply Chain Technology, Systems and Innovation  
SCM753 Globalization and Outsourcing Strategies  
SCM754 Packaging Design and Environmental Aspects  
SCM755 E-business Strategies in SCM  
SCM756 Operational Research and Simulation  
SCM757 Managing Sustainable Supply Chain  
SCM758 Supply Chain i4.0 & Data Sciences

### Logistics Major Electives – 6

LOG751 Import Export Management  
LOG752 Lean Six Sigma and Lean Manufacturing  
LOG753 Shipping, Ocean Freights and Port Operations  
LOG754 Humanitarian Logistics Supply Chain Management  
LOG755 Reverse Logistics and Supply Chain Sustainability  
LOG756 Retail Management  
LOG757 Dock Mgmt. Systems & IT Applications in Logistics  
LOG758 Inventory Management

### Course Structure

<b>Semester One</b> Introduction to Psychology Islamic Studies Business Mathematics Business Ethics Academic English Business Economics	<b>Semester Two</b> History of Ideas Foreign Language I Probability Theory & Statistics Corporate & Business Law Persuasive & Analytical Writing for Business Communication Essentials of Supply Chain Management	<b>Semester Three</b> Fundamentals of Accounting Computer Concepts and Application Foreign Language II Pakistan Studies Business & Professional Speech Logistics and Operations Management
<b>Semester Four</b> Principles of Mgmt. & Org. Behavior Introduction to ERP Systems Supply Chain Design Transportation Techniques and Mgmt. Fundamentals of Finance Fundamentals in Logistics Research	<b>Semester Five</b> Marketing Management Storage and Warehouse Techniques Supply Chain Analytics Supply Chain Elective I Supply Chain Elective II Supply Chain Elective III	<b>Semester Six</b> Leadership Journey Procurement Management Supply Chain Project Management Supply Chain Elective IV Supply Chain Elective V Supply Chain Elective VI
<b>Semester Seven</b> Pakistan Economic Policy Quantitative Methods in Production & Logistics Distribution Management in Logistics & Supply Chain Logistics Elective I Business Research Project (Supply Chain) Logistics Elective II	<b>Semester Eight</b> Logistics Elective III Logistics Elective IV Logistics Elective V Logistics Elective VI Strategic Management Business Research Project (Logistics)	



## MBA PROGRAM

MBA program is designed to produce transformational, ethical and change leadership for businesses and industry through an integrated curriculum and experiential learning and prepares graduates for business challenges emerging from globalization, connectivity and technology driven innovations. The program is designed to produce a skilled pool of business leaders possessing multidisciplinary expertise.

A distinguishing feature of the program is the academic ecosystem of experiential learning which immerses the student in a cycle of “learning by doing” through reflection. Case studies and project work are among the pedagogies used for delivery of the curriculum content. A significant value adding feature is the 6 credit hours of a Graduate Capstone Project divided into two 3 credit hour components. Students undertake, individually or in small groups, a real life project with a company that addresses a real life issue which, through the application of multidisciplinary knowledge and skills acquired during MBA studies, helps in more profitable and competitive decision making and implementation in the organization. This project is jointly supervised and evaluated by a faculty member with aligned skills and interest and an industry mentor and is evaluated in an open exhibition by executives and faculty. A Capstone Project report has to be converted into a publishable case study as a part of the degree requirement.

### Structure of MBA program

CBM’s MBA program is a 72 credit-hour program that most students can complete in two years. It is designed for students with a minimum of 16 years of education with degrees in a wide range of disciplines such as business, commerce, engineering, law, science, medicine, the arts and pharmacy. CBM MBA programs share a unified structure consisting of a foundation stage followed by the specialization stage. The foundation stage of the MBA program fulfills the minimum eligibility requirements of HEC to switch from a non-business major at the bachelor stage to a master level program in business as per PQF, Pakistan Qualification Framework. It consists of 30 credit hours.

The foundation stage consists of 30 credit hours of coursework from areas such as Communication, Economics, Quantitative Analysis, Behavior/ Psychology, Accounting, Finance, Law/Ethics, Management, HRM, Entrepreneurship, Marketing, and Research.

The specialization stage consists of 42 credit hours of coursework covering strategic and operational areas of functional and domain-based specializations. The courses are in areas related to Marketing Strategy, Strategic Finance, Strategic Management, Leadership, Technology/Operations, Entrepreneurship, Organizational Processes, Analytics for Decision Making, etc. Students select two real life Capstone Projects in their area of specialization during their final year. MBA students must select, at the time of admission, from one of the following shifts for their entire program; morning week-days, evening week-days and week-ends. Functional area specializations are available in all three shifts. Domain based specializations are only available during weekends.

- MBA students who have completed their business relevant Bachelor program from IoBM are exempted from the 30 credit hours of the Foundation Stage of the standardized 72 credit hours MBA Program. Applicants with 4 year bachelor degree from IoBM in a non-business discipline can claim up to 6 course exemption from the foundation stage for the equivalent courses completed in the bachelor program.
- MBA Program for applicants with 14 years education is of 108 credit hours. It consists of a foundational stage of a minimum of 2 years and consists of 72 credit hours followed by 36 credit hours of rigorous MBA level courses.

### Foundation Stage

The foundation stage covers areas such as accounting, finance, marketing, economics and management in addition to other preparatory course work necessary for applicants coming from background unrelated to business studies. The foundation stage prepares the students for the higher level MBA courses. The program is divided into a foundation stage of 30 credit hours followed by the 42-credit hours of rigorous MBA level courses and the capstone project dealing with strategy and business transformation.

**Students joining CBM for the first time are expected to have qualified the MBA Boot Camp (Details on Page No. 49).**

## Foundation Courses

### Accounting

ACC419 Financial Accounting

### Economics

ECO409 Business Economics<sup>2</sup>

### Statistics

STA411 Quantitative Analysis for Decision Making<sup>3</sup>

### Law

LAW409 Corporate and Business Law<sup>4</sup>

### Marketing

MKT402 Marketing Management

MKT404 Methods in Business Research<sup>5</sup>

### Communication

COM402 Business Communication<sup>1</sup>

### Finance

FIN408 Theory and Practice of Financial Management

### Human Resource Management

HRM410 Managing Human Capital

### Management

MAN418 Management and Organizational Dynamics

1. *Digital Business Communication (MMM) / Academic Writing, Seminar Skills (EdM)*
2. *Economics of Energy and Environment (EEM) / Business and Health Economics (MHM) / Micro and Macroeconomics / (FRM)*
3. *Statistics and Mathematics (EdM) / Model and Inferences, (FRM)*
4. *Health Ethic, Law and Jurisprudence (MHM) / Environmental Rules, Laws and Regulations (EEM) / Business Law (IM) / Educational Philosophy and Ethics (EdM) / Business and Insurance Law / (FRM)*
5. *Research and Survey Methodology (EEM) / (MHM), Research Methods I & II (EdM)*

## Specializations Overview

CBM MBA Program offers students several options for specialization spread over 42 credit hours. Depending upon the specialization, students complete a minimum of 15 credit hours of strategy level courses, 12 credit hours of operational levels courses focusing on innovation, creativity and efficiency. They also conduct two final year Capstone Projects focused on real-life issues of the industry.

Specializations include (i) functional-area specializations and (ii) domain-based specializations:

1. Functional-area specializations include majors in Marketing, Finance, Human Resource Management and Entrepreneurship. It also includes majors in Logistics and Supply Chain Management, and Development Studies. Functional area specializations offer the flexibility to the MBA students to choose from at least one major before the final year. Students considering functional-area specializations must select, at the time of admission, from one of the following shifts for their entire program; morning week-days, evening week-days and week-ends.
2. Domain-based specializations include aggressive tracks in the following domains. Students are expected to opt for them at the time of admission. Students selecting any of these specializations have to complete their entire MBA program during the weekends.
  - Specialization in Health and Hospital Management (Page No. 36)
  - Specialization in Media Management and Marketing (Page No. 38)
  - Specialization in Finance and Risk Management (Page No. 40)
  - Specialization in Environment and Energy Management (Page No. 42)
  - Specialization in Logistics and Supply Chain Management (Page No. 44)
  - Specialization in Industrial Management (Page No. 46)
  - Specialization in Entrepreneurship and SME Banking and Financing (Page No. 48)
  - Specialization in Educational Management (Page No. 117)



## FUNCTIONAL AREA SPECIALIZATIONS

Students selecting a functional area specialization major given below are expected to have completed the 30 credit hours of foundation stage (page No. 31) of the MBA program. The specialization stage consists of 42 credit hours of course work covering strategic and operational areas. They specialize in one of the following functional areas to complete their degree requirements:

- **Marketing:** Aims to empower students to use critical thinking, experiential and active learning to become leaders in a challenging and demanding environment
- **Management:** Aims to instill in each student a desire to learn, accept challenges, and develop an enquiring mind essential for making a difference in the dynamic global business scenario; in fact in all facets of their lives and communities they become part of
- **Finance:** Offers courses in finance, incorporating the latest concepts and theories in the related fields and their practical applications to the business world. The program aims to develop fully equipped professionals to face challenges of the industry. Students may also elect courses from Islamic Banking and Finance major.
- **Human Resource Management:** The Human Resource Management concentration will provide you with a comprehensive overview of the strategic HR management techniques that will help you take on senior management responsibility in the field. The program covers the whole spectrum of HR-related issues, from workforce leadership and performance evaluation to organizational behavior and change management.
- **Logistics and Supply Chain Management:** The program aims to develop supply chain professionals and innovative leaders with research capabilities & entrepreneurial skills who can improve the world and advance management practices.
- **Development Studies:** Development Studies is a vibrant field concerned with processes of change such as social and economic, political and cultural and the major policy challenges that present the efforts to overcome poverty and insecurity. The program provides a stable interdisciplinary social science formation and develops students' capacities for independent and critical inquiry.
- **Islamic Banking and Finance:** Covers the operations and role of Islamic and Financial banking institutions in an economy. The different types of financial institutions, local as well as multilateral, and their distinct functions are reviewed. The program also covers the concepts of Islamic banking and similarities and conflicts between Islamic and conventional banking. Students may also elect courses from Islamic Banking and Finance Major.
- **Entrepreneurship:** Entrepreneurship electives will provide a broad intrapreneurial and entrepreneurial skill set for managing businesses in addition to providing highly customized paths for a variety of business contents, including new vendors, franchises, corporate ventures, socially responsible companies and family controlled enterprise.

During the specialization stage, students take 12 credit hours of strategy courses, 9 credit hours of operational level courses, and 12 credit hours of elective courses. In addition, students select two real life Capstone Projects (6 credit hours) in their area of specialization during their final year.

The functional area specialization track is available in three mutually exclusive shifts: weekends, weekday mornings, or weekday evenings. The candidate must select a shift at the time of filing the application. Students are expected to complete all the courses of their program in their designated shift.



## Required Courses

### Accounting

ACC419 Financial Accounting

### Communication

COM107+Academic English

COM402 Business Communication

+Less Proficient Students

### Economics

ECO409 Business Economics

### Entrepreneurship

ENT403 Small Business and Entrepreneurship

### Finance

FIN408 Theory and Practice of Financial Management

FIN601 Strategic Financial Analysis and Design\*

### Human Resource Management

HRM410 Managing Human Capital

HRM606 Leadership, Ethics and Change\*

### Law

LAW409 Corporate and Business Law

### Management

MAN418 Management and Organizational Dynamics

MAN606 Business Analytics for Decision Making\*

MAN608 Technology, Operations and Innovation\*

MAN612 Strategic Management\*\*<sup>1</sup>

### Marketing

MKT402 Marketing Management

MKT404 Methods in Business Research

MKT509 Consumer Behavior

MKT610 Marketing Strategies and Value Innovation\*

### Statistics and Mathematics

STA411 Quantitative Analysis for Decision Making

4 Elective to be chosen from the Elective Courses

### Capstone Project

XXX691<sup>2</sup> Capstone Project I\*

XXX692<sup>2</sup> Capstone Project II\*

\* Indicates MBA level courses

<sup>1</sup> MBA Students with business relevant bachelor program from IoBM will instead take MAN619 Emerging Organizational Models for Dynamic Change.

<sup>2</sup> Students will be selecting their functional area specialization Capstone Projects: MKT691/692 for Marketing Specialization students, MAN691/692 for Management Specialization students, FIN691/692 for Finance Specialization students, HRM691/692 for HRM Specialization students, SCM691/692 for Logistics & Supply Chain Management Specialization students and IBF691/692 for Islamic Banking & Finance Specialization students.

## Specialized Elective Courses

Students may choose 4 elective courses from the following specializations. They can also select from BBA (Hons) electives (maximum two courses) of 500 level or above:



## Required Courses for Students with 14 Years of Education

### Accounting

ACC401 Introduction to Managerial and Cost Accounting  
ACC419 Financial Accounting

### Communication

COM107 Academic English\*  
COM402 Business Communication

*\* Less Proficient Students*

### Finance

FIN408 Theory and Practice of Financial Management  
FIN601\* Strategic Financial Analysis and Design

### Economics

ECO405 Seminar in Economic Policy  
ECO409 Business Economics

### Management

MAN418 Management and Organizational Dynamics  
MAN606 Business Analytics for Decision Making\*  
MAN608 Technology, Operations and Innovation\*  
MAN612 Strategic Management\*  
MAN619 Emerging Organizational Models for Dynamic Change

### Law

LAW409 Corporate and Business Law

### Human Resource Management

HRM606\*Leadership, Ethics and Change  
HRM410 Managing Human Capital

### Marketing

MKT402 Marketing Management  
MKT403 Sales Management  
MKT404 Methods in Business Research  
MKT509 Consumer Behavior  
MKT610\* Marketing Strategies and Value Innovation

### Management Information Systems

MIS526 Introduction to Enterprise Resource Planning Systems

### Statistics and Mathematics

STA403 Statistics and Mathematics  
STA404 Statistical Inference

### Social Sciences

SSC401 Business Ethics  
SSC402 Organizational Psychology  
SSC408 Political Sociology

### Entrepreneurship

ENT307 Entrepreneurial Leadership and Motivation  
ENT308 Social Advocacy and Community Service  
ENT403 Small Business and Entrepreneurship

*\*Indicates MBA level courses*

## Elective Courses

### Majors

#### Majors in Accounting

- ACC302 Accounting and Financial Information Systems
- ACC405 Internal Auditing & EDP Accounting
- ACC501 Advanced Financial Accounting
- ACC503 Taxation
- ACC505 Auditing
- ACC520 Managerial Analysis and Decision Making
- ACC521 International Finance Reporting Standards
- ACC522 Strategic Management Accounting
- ACC523 Financial Regulatory Requirements for Business
- ACC524 Corporate Governance and Reporting

#### Majors in Marketing

- MKT501 Strategic Marketing and Planning
- MKT602 Marketing Analytics
- MKT605 Pricing Models and Strategies
- MKT611 Integrated Marketing Communications
- MKT613 Marketing of Financial Services
- MKT615 Brand Management
- MKT618 Advertising Management and Strategy
- MKT621 Marketing Strategies for Emerging Economies
- MKT622 Marketing Strategies for Bottom of the Pyramid (BOP)
- MKT623 Pharmaceutical Marketing & Quality Assurance
- MKT625 Business to Business Marketing
- MKT626 Marketing for Social Impact
- MKT627 Future Marketing Technologies
- MKT628 Competitive Strategies
- MKT629 B2B Sales by Simulation/Gamification
- MKT630 Growth Marketing

#### Majors in Finance and Banking

- FIN602 Behavioral Finance
- FIN603 Entrepreneurial Finance
- FIN608 Project Appraisal
- FIN610 Debt and Equity Markets
- FIN612 SME and Micro-Financing
- FIN613 Financial Modeling for Investment Decisions
- FIN630 Options, Swaps and Futures
- FIN631 Applied Corporate Finance
- FIN632 Fixed Income Securities
- FIN633 Mergers, Acquisitions and Restructuring
- FIN634 Enterprise Risk Management
- FIN635 Risk Management with Derivatives

#### Majors in Human Resource Management

- HRM612 Strategic Human Resource Management
- HRM615 Leadership Studies
- HRM617 HR Analytics
- HRM618 Managing Diversity & Inclusion in Organization
- HRM619 Talent Acquisition
- HRM620 Labour Studies and Employee Relations
- HRM621 Learning and Organizational Development
- HRM622 Negotiations and Conflict Resolution Skills
- HRM623 Managing Organizational Change
- HRM624 Talent Management and Performance Development
- HRM625 Total Rewards Management

### Majors in Management

- MAN501 Total Quality Management
- MAN611 Project Management
- MAN613 Corporate Governance
- MAN618 Negotiation and Conflict Resolution Skills

### Majors in Logistics and Supply Chain Management

- SCM601 Quantitative Methods in Production and Logistics
- SCM602 Business Process Mgmt. in Supply Chain & Logistics
- SCM603 IT Applications in Logistics
- SCM604 Packaging Design and Environmental Aspects
- SCM605 Supply Chain Management
- SCM606 ERP Systems Design and Implementation
- SCM607 Strategic Supply Chain Management
- SCM608 Procurement and Inventory Management
- SCM609 Storage and Warehouse Techniques
- SCM610 Transportation Techniques and Management
- SCM611 Sustainability & Env. Aspects in Managing Supply Chains
- SCM612 Risk Management in Supply Networks
- SCM613 Innovation Management in Supply Chain and Logistics
- SCM614 Corporate Consultancy Project in Logistics
- SCM615 Contract Management for Supply Chain & Negotiations
- SCM616 Life Cycle Enterprise Asset Management
- SCM617 Mobile Commerce and Mobile Logistics
- SCM618 Aviation Logistics Supply Chain Management
- SCM619 Humanitarian Logistics Supply Chain Management
- SCM620 Supply Chain Project Management
- SCM621 Lean Construction Supplychain Management

### Majors in Development Studies

- SSC601 Dimensions of Development
- SSC602 Development Sociology
- PDE703 Development Economics
- STA601 Development Statistics and Research Methodology

### Majors in Islamic Banking and Finance

- ISF601 Economics for Islamic Finance
- ISF602 Islamic Banking Practices
- ISF603 Accounting for Islamic Finance
- ISF604 Islamic Financial Services Marketing
- ISF605 Islamic Capital Markets
- ISF606 International Islamic Finance Standards
- FRM514 Takaful and Risk Management in Islamic Products

### Majors in Entrepreneurship

- ENT503 Competitive Strategies for Startup
- ENT504 Technology Support for Small Business
- ENT505 Innovative Internet Based Business Models
- ENT506 Guerrilla Strategies in Business
- ENT507 Affordable Design and Frugal Innovation
- ENT508 Commercializing and Monetizing Ideas
- ENT509 Building and Managing Start-Up Teams
- ENT510 New Venture Finance
- ENT511 Managing Family Business
- ENT512 Growth Hacking Strategies
- ENT513 Design Thinking and Strategy



## DOMAIN BASED SPECIALIZATIONS

### SPECIALIZATION IN HEALTH AND HOSPITAL MANAGEMENT

CBM MBA's Domain Specialization in Health and Hospital Management is designed for building careers as healthcare leaders, managers and decision makers in hospitals, pharmaceutical industry, NGOs, and other allied healthcare institutions. The specialization of Health and Hospital Management provides an environment of continual learning for its faculty and students, and focusses on development of the leadership skills like creative and critical thinking, decision making, team building and entrepreneurial expertise among the students so that they can generate market driven results. It continuously refines and caters to the needs, demands and expectations of the healthcare industry. The department uses state of the art teaching methodologies for capacity-building of the future healthcare leaders who are trained to be sensitive to the needs of society, and to promote ethical practices in the healthcare businesses with the objectives of serving the community and the nation.

Students selecting the domain-based specialization in Health and Hospital Management are expected to complete the 30 credit hours of foundation stage (page No. 31) of the MBA program. Specialization stage consists of 42 credit hours of course work covering strategic and operational areas. These include courses in Marketing Strategy, Strategic Finance, Strategic Management, Leadership, Technology/Operations, Entrepreneurship, Organizational Processes, Analytics of Decision Making, etc. These courses are specifically designed by the department with a focus on Health and Hospital Management. During the specialization stage, students take 12 credit hours of strategy courses, 9 credit hours of operational level courses, and 12 credit hours of elective courses. The strategy, operational and elective courses help prepare graduates for the provision of necessary expertise to manage health services effectively and develop technically competent and socially sensitive managers for leadership roles in global health systems, hospitals, NGO sector, pharmaceutical industries and population programs. In addition, students select two real life Capstone Projects (6 credit hours) in their areas of specialization during their final year.

MBA track for specialization in Health and Hospital Management as well as the foundation stage is only available during the weekends. Candidates must select the specialization at the time of filing the application. The required and elective courses for the entire track are given below:

#### Required Courses:

##### Accounting

ACC419 Financial Accounting

##### Human Resource Management

HRM410 Managing Human Capital

##### Communication

COM402 Business Communication

##### Management

MAN418 Management and Organizational Dynamics

##### Finance

FIN408 Theory and Practice of Financial Management

FIN411 Finance for Entrepreneurial Ventures

Elective Business Courses\*

##### Core Health Courses

MHM529 Health Policy and Analytics for Decision Making

MHM530 Quantitative Analysis

MHM531 Health Management Information Systems

MHM532 Research and Survey Methodology

MHM533 Business and Health Economics

MHM534 Health Psychology

MHM601 Strategic Management of Health Services

MHM602 Health Service Delivery and Operation Management

MHM603 Health Ethics, Law and Jurisprudence

MHM604 Healthcare Leadership

##### Marketing

MKT402 Marketing Management

MKT610 Marketing Strategies and Value Innovation

3 Health Elective and 2 Business Elective

##### Capstone Project

MHM691 Capstone Project I

MHM692 Capstone Project II

## Elective Health Courses

MHM605 Financial Management of Health Services  
MHM606 Concepts of Primary Healthcare  
MHM607 Introduction to Epidemiology  
MHM608 Pharmaceutical Marketing and Quality Assurance  
MHM609 Marketing of Health Services  
MHM610 Population and Health  
MHM611 Environmental Health Assessment & Management  
MHM612 Hospital Administration  
MHM613 Regulatory Affairs at Healthcare Industries  
MHM614 Product Management  
MHM615 Pharmaceutical Sales Management  
MHM616 Project Management of Health Services  
MHM617 Seminar in Health Policy Management  
MHM618 Health Communications  
MHM619 Healthcare Human Resource Management  
MHM621 Supply Chain & Prod. Mgmt. in Pharma. Inds.  
MHM622 Quality Management in Healthcare  
MHM623 Pharmaceutical Branding  
MHM624 Occupational Health and Safety  
MHM625 Knowledge Management for Health Managers  
MHM626 Workplace Well-being for Healthcare Managers  
MHM627 Global and local Public Health Challenges and Practices  
MHM628 Pharmacovigilance

## Business Elective Courses:

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## Course Structure

<b>Semester One</b> Health Policy and Analytics for Decision Making Quantitative Analysis (QA / Bio statistics) Management and Organizational Dynamics Business Communication	<b>Semester Two</b> Research and Survey Methodology Health Management Information Systems Health Psychology Financial Accounting
<b>Semester Three</b> Theory and Practice of Financial Management Managing Human Capital Marketing Management Business and Health Economics	<b>Semester Four</b> Strategic Management of Health Services Health Service Delivery and Operation Management Health Ethics, Law and Jurisprudence Finance for Entrepreneurial Ventures
<b>Semester Five</b> Marketing Strategies and Value Innovation Healthcare Leadership Health Elective I Capstone Project I	<b>Semester Six</b> Business Elective I Business Elective II Health Elective II Health Elective III Capstone Project II



## SPECIALIZATION IN MEDIA MANAGEMENT AND MARKETING

The MBA - Media Management and Marketing (MMM) program seeks to develop quality human resource, capable of playing strategic leadership roles across a variety of traditional and new media organizations, as well as consumer marketing companies.

It is a 72 credit hours program which is divided into a foundation stage of 36 credit hours, followed by 36 credit hours of rigorous MBA level courses, rounded off with a strategy-oriented Capstone Project. Key areas covered by the program include accounting, finance, marketing, economics, law, management, quantitative analysis, as well as media management and marketing.

### Required Courses

#### Accounting / Finance

ACC419 Financial Accounting  
FIN404 Financial Management

#### Communications

COM410 Digital Business Communication

#### Economics

ECO409 Business Economics

#### Human Resource Management

HRM410 Managing Human Capital  
HRM606 Leadership, Ethics and Change

#### Law

LAW409 Business & Corporate Law

#### Management

MAN418 Theory and Practice of Management  
MAN607 Business Analytics and Decision Making  
MAN612 Strategic Management  
MAN616 Entrepreneurship and Ecommerce

#### Marketing

MKT402 Marketing Management  
MKT404 Methods in Business Research  
MKT509 Consumer Behavior  
MKT527 Integrated Marketing Communication  
MKT620 Digital Marketing

#### Media

MMM401 Media & Social Change  
MMM437 Role of Media in World Affairs  
MMM603 Seminar in Strategic Media Marketing  
MMM606 Media Psychology  
MMM607 Media and Public Opinion

### Statistics

STA411 Quantitative Analysis for Decision-Making

### Capstone Projects

BPR601 MBA Capstone Project 1 - Media Operations Management

BPR602 MBA Capstone Project 2 - Media Operations Management

### Elective Courses (1 Elective)

MMM604 Screenwriting for TV & Cinema

MMM606 Media Psychology

MKT511 Brand Management

### Course Structure

<b>Foundation Stage</b> <b>Semester One</b> Quantitative Analysis for Decision Making Financial Accounting Consumer Behavior Digital Business Communication	<b>Semester Two</b> Theory and Practice of Management Marketing Management Methods in Business Research Business Economics Market-
<b>Semester Three</b> Financial Management Business and Corporate Law Managing Human Capital Media and Social Change	<b>MBA Stage</b> <b>Semester Four</b> Leadership, Ethics and Change Strategic Management Digital Marketing Media and Public Opinion
<b>Semester Five</b> Business Analytics and Decision-Making Seminar in Media Marketing Elective 1 Capstone Project I	<b>Semester Six</b> Entrepreneurship and Ecommerce Integrated Marketing Communication Role of Media in World Affairs Capstone Project II



## SPECIALIZATION IN FINANCE AND RISK MANAGEMENT

Specialization in Finance and Risk Management is designed to cover financial decision making with special emphasis on Risk Management including recent development in Corporate Risk Management, Sustainable Risk Management and Risk Financing techniques.

Students selecting the domain based specialization in Finance and Risk Management are expected to have completed the 30 credit hours of foundation stage (page No. 31) of the MBA program. Specialization stage consists of 42 credit hours of course work covering strategic and operational areas. These include courses in the area of Marketing Strategy, Strategic Finance, Strategic Management, Leadership, Technology/Operations, Entrepreneurship, Organizational Processes, Analytics of Decision Making, etc. During the specialization stage, students take 12 credit hours of strategy courses, 9 credit hours of operational level courses, and 12 credit hours of elective courses. These courses are specifically designed to understand the financial risk management. In addition to strategic, operational and elective courses students select two real life Capstone Projects (6 credit hours) in their area of specialization during their final year.

MBA track for specialization in Finance and Risk Management as well as the foundation stage is only available during the weekends. Candidates must select the specialization at the time of filing the application. The required and elective courses for the entire track are given below:

### Required Courses

#### Accounting

ACC401 Introduction to Managerial and Cost Accounting  
ACC419 Financial Accounting

#### Communication

COM402 Business Communication

#### Economics

ECO401 Micro and Macroeconomics  
ECO408 Applied Financial Economics

#### Finance

FIN408 Theory and Practice of Financial Management  
FIN501 Advanced Financial Management  
FIN511 Analysis of Financial Statements

#### Finance and Risk Management

FRM401 Principles of Risk Management  
FRM402 Computational Methods in Risk  
FRM403 Introduction to Financial Risk Management  
FRM404 Risk Financing Techniques  
FRM405 Advanced Financial Risk Management



### **Human Resource Management**

HRM410 Managing Human Capital

### **Law**

LAW403 Business and Insurance Law

### **Management**

MAN418 Management and Organizational Dynamics

MAN405 Strategic Management

### **Marketing**

MKT401 Principles of Marketing

### **Mathematics**

MTH409 Financial Mathematics I

MTH410 Financial Mathematics II

### **Social Sciences**

SSC405 Business Ethics and Financial Responsibility

### **Statistics**

STA402 Model and Inferences

2 Elective

### **Elective Courses**

#### **Finance and Banking**

FIN403 Islamic Banking and Finance

#### **Finance and Risk Management**

FRM503 Corporate Risk Management

FRM504 Theory of Risk and Insurance

FRM505 Corporate Treasury and Risk Management

FRM506 Financial Regulation for Risk Management

FRM508 Financial Market Issues and Crisis

FRM510 Energy Risk Management

FRM512 International Risk and Financial Reporting

FRM513 Project Risk Management

FRM514 Takaful and Risk Management in Islamic Products

FRM516 International Financial Reporting and Standards

FRM517 Property Risk Management

FRM518 Management of Insurance Institutions



## SPECIALIZATION IN ENVIRONMENT AND ENERGY MANAGEMENT

Specialization in Environment and Energy Management aims to prepare future decision-makers in companies, government and non-governmental organizations for analyzing and acting in an environmentally proactive and energy efficient way when making decisions about policy, production and resource utilization in energy generation, transmission and load management.

Students selecting the domain based specialization in Environment and Energy Management are expected to have completed the 30 credit hours of foundation stage (page No. 31) of the MBA program. Specialization stage consists of 42 credit hours of course work covering strategic and operational areas. These include courses in the area of Marketing Strategy, Strategic Finance, Strategic Management, Leadership, Technology/Operations, Entrepreneurship, Organizational Processes, Analytics of Decision Making, etc. During the specialization stage, students take 12 credit hours of strategy courses, 9 credit hours of operational level courses, and 12 credit hours of elective courses. The department of Environment and Energy Management has developed the strategy, operational and elective courses to help students understand the environment and be decision makers in the future. In addition, students select two real life Capstone Projects (6 credit hours) in their area of specialization during their final year.

MBA track for specialization in Environment and Energy Management as well as the foundation stage is only available during the weekends. Candidates must select the specialization at the time of filing the application. The required and elective courses for the entire track are given below:

### Required Courses

#### Accounting

ACC419 Financial Accounting

#### Communication

COM402 Business Communication

#### Finance

FIN408 Theory and Practice of Financial Management

FIN601 Strategic Financial Analysis & Design\*

#### Human Resource Management

HRM410 Managing Human Capital

HRM606 Leadership, Ethics and Change\*

#### Management

MAN418 Management and Organizational Dynamics

MAN608 Technology, Operations and Innovation\*

MAN612 Strategic Management\*

#### Marketing

MKT402 Marketing Management

MKT610 Marketing Strategies and Value Innovation\*

#### Statistics

STA411 Quantitative Analysis for Decision Making

### **Environmental and Energy Management**

- EEM401 Environmental Issues and Management
- EEM403 Energy Sources and Management
- EEM404 Industrial and Municipal Waste Management
- EEM405 Renewable Energy and Energy Conservation
- EEM410 Environmental Impact Assessment
- EEM411 Environmental Rules, Laws and Regulations
- EEM412 Research and Survey Methodology
- EEM510 Economics of Energy Management
- EEM614 Safety, Health and Environmental Management

1 Elective

### **Capstone Project**

- EEM691 Capstone Project I\*
- EEM692 Capstone Project II\*

*\*Indicates MBA level courses*

### **Elective Courses**

#### **Environmental and Energy Management**

- EEM603 Air and Noise Pollution Management
- EEM604 Coastal Environment and Management
- EEM605 Climatic Changes and its Impact
- EEM606 Natural Resources Management
- EEM607 Hospital Waste Management
- EEM608 Solid and Hazardous Waste Management
- EEM609 Energy Audit
- EEM610 Energy Conservation
- EEM611 Energy Planning
- EEM612 Environmental Ethics
- EEM613 Public Awareness for Environment and Energy Sector
- EEM615 Risk and Disaster Management



## SPECIALIZATION IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Logistics and Supply Chain Management specialization addresses strategic economic and process-oriented technical problems in logistics, supply chain management across industries and across countries. It covers complexities of moving goods across regions with diverse compliance requirements.

Students selecting the domain based specialization in Logistics and Supply Chain Management are expected to have completed the 30 credit hours of foundation stage (page No. 31) of the MBA program. Specialization stage consists of 42 credit hours of course work covering strategic and operational areas. These include courses in the area of Marketing Strategy, Strategic Finance, Strategic Management, Leadership, Technology/Operations, Entrepreneurship, Organizational Processes, Analytics of Decision Making, etc. During the specialization stage, students take 12 credit hours of strategy courses, 9 credit hours of operational level courses, and 12 credit hours of elective courses. The department of Supply Chain and Logistics Management has developed the strategy, operational and elective courses keeping in view the requirement of the industry. In addition, students select two real life Capstone Projects (6 credit hours) in their area of specialization during their final year.

MBA track for specialization in Logistics and Supply Chain Management as well as the foundation stage is only available during the weekends. Candidates must select the specialization at the time of filing the application. The required and elective courses for the entire track are given below:

### Required Courses

#### Accounting

ACC419 Financial Accounting

#### Communication

COM402 Business Communication

#### Entrepreneurship

ENT403 Small Business and Entrepreneurship

#### Finance

FIN408 Theory and Practice of Financial Management

#### Economics

ECO409 Business Economics

#### Human Resource Management

HRM410 Managing Human Capital

HRM606 Leadership, Ethics and Change\*

## **Management**

MAN406 Production and Operations Management  
MAN418 Management and Organizational Dynamics  
MAN606 Business Analytics for Decision Making\*  
MAN612 Strategic Management\*

## **Marketing**

MKT402 Marketing Management  
MKT404 Methods in Business Research  
MKT610 Marketing Strategies and Value Innovation\*

## **Law**

LAW409 Corporate and Business Law

## **Supply Chain and Logistics Management**

SCM400 Introduction to ERP Systems  
SCM508 Design of Business Processes - Workflow Management  
SCM601 Quantitative Methods for Logistics & Supply Chain Management  
SCM605 Supply Chain Management  
SCM612 Risk Management in Supply Networks  
SCM613 Innovation Management in Supply Chain and Logistics

## **Capstone Project**

SCM691 Capstone Project I\* (Logistical Projects in ERP- Case Study Development)  
SCM692 Capstone Project II\*(Corporate Consultancy Projects in Logistics)

*\*Indicates MBA level courses*

1 Elective

## **Elective Courses**

### **Management**

MAN501 Total Quality Management  
MAN611 Project Management

### **Supply Chain and Logistics Management**

SCM604 Packaging Design- Environment Aspects  
SCM606 ERP System Design and Implementation  
SCM608 Procurement and Inventory Management  
SCM609 Storage and Warehouse Techniques  
SCM610 Transportation Techniques and Management  
SCM611 Sustainability & Env. Aspects in Managing Supply Chains  
SCM623 Textile and Fashion Supply Chain



## SPECIALIZATION IN INDUSTRIAL MANAGEMENT

Specialization in Industrial Management focuses on real life problems relating to industrial processes and discrete manufacturing. It focuses on project management, quality management, manufacturing effectiveness, logistics, warehousing and supply chain management.

Students selecting the domain based specialization in Industrial Management are expected to have completed the 30 credit hours of foundation stage (page No. 31) of the MBA program. Specialization stage consists of 42 credit hours of course work covering strategic and operational areas. These include courses in the area of Marketing Strategy, Strategic Finance, Strategic Management, Leadership, Technology, Operations, Entrepreneurship, Organizational Processes, Analytics of Decision Making, etc. During the specialization stage, students take 12 credit hours of strategy courses, 9 credit hours of operational level courses, and 12 credit hours of elective courses. The department of Industrial Management has developed the strategy, operational and elective courses to help the students understand the requirement of the industry. In addition, students select two real life Capstone Projects (6 credit hours) in their area of specialization during their final year.

MBA track for specialization in Industrial Management as well as the foundation stage is only available during the weekends. Candidates must select the specialization at the time of filing the application. The required and elective courses for the entire track are given below:

### Required Courses

#### Accounting

ACC401 Introduction to Managerial and Cost Accounting  
ACC419 Financial Accounting

#### Communication

COM402 Business Communication

#### Economics

ECO409 Business Economics

#### Engineering

ENG405 Environmental Impact Assessment and Management  
ENG604 Enterprise Asset Management and Financial Analysis

#### Entrepreneurship

ENT403 Small Business and Entrepreneurship

#### Finance

FIN408 Theory and Practice of Financial Management

#### Human Resource Management

HRM410 Managing Human Capital

#### Law

LAW401 Business Law

#### Supply Chain and Logistics Management

SCM605 Supply Chain Management\*

#### Marketing

MKT402 Marketing Management  
MKT404 Methods in Business Research  
MKT610 Marketing Strategies and Value Innovation\*

#### Statistics

STA411 Quantitative Analysis for Decision Making

*\*Indicates MBA level courses*

### **Management**

MAN406 Production and Operations Management  
MAN418 Management and Organizational Dynamics  
MAN502 Business Process Re-engineering  
MAN611 Project Management\*  
MAN612 Strategic Management\*

### **Capstone Project**

INM691 Capstone Project I\*  
INM692 Capstone Project II\*

*\*Indicates MBA level courses*

2 Elective

### **Elective Courses**

#### **Engineering**

INM601 Facilities Planning  
INM602 Maintenance Management  
INM603 Industrial Safety, Health, and environment  
INM604 Enterprise Life Cycle Management  
INM605 Industrial Technology Management  
INM606 Operation Research  
INM607 Enterprise Risk Management  
INM608 Logistic and Inventory control  
INM609 Advance Production Planning & Control  
INM610 Integrated Manufacturing Systems  
INM611 Advance Manufacturing Processes  
INM612 Industrial Supply Chain Management

#### **Human Resource Management**

HRM606 Leadership, Ethics, and Change

#### **Management**

MAN501 Total Quality Management



## SPECIALIZATION IN ENTREPRENEURSHIP AND SME BANKING AND FINANCE

Specialization in Entrepreneurship and SME Banking and Finance is aligned with SBP policy of encouraging SME Banking and Finance for entrepreneurs and small businesses. The program caters to individuals who want to build their careers in SME sector.

### Required courses:

#### Accounting

ACC419 Financial Accounting

#### Communication

COM402 Business Communication

#### Economics

ECO409 Business Economics

#### Finance

FIN408 Theory and Practice of Financial Management

FIN535 Strategic Finance for SMEs

#### Human Resource Management

HRM410 Managing Human Capital

HRM606 Leadership Ethics and Change

#### Law

LAW501 Governance, Regulations and Taxation for SMEs

#### Entrepreneurship

ENT403 Small Business and Entrepreneurship

#### Management

MAN418 Management and Organizational Dynamics

MAN511 SME Technology, Innovation & Operations

MAN512 Strategic Management for SMEs

MAN606 Business Analytics for Decision Making

#### Marketing

MKT402 Marketing Management

MKT404 Methods in Business Research

MKT509 Consumer Behavior

MKT539 Entrepreneurial Marketing

#### Statistics and Mathematics

STA411 Qualitative Analysis for Decision Making

#### Capstone Projects

ENT691 Capstone Project I

ENT692 Capstone Project II

### Specialized Elective Courses

Students may choose 4 elective courses from the following electives.

FIN603 Entrepreneurial Finance

FIN613 Financial Modeling for Decision Making

FIN615 Advanced Financing Practices for SMEs

ISF606 Islamic Finance for SMEs

MKT629 Marketing of SME Banking Products

MAN611 SMEs in Global Context



## MBA BOOT CAMP: ORIENTATION PROGRAM FOR NEW MBA STUDENTS

CBM challenges its incoming MBA students by offering a rigorous boot camp of orientation courses which fulfill the pre-requisite requirement to undertake first year foundation stage courses of the MBA program. Students with a four-year bachelor in commerce or business management are exempted from attending the camp. The exemption includes students with 2 years of B.Com plus 2 years of M.Com. The camp helps students from disparate backgrounds to bond quickly and prepare them for the intellectual challenge that they are going to encounter in the MBA program. They get a head-start with pre-requisite knowledge which acclimatizes them with the rigor and culture of CBM. This is an intensive 126-hour program which is spread over five weeks and conducted during evenings and weekends. Its objectives are:

1. To develop technical skills in statistical and IT tools
2. To develop a shared knowledge base in core areas of business
3. To bring their communication and presentation skills to the desired level
4. To provide orientation for personal organization and effectiveness
5. To familiarize them with pedagogies of case study, and experiential learning

	Modules	Number of Hours
1	Business English	12 hrs
2	Economics	12 hrs
3	Personal Effective and Leadership	12 hrs
4	Introduction to Management and Case Method	12 hrs
5	Introduction to Marketing and Case method	12 hrs
6	Business Finance	12 hrs
7	Business Accounting	12 hrs
8	Excel for Business Decision Making	18 hrs
9	Research Tools and Techniques	12 hrs
10	Business Mathematics and Statistics	12 hrs



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## MS IN BUSINESS MANAGEMENT

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MS program in Business Management is a research route for a PhD in Business Management and is designed for students with a 4-year BBA qualification or those meeting the HEC criteria for MS in management science i.e. 16 years of education with degree in relevant business field with 1st division/CGPA 3.0.

### Program Structure

MS in Business Management is a 36 credit-hour program with 10 courses and one thesis of 6 credit hours. Each of the 10 courses is of 3 credit hours.

After successful completion of course work, students are required to carry out research study for the thesis under the guidance of a research supervisor assigned by IoBM. In lieu of a thesis, students can also opt for two additional courses for the completion of the degree.

### Course Structure

MPM601 Advanced Qualitative Research  
MPM603 Advanced Quantitative Research  
MPM605 Survey of Current Research Literature in Management  
MPM607 Corporate Governance and Strategy  
MPM609 Seminar in Human Resource Management  
MPM611 Advanced Corporate Finance  
MPM614 Advanced Marketing Strategy  
MPM616 Econometrics

### Elective

Elective I

Elective II

(Electives may be selected from the specialization areas of Business Management of 700 Series)

Thesis (06 credit hours)

*It is mandatory for research students of MS and PhD programs to attend at least five sessions of the Multi-disciplinary Research Seminar Series in each semester. Students must dedicate Saturdays (12:00 to 2:00 PM) to attend the same.*

## MS IN ENGLISH - APPLIED LINGUISTICS

The MS in English-Applied Linguistics program envisages enhancing students' understanding of issues in the field of Applied Linguistics. The program has been designed to meet the needs of emerging professionals for a) reading research critically; b) doing research; and c) sharing ideas/findings with peers and the wider academic community.

### Eligibility

- 16 years of education in the relevant field of study with a minimum of 55% marks in the annual examination system or CGPA 2.5 in a semester system.
- Candidates must have a Master in Applied Linguistics, ELT, TESL, or Literature and Linguistics.
- Candidates who do not have a teaching degree (Master's in ELT, TESL) will have to opt for at least four deficiency courses as per the HEC policy.
- NTS/ETC Test Result.
- An interview conducted by the Institute.
- All other HEC stipulated requirements.

### Learning Outcomes

- Understand approaches and methods in Applied Linguistics research
- Exhibit suitable language pedagogical knowledge
- Critically analyze existing research and craft arguments for ones' own research
- Compose a thesis that evidences original research and high proficiency in the interpretation, analysis, and explanation of Applied Linguistics phenomena

### Career Path

- School/College Teacher/Professor
- Testing/Assessment Specialist
- Copy Editor/Proofreader
- Curriculum Developer
- Teacher Trainer
- Technical Writer

### Required Courses

#### Core Courses

- MPL601 Qualitative Research Methods in Social Science  
MPL602 Contemporary Issues in Applied Linguistics Research  
MPL603 Quantitative Research Methods in Social Science  
MPL604 Research Communication Skills

#### Elective Courses (Any Four Courses)

- MPL701 Language Assessment and Feedback  
MPL702 Research Perspectives on Second Language Acquisition  
MPL703 Language in Education and Development  
MPL704 Second Language Teacher Education  
MPL705 Teaching English in Difficult Circumstances  
MPL706 Psychology of Language Learning and Teaching  
MPL707 Directed Research Study  
MPL708 Research Colloquium  
MPL709 Teaching-Learning of World Englishes  
MPL710 Methods and Approaches of Critical Discourse Analysis

- MPL715 Research Thesis

*It is mandatory for research students of MS program to attend at least 5 sessions of the Multi-disciplinary Research Seminar Series in each semester. Students must dedicate Saturdays (12:00 to 2:00 PM) to attend the same.*



## MPhil IN BUSINESS MANAGEMENT

The MPhil program in Business Management is designed to meet the challenges of the business world and the growing demand for well-qualified and research-oriented scholars in Pakistan. This program has been carefully designed in response to traditional and emerging trends to meet the growing market demand for various specialist areas in business management.

### Eligibility

Students with a 4-year BBA qualification or those meeting the HEC criteria for MS/MPhil in management science i.e. 16 years of education with degree in relevant business field with 1st division/CGPA 3.0. The candidate have to pass GAT-General /IoBM entrance test and interview as per IoBM rules.

### Program Structure

The MPhil is a 30 credit hours program with 8 courses and Thesis. All the courses are of 3-credit Hours each.

After successful completion of course work, students are required to carry out research for thesis under the guidance of a research supervisor assigned by the Institute. Students must convert their research thesis into a publishable paper as part of a degree requirement. Continuous enrollment in supervised research courses is necessary during research stage.

### Course Structure

MPM601 Advanced Qualitative Research  
MPM603 Advanced Quantitative Research  
MPM605 Survey of Current Research Literature in Management  
MPM607 Corporate Governance and Strategy  
MPM609 Seminar in Human Resource Management  
MPM611 Advanced Corporate Finance  
MPM614 Advanced Marketing Strategy  
MPM616 Econometrics

For health professionals, electives may be selected from the specialization areas of Business Management of MPM700 Series in lieu of any four of the above mentioned courses.

Thesis (06 Credit hours)

*It is mandatory for research students of MPhil and PhD programs to attend research proposal / thesis defense / multi-disciplinary research seminars in each semester. Students must dedicate Saturdays (12:00 to 2:00 PM) to attend the same.*

## PhD IN BUSINESS MANAGEMENT

The mission of the PhD research program in business management is to pursue leading-edge research, engage in the development of innovative ideas and analytical skills, and encourage both faculty and students to be independent and creative in their thinking. The outcome of this research program is the creation of a real and measurable impact on society and industry through quality research published in impact factor journals and recognized by industry.

### Eligibility

**MS or equivalent graduates from HEC recognized institutions meeting the following criteria:**

- A minimum CGPA of 3.00 on a scale of 4.00 (or overall 60% marks) or equivalent
- HEC equivalency required for 18 years of Schooling
- A minimum of 18 years of schooling that corresponds to MS / MPhil or. Equivalent degree from HEC recognized institutions in a relevant discipline. Students with HEC recognized MBA have to do a number of pre-requisite courses
- GAT subject test conducted by the NTS is required with a minimum of 60% (percentage) marks and Minimum of 70% marks in IoBM test for Provisional Admission
- An interview conducted by the Institute
- All other HEC stipulated requirements

### Program Requirements

**PhD requires completion of course work and dissertation/thesis. Minimum duration is three years and maximum is seven years:**

- PhD course work requirements consist of six graduate level courses (18 credit hours)
- On completion of dissertation/thesis the student is awarded 30 credits

**A PhD student must additionally complete the following requirements:**

- Comprehensive Exam
- PhD Proposal/Synopsis Development
- PhD Proposal/Synopsis Defense
- BASR Approval of PhD Proposal/Synopsis
- Continuous enrollment in supervised research courses is necessary during the research thesis stage
- Completion of PhD Dissertation/Thesis
- Selection of External Evaluators by BASR
- Publication of at least one paper in an ISI indexed or an HEC recognized journal or an official acceptance of the paper
- Students must convert their research thesis into a publishable paper as part of a degree requirement
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Any other HEC requirement
- Final Dissertation/Thesis submission to BASR



## Course Structure

### Pre-requisites:

MPM601 Advanced Qualitative Research  
MPM604 Philosophy of Business Management  
MPM612 Advanced Research Methodology  
MPM610 Directed study of Business Research I

MPM603 Advanced Quantitative Research  
MPM605 Survey of Current Research Literature in Mgmt.  
MPM616 Econometrics  
MPM622 Directed study of Business Research II

*Note: Pre-requisites may be assigned according to the level of previous work. if Directed Research Study (I/II or both) is assigned then it has to be taken, only after completion of above mentioned Courses 1 to 6.*

### Courses of PhD Business Management (48-Credit Hours)

1. PBM703 Multivariate Analysis
2. PBM705 Readings in Business Research
3. PBM707 Replication of Business Research Design and Results
4. PBM710 Advanced Philosophy of Business Management
5. PBM708 Directed Study of a Business Research Problem
6. Elective
7. Dissertation

*Note: Apart from Dissertation which is of 30-Credit Hours, all other courses in PhD Business Management are of 3-Credit Hours each*

PBM921 Research Thesis (3 units)

PBM922 Research Thesis (6 units)

PBM923 Research Thesis (9 units)

### Research Electives in the Area of Specialization

#### Finance Electives

1. Business Finance and Decision Making
2. Financial Times Series
3. Derivatives and Financial Risk
4. Capital Asset Pricing
5. Empirical Asset Pricing
6. Contemporary Issues in Finance
7. Operations and Mathematical Modelling
8. Modern Financial Applications
9. Corporate Finance Planning and Decision
10. Corporate Financial Governance and Strategy
11. Advanced Topics in Finance

#### Marketing Electives

1. Strategic Marketing Decisions
2. Marketing Models
3. Marketing Theory
4. Advanced topics in Marketing Management
5. Contemporary Seminars in Marketing
6. Advanced Marketing Strategies
7. Distribution and Channel Management
8. Strategic Brand Management
9. Contemporary Issues in Marketing Management

#### HR/Management Electives

1. Strategic Human Resource Development
2. Change Management
3. Organizational Development
4. Leadership and Motivational techniques
5. Global Corporate Strategy
6. Creative leadership
7. International Business Management
8. Global Governance and Development
9. Contemporary Issues in Human Resource Management
10. Negotiation and Conflict Resolution
11. Contemporary Issues in Strategic Management
12. Critical thinking and Organizational Learning
13. Advanced Topics in Human Resources Management

*It is mandatory for research students of MPhil and PhD programs to attend research proposal / thesis defense / multi-disciplinary research seminars in each semester. Students must dedicate Saturdays (12:00 to 2:00 PM) for this attendance.*

## PHD IN ENVIRONMENT AND ENERGY MANAGEMENT

CBM's PhD program in Environment and Energy Management is a rigorous, interdisciplinary research program focusing on building theoretical models in the area of energy and/or environment. The research develops models relating to areas such as energy supply, sufficiency, and security for meeting future energy requirements. The models may also focus on environmental sustainability, impact models and trends relating to water supply, air quality, waste, etc.

### Eligibility

**MS or equivalent graduates from HEC recognized institutions meeting the following criteria:**

- A minimum CGPA of 3.00 on a scale of 4.00 (or overall 60% marks) or equivalent
- A minimum of 18 years of schooling that corresponds to MS / MPhil or equivalent degree from HEC recognized institutions in a relevant discipline
- GRE subject specific or GAT subject test conducted by the NTS, HAT subject test of HEC or equivalent in the relevant discipline. A minimum of 60% (percentage) marks are required or a minimum of 70% marks in IoBM test
- An interview conducted by the Institute
- All other HEC stipulated requirements
- Complete deficiency courses

### Program Requirements

**PhD requires completion of course work and dissertation/thesis. Minimum duration is 3 years and maximum is 5 years:**

- PhD course work requirements consist of six graduate level courses (18 credit hours)
- Student are awarded 30 credits on completion of dissertation/thesis

**A PhD student must additionally complete the following requirements:**

- Comprehensive Exam
- PhD Proposal/Synopsis Development
- PhD Proposal/Synopsis Defense
- BASR Approval of PhD Proposal/Synopsis
- Continuous enrollment in supervised research courses is necessary during the research thesis stage
- Completion of PhD Dissertation/Thesis
- Selection of External Evaluators by BASR
- Publication of at least one paper in an ISI indexed or an HEC recognized journal or an official acceptance of the paper
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Any other HEC requirement
- Final Dissertation/Thesis Submission to BASR

### Pre-Requisite Courses

The interview committee may prescribe certain pre-requisite courses.



## Course Structure

### Semester One

- EEM701 Methods and Issues in Advanced Qualitative Research
- EEM702 Methods and Issues in Advanced Quantitative Research

### Semester Two

- EEM703 Current Advancement and Trends in Environment and Energy Management
- EEM704 Independent Study in Environment and Renewable Energy Management

### Semester Three

Elective Courses (any two)

- EEM801 Advanced Environment Toxicology & Epidemiology
- EEM802 Advanced Pollution Control Technologies and Mitigation Options
- EEM803 Advances in Green Technology Mechanism
- EEM804 Disaster Risk Management and Mitigation Strategies
- EEM805 Trade and Environment
- EEM806 Sustainability and Conservation of Major Ecosystems

### Semester Four to Nine

- EEM921 Research Thesis
- EEM922 Research Thesis
- EEM923 Research Thesis

*It is mandatory for research students of MPhil and PhD programs to attend research proposal / thesis defense / multi-disciplinary research seminars in each semester. Students must dedicate Saturdays (12:00 to 2:00 PM) for this attendance.*





# COLLEGE OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

## **Vision Statement**

The College of Computer Science and Information System (CCSIS) is committed to emerge as one of the leading college, nationally and internationally, in computing and analytics by focusing on learning, research, technological innovation and enhancing value to society.

## **Mission Statement**

The mission of Computer Science and Information System (CCSIS) is to empower learners and aspirants with technological and analytical tools & techniques following the local and global teaching paradigms so that they could explore new spectrums within a competitive world of technology by innovating in research activities, which will enable their personal, professional, social and intellectual capabilities for economic wellbeing.

## BS COMPUTER SCIENCE (BS CS)

The graduates of this program would have the confidence and skills to design ICT solutions and become technology entrepreneurs. The graduates may also join careers as software engineers and may move on to become analysts, designers, and architects in software houses or be freelance solution providers. They may also go into management careers that require strong analytical skills.

The program emphasizes the need for overall development including exposure to an integrated series of courses in technology, methodology, social sciences, liberal arts, and management. Project-based software development along with research assignments are also emphasized. These courses seek to impart a broad and deep knowledge of the theory, design, and application of digital computers and information processing techniques. The curriculum has been designed to prepare students to serve the productive needs of Pakistan's software industry. It requires completion of 138 credit hours of coursework. Students are required to take 43 courses (including Final Year Project and relevant labs) & internship, approved by the Institute, in order to complete their degree requirements. Students must maintain a CGPA of 2.5 for the conferment of the degree.

Students from Pre Medical background requires to complete following two mathematics courses additionally:

MTH011 Basic College Mathematics

MTH012 Intermediate College Mathematics

### BS Computer Science students learn:

- To apply knowledge gained during the program effectively and efficiently in the software industry.
- To contribute, manage, and lead, computer science and software development teams.
- To actively pursue lifelong learning and innovation skills.
- To equip themselves with latest software tools and techniques.
- To groom so as to occupy senior technical and managerial positions.
- To successfully bring innovation in IT technology as a whole.

### Learning Outcomes for BS Computer Science Students include:

1. Successfully bring innovation in IT technology.
2. To analyze, identify computing requirements appropriate to solution.
3. Appreciate the challenges of IT industry with global changes.
4. An ability to apply knowledge of computing and mathematics in IT.
5. To design, implement, and evaluate a computer-based system.

### Major Requirements for students:

- a) Student from BS Software Engineering and BS Data Science requires to complete following:
- |                  |                 |
|------------------|-----------------|
| 1. CS Core       | 24 Credit Hours |
| 2. CS Elective   | 15 Credit Hours |
| 3. CS Supporting | 09 Credit Hours |
| Total            | 48 Credit Hours |
- b) Students from other Colleges or other Department within CCSIS requires to complete following:
- |                   |                 |
|-------------------|-----------------|
| 1. Computing Core | 39 Credit Hours |
| 2. CS Electives   | 15 Credit Hours |
| Total             | 54 Credit Hours |

### Minor Requirements for students:

- a) Student from BS Software Engineering and BS Data Science requires to complete following:
- |                |                 |
|----------------|-----------------|
| 1. CS Elective | 15 Credit Hours |
| Total          | 15 Credit Hours |

b) Students from other Colleges or other Department within CCSIS requires to complete following:

1. Programming Fundamentals	3+1
2. Object Oriented Programming	3+1
3. Data Structures and Algorithms	3+1
4. Operating Systems	3+1
Total	16 Credit Hours

#### Career Path:

- |  |                               |                                  |
|--|-------------------------------|----------------------------------|
| 1. Software Engineer                             | 2. Web/Software Developer     | 3. Computer Scientist            |
| 4. Computer Programmer                           | 5. Network Security Expert    | 6. Database Administrator        |
| 7. Computer Systems Analyst                      | 8. Computer Network Architect | 9. Information Security Analyst. |
| 10. Computer and Information Research Scientists |                               |                                  |

#### Prospective Employers:

- |                            |  |                                |
|----------------------------|--|--------------------------------|
| 1. Cyber Internet Services | 2. Internet Service Providers            | 3. Real Estate Sector          |
| 4. Banking Sectors         | 5. Hospital Sector                       | 6. Industrial Sector           |
| 7. Software Houses         | 8. Communication & Transportation Sector | 9. Government & Private Sector |

## Foundation Courses

### Social Sciences

SSC301 History of Ideas

### Economics

ECO104 Micro and Macroeconomics

### Language

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic \*2 = Introduction to French

\*4 = Introduction to German \*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic \*\*2 = Intermediate French

\*\*4 = Intermediate German \*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

### Computing (Core Courses)

CSC113 Programming Fundamentals

CSC113 Programming Fundamentals LAB

CSC213 Object Oriented Programming

CSC213 Object Oriented Programming LAB

CSC215 Data Structures & Algorithm

CSC215 Data Structures & Algorithm LAB

CSC217 Intro to Database Systems

CSC217 Intro to Database Systems LAB

CSC231 Discrete Structures

CSC313 Operating Systems

CSC313 Operating Systems LAB

CSC317 Intro to Software Engineering

CSC319 Computer Networks

CSC319 Computer Networks LAB

CSC419 Information Security

CSC491 Final Year Project (FYP) I

CSC492 Final Year Project (FYP) II

### Communication

COM107 Academic English

COM202 Business and Professional Speech

COM205 Persuasive & Analytical Writing for Business Comm.

### Management

MAN101 Principles of Management

### Natural Science

SSC202 Environmental Studies

### Physics

PHY111 Applied Physics

### Computer Science

CSC111 Intro to Info & Communication Technology

CSC111 Intro to Info & Communication Technology LAB

CSC219 Professional Practices

### Political Sciences

PSC301 Pakistan Studies

### Mathematics

MTH107 Calculus and Analytical Geometry

MTH204 Linear Algebra

### Statistics

STA203 Probability Theory and Statistics

### Religious Studies

REL101 Islamic Studies



## Computer Science (Elective Courses)

CSC371 Computer Graphics  
 CSC372 Human Computer Interaction  
 CSC373 Web Engineering  
 CSC374 Mobile Application Development  
 CSC471 Database Administration and Management  
 CSC472 Visual Programming  
 CSC473 Enterprise Systems  
 CSC474 Data Warehousing  
 CSC475 Big Data Analytics  
 CSC476 E-Commerce  
 CSC477 IT Infrastructure  
 CSC478 Digital Image Processing  
 CSC479 Digital Signal Processing  
 CSC481 Software Quality Assurance  
 CSC482 Formal Methods in Software Engineering  
 CSC483 Information Security Audit  
 CSC484 Network Security  
 CSC485 Cyber Security  
 CSC486 Wireless Network  
 CSC487 Neural Network  
 CSC488 Fuzzy Logic

## Computer Science (Compulsory Courses)

CSC115 Digital Logic & Design  
 CSC115 Digital Logic & Design LAB  
 CSC211 Computer Organization and Assembly Language  
 CSC211 Computer Organization and Assembly Language LAB  
 CSC311 Theory of Automata & Formal Language  
 CSC315 Design Analysis of Algorithms  
 CSC411 Compiler Construction  
 CSC413 Artificial Intelligence  
 CSC413 Artificial Intelligence LAB  
 CSC418 Parallel & Distributed Computing

## Computer Science (Supporting Courses)

CSC233 Multivariable Calculus  
 CSC331 Differential Equation  
 CSC333 Numerical Computing

## Course Structure

<b>Semester One</b> Intro to Info & Communication Technology (2+0) [Pre Req. NA] Intro to Info & Communication Technology (0+1) [Pre Req. NA] Programming Fundamentals (3+0) [Pre Req. NA] Programming Fundamentals LAB (0+1) [Pre Req. NA] Academic English Applied Physics (3+0) [Pre Req. NA] Micro & Macroeconomics (3+0) [Pre Req. NA] Islamic Studies (3+0) [Pre Req. NA]	<b>Semester Two</b> Object Oriented Programming (3+0) [Pre Req. CSC113] Object Oriented Programming LAB (0+1) [Pre Req. CSC113] Persuasive & Analytical Writing for Business Comm [Pre Req. COM107] Environmental Studies (3+0) [Pre Req. NA] History of Ideas (3+0) [Pre Req. NA] Professional Practices (3+0) [Pre Req. NA] Discrete Structure (3+0) [Pre Req. NA]
<b>Semester Three</b> Pakistan Studies (3+0) [Pre Req. NA] Digital Logic & Design (3+0) [Pre Req. PHY111] Digital Logic & Design LAB (0+01) [Pre Req. PHY111] Business and Professional Speech [Pre Req. COM205] Calculus & Analytical Geometry (3+0) [Pre Req. NA] Foreign Language I (3+0) [Pre Req. NA]	<b>Semester Four</b> Comp Organization & Assembly Lang (3+0) [Pre Req. NA] Comp. Organization & Assembly Lang LAB (0+1) [Pre Req. NA] Foreign Language II (3+0) [Pre Req. LAN10*] Multivariable Calculus (3+0) [Pre Req. MTH107] Probability Theory & Statistics (3+0) [Pre Req. NA] Principles of Management (3+0) [Pre Req. NA]
<b>Semester Five</b> Data Structures & Algorithms (3+0) [Pre Req. CSC213] Data Structures & Algorithms LAB (0+1) [Pre Req. CSC213] Intro to Database Systems (3+0) [Pre Req. CSC215] Intro to Database Systems LAB (0+1) [Pre Req. CSC215] Intro to Software Engineering (3+0) [Pre Req. NA] Theory of Automata & Formal Language (3+0) [Pre Req. CSC231] Linear Algebra (3+0) [Pre Req. MTH107]	<b>Semester Six</b> Operating Systems (3+0) [Pre Req. CSC215] Operating Systems LAB (0+1) [Pre Req. CSC215] Computer Networks (3+0) [Pre Req. NA] Computer Networks LAB (0+1) [Pre Req. NA] Design & Analysis of Algorithms (3+0) [Pre Req. CSC215] Compiler Constructions (3+0) [Pre Req. CSC311] Differential Equations (3+0) [Pre Req. CSC233]
<b>Semester Seven</b> Artificial Intelligence (3+0) [Pre Req. CSC231] Artificial Intelligence LAB (0+1) [Pre Req. CSC231] Numerical Computing (3+0) [Pre Req. MTH204] CS Elective 1 (3+0) [Pre Req. NA] CS Elective 2 (3+0) [Pre Req. NA] Final Year Project I (0+3) [Pre Req. CSC317]	<b>Semester Eight</b> Parallel & Distributed Computing (3+0) [Pre Req. CSC313] Information Security (3+0) [Pre Req. NA] CS Elective 3 (3+0) [Pre Req. NA] CS Elective 4 (3+0) [Pre Req. NA] CS Elective 5 (3+0) [Pre Req. NA] Final Year Project II (0+3) [Pre Req. CSC491]

## BS ACTUARIAL SCIENCE AND RISK MANAGEMENT

BS in the Actuarial Science and Risk Management equips graduates with mathematical and statistical skills and expertise of tools that help in assessing risk in insurance, finance and other relevant industries and professions.

A BS in the Actuarial Science and Risk Management program is intended to provide students with the tools of risk analysis, transfer and financing that are critical to the operation of private and public institutions, and to prepare them for careers in risk management and insurance. As a risk management major, a student will gain a broad business background with an emphasis on accounting, finance and law, as well as a thorough knowledge of all types of insurance. BS in Actuarial Science and Risk Management is a four-year degree program. It requires completion of 144 credit hours of course work and 2 credit hours of internship of at least six weeks in an organization approved by the Institute. Students graduating with a CGPA of 2.5 on the scale of 4 are eligible to apply for MBA program offered by the Institute.

### Required Courses

#### Accounting

ACC101 Introduction to Financial Accounting

#### Communication

COM107 Academic English

COM205 Persuasive & Analytical Writing for Bus. Com.

#### Economics

ECO101 Principles of Microeconomics

ECO102 Principles of Macroeconomics

ECO304 Introduction to Econometrics

#### Finance and Risk Management

FRM201 Principles of Risk Management

FRM202 Life and Other Contingencies

FRM204 Enterprise Risk Management

FRM206 Institutional Investments

FRM302 Computational Methods in Risk

FRM304 Risk Financing Techniques

FRM310 Project

#### Management

MAN101 Principles of Management

#### Marketing

MKT301 Principles of Marketing

MKT404 Methods in Business Research

#### Actuarial Science

ARM201 Introduction to Actuarial Science

ARM501 Stochastic Process/Modeling

ARM601 Models of Financial Economics-I

ARM602 Models of Financial Economics - II

#### Finance

FIN201 Introduction to Business Finance

FIN406 Financial Econometrics

FIN503 Corporate Finance

FIN507 Portfolio Management

FIN509 Financial Derivatives

#### Language

LAN 10\* Foreign Language I

\*1 = Introduction to Arabic

\*2 = Introduction to French

\*4 = Introduction to German

\*6 = Introduction to Italian

\*8 = Introduction to Chinese

#### LAW

LAW401 Business Law



### Mathematics

MTH104 Calculus I  
MTH105 Calculus II  
MTH204 Linear Algebra  
MTH209 Financial Mathematics I  
MTH210 Financial Mathematics II  
MTH211 Actuarial Mathematics  
MTH405 Numerical Analysis

### Political Sciences

PSC301 Pakistan Studies

### Religious Studies

REL101 Islamic Studies

### Statistics

STA203 Probability Theory and Statistics  
STA210 Sampling Theory  
STA302 Methods of Data Analysis  
STA305 Applied Regression Analysis  
STA309 Loss Models I

STA205 Probability Theory and Statistics II  
STA301 Model and Inferences  
STA303 Time Series Analysis and Forecasting  
STA307 Decision Theory  
STA310 Loss Models II

### Elective Courses

#### Finance and Risk Management

FRM503 Corporate Risk Management  
FRM505 Corporate Treasury and Risk Management  
FRM508 Financial Market Issues and Crisis  
FRM512 International Risk and Financial Reporting  
FRM514 Takaful and Risk Management in Islamic Products  
FRM517 Property Risk Management

FRM504 Theory of Risk and Insurance  
FRM506 Financial Regulation for Risk Management  
FRM510 Energy Risk Management  
FRM513 Project Risk Management  
FRM516 International Financial Reporting and Standards  
FRM518 Management of Insurance Institutions

### Computer Sciences

CSC103 Structured Programming Language

### Course Structure

<b>Semester One</b> Academic English (3+0) [Pre req NA] Principles of Microeconomics Probability Theory and Statistics Calculus I Islamic Studies Introduction to Actuarial Science	<b>Semester Two</b> Introduction to Financial Accounting Probability Theory and Statistics II Calculus II Principles of Macroeconomics Financial Mathematics I Foreign Language I	<b>Semester Three</b> Principles of Marketing Linear Algebra Model and Inferences Introduction to Business Finance Persuasive & Analytical Writing for Bus. Com. (3+0) [Pre Req. COM107] Financial Mathematics II
<b>Semester Four</b> Numerical Computing Business Law Introduction to Econometrics Principles of Management Pakistan Studies Method of Data Analysis	<b>Semester Five</b> Financial Derivatives Actuarial Mathematics Principles of Risk Management Stochastic Processes Financial Econometrics Corporate Finance	<b>Semester Six</b> Portfolio Management Life and Other Contingencies Enterprise Risk Management Sampling Theory Models in Financial Economics I Methods in Business Research
<b>Semester Seven</b> Institutional Investments Models in Financial Economics II Applied Regression Analysis Computational Methods in Risk Mgmt. Loss Models I Elective I	<b>Semester Eight</b> Decision Theory Loss Models II Risk Financing Techniques Time Series Analysis & Forecasting Project Elective II	

## BS MATHEMATICS AND ECONOMICS

BS (Mathematics & Economics) is an interdisciplinary undergraduate joint program of CCSIS and CESD, for students with robust mathematical skills and a keen interest in economics. This program is a perfect blend of pure and applied mathematics which does not only ensure a solid quantitative foundation for both disciplines but also provides phenomenal coverage of Statistics, Actuarial Sciences, and Finance.

Graduates with this degree are increasingly valued by employers because of their critical reasoning and sound knowledge as much of the economic theory is currently presented in terms of mathematical models. This opens more career options than the ones traditionally available to either mathematics or economics majors. This degree is also a paragon for those who aim for Master's/Doctoral degree in Economics, Finance, Mathematics, Statistics, Actuarial Sciences or other related fields.

The BS (Mathematics & Economics) is a four-year program. Applicants who have successfully completed H.Sc with minimum 50% marks in Pre-Engineering or in General Group (with Mathematics) or A-Levels with a maximum 2 'C's in three principal subjects (with Mathematics) are eligible to apply for admission. The graduation requirement is the completion of 138 credit hours of course work and 6 credit hours of a project approved by the college. Students must take a minimum load of 12 credit hours (four courses) or a maximum load of 18 credit hours (six courses) in a semester. In order to obtain a BS degree in four years, a student is required to cover twelve courses in a year. Full load of six courses can be taken each in the Fall and Spring semesters with an option of four courses in the latter and making up the shortfall in the summer session. Students must maintain a CGPA of 2.5 for the conferment of the degree.

### **BS Mathematics and Economics students learn to:**

- Develop mathematical thinking, evolving from a computational / procedural understanding of mathematics to a broad understanding that involves logical reasoning, generalization, inference and formal proof.
- Explore the fundamental aspects of economics, formulation and use of quantitative models arising in social science, business and other contexts.
- Acquire an understanding of basic pure mathematics, and of the role of logical argument in mathematics.
- Use basic econometric methods to quantify uncertainty with confidence intervals; use regression to infer causal relationships; and use regressions for prediction

### **Learning Outcomes for BS Mathematics & Economics Students include:**

1. An ability to communicate effectively with the educational and business community and with society at large about mathematical and economical principles, concepts, and solution to problems with precision and adherence in written, oral and graphical form about concrete questions and to prepare well-organized written arguments that clearly state assumptions/hypotheses supported by evidence.
2. An ability to optimally apply economic analysis to everyday economic problems in the real world. This shall allow them to understand current events and evaluate potential policy proposals. Moreover, an appreciation shall be developed to evaluate the role played by assumptions in situations that reach various conclusions to a specific economic or policy problem.
3. Be equipped with skills to apply optimization models to consumer, producer, and market theories and to use game theory to analyze the strategic behavior of individuals and firms.
4. Be equipped with the investigative skills necessary for conducting original economic research and participating effectively in project teams.

### **Eligibility Criteria**

The BS (Mathematics and Economics) is a four-year program. Applicants who have successfully completed HSc with minimum 50% marks in Pre-Engineering or in General Group (with Mathematics/Statistics/Computer Science) or A-Levels with a maximum 2 'C's in three principal subjects (with Mathematics/Statistics/Computer Science) are eligible to apply for admission.



## Required Courses

### Communication (3 courses, 9 credit hours)

COM107 Academic English  
COM205 Persuasive. & Analytical Writing for Business Comm.  
COM202 Business and Professional Speech

### Economics (10 courses, 36 credit hours)

ECO103 Microeconomics Analysis  
ECO105 Macroeconomics Analysis  
ECO107 Introduction to Micro and Macroeconomics  
ECO302 International Trade  
ECO303 Financial Economics  
ECO307 Monetary theory and Policy  
ECO410 Econometrics I  
ECO412 Econometrics II  
ECO507 Development Economics  
ECOXXX Elective I  
ECOXXX Elective II

### General Education (1 course, 3 credit hours)

SSC301 History of Ideas<sup>1</sup>  
LAN 10\* Foreign Language I

\*1 = Introduction to Arabic      \*2 = Introduction to French  
\*4 = Introduction to German      \*6 = Introduction to Italian  
\*8 = Introduction to Chinese

<sup>1</sup> or any subject from pool of General Education

### Political Sciences (1 course, 3 credit hours)

PSC301 Pakistan Studies

### Mathematics (16 courses, 48 credit hours)

MTH104 Calculus I  
MTH105 Calculus II  
MTH203 Introduction to Formal Mathematics  
MTH204 Linear Algebra  
MTH224 Multivariable Calculus  
MTH303 Real Analysis I  
MTH304 Real Analysis II  
MTH344 Ordinary Differential Equations  
MTH346 Partial Differential Equations  
MTH350 Topics in Mathematical Economics  
MTH403 Numerical Analysis  
MTH427 Topology  
MTH401 Complex Analysis  
MTH433 Optimization Techniques  
MTHXXX Elective I  
MTHXXX Elective II

### Programming (3 courses, 12 credit hours)

CSC113 Programming Fundamentals  
CSC213 Object Oriented Programming  
CSC215 Data Structure and Algorithms

### Religious Studies (1 course, 3 credit hours)

REL101 Islamic Studies

### Statistics (5 courses, 15 credit hours)

STA203 Probability Theory and Statistics  
STA301 Model and Inference  
STA302 Methods of Data Analysis  
STA303 Time Series Analysis  
STA305 Applied Regression Analysis

## Elective Courses

### Mathematics (courses 10, credit hours 6)

MTH406 Finite Element Analysis  
MTH411 Modelling and Simulation  
MTH421 Abstract Algebra  
MTH430 Operational Research  
MTH437 Functional Analysis  
MTH439 Introduction to Dynamical Systems  
MTH451 Number Theory  
MTH456 Statistical Machine Learning  
MTH457 Deep Learning  
MTH214 Game Theory

### Economics (15 courses, credit hours 6)

ECO314 Contemporary Issues in Macroeconomics  
ECO402 Pakistan Economic Policy  
ECO414 Islamic Economics  
ECO416 Growth Theories  
ECO301 Managerial Economics  
ECO418 Resource & Environmental Economics  
ECO526 Energy Economics  
ECO442 Public Finance  
ECO444 Economics of Logistics  
ECO415 WTO, Disputes and Settlements  
ECO419 Agriculture and Food Security  
ECO407 Analysis of Pakistani Industries  
ECO321 General Equilibrium and Welfare Economics  
ECO527 History of Economics Idea  
ECO528 Economics and Social Equilibrium



**Natural Science Courses Pool (Courses 03, Credit Hours 06)**

NSC301 Everyday Science  
 PHY111 Applied Physics  
 NSC302 Environmental studies

**General Education (Courses 04, Credit Hours 06)**

SSCXXX Introduction to Philosophy  
 SSCXXX Video Production (ELE625 / ECE626 Image and Video Processing)  
 SSCXXX Teaching of Mathematics  
 SSC310 History of Economic Thought

**Course Structure**

<b>Semester One (19 Credit Hours)</b> Islamic studies (3+0) [Pre req NA] Academic English (3+0) [Pre req NA] Natural science I (3+0) I [Pre req NA] Introduction to Micro & Macroeconomics(3+0) [Pre req NA] Calculus I (3+0) [Pre req NA] Programming Fundamentals (3+1)[Pre req NA]	<b>Semester Two (19 Credit Hours)</b> Topics in Mathematical Economics (3+0) [Pre req ECO101 & MTH104] Persuasive. & Analytical Writing for Business Communication (3+0) [COM107] Foreign Language I (3+0) I [Pre req NA] Calculus II (3+0) [Pre req MTH104] Probability theory & Statistics (3+0) [Pre req MTH104] Object Oriented Programming (3+1) [Pre req CSS113]
<b>Semester Three (19 Credit Hours)</b> Microeconomic Analysis (3+0) [Pre req ECO101] Multivariable Calculus (3+0) [Pre req MTH105] Model and inference (3+0) [Pre req STA203] Introduction to Formal Mathematics (3+0) [Pre req NA] Business and Professional Speech (3+0) [Pre req COM202] Data Structure and Algorithms (3+1) [Pre Req CSC213]	<b>Semester Four (18 Credit Hours)</b> Macroeconomics Analysis (3+0) [Pre req ECO102] Real Analysis I (3+0) [Pre req MTH203] Methods of Data Analysis (3+0) [Prereq STA301] Linear Algebra (3+0) ([Pre req NA] Development Economics (3+0) [Pre req ECO103 & ECO105] Natural sciences II(3+0) ([Pre req NA]
<b>Semester Five (18 Credit Hours)</b> Pakistan Studies (3+0) [Pre req NA] International Trade (3+0) [Pre req ECO103 & ECO105] Real Analysis II (3+0) [Pre req MTH301] Applied Regression Analysis (3+0) [Pre req STA302] Ordinary Differential Equations (3+0) [Pre req MTH224] General Education I(3+0) ([Pre req NA]	<b>Semester Six (18 Credit Hours)</b> Numerical Analysis (3+0) [Pre req MTH105, MTH204 & MTH344] Complex Analysis (3+0) [Pre req MTH303 & MTH304] Econometrics I (3+0) [Pre req STA301] Financial Economics (3+0) [Pre req ECO102] Partial Differential Equations (3+0) [Pre req MTH 344] Monetary theory & Policy (3+0) [Pre req ECO105]
<b>Semester Seven (15 Credit Hours)</b> Econometrics II (3+0) [Pre req ECO410] Topology (3+0) Economics Elective I (3+0) Mathematics Elective I (3+0) Final Year Project I (0+3)	<b>Semester Eight (15 Credit Hours)</b> Time Series Analysis (3+0) [Pre req STA305] Optimization Techniques (3+0) Economics Elective II (3+0) Mathematics Elective II (3+0) Final Year Project II (0+3)

## BS DATA SCIENCE

BS (Data Science) focuses on statistical analysis and theoretical computer science to develop solutions that employ robust mathematical models. These models help AI (Artificial Intelligence) and other predictive tools for data mining and reaching closer to the solution.

This program has a dual emphasis on the basic principles of statistics and computer science, with foundational training in statistical and mathematical aspects of data analysis. This program is, additionally, based on broad computer science principles, including algorithms, data structures, data management, and machine learning. The program is suitable for students interested either in a career in industry or more specialized graduate study. This program will prepare students for a career in data analysis, combining foundational statistical concepts with computational principles from computer science. A major component of this degree is the final year two-semester project that teaches students how to apply statistical and computational principles for solving large-scale, real-world data analysis problems. BS (Data Science) is a four-year degree program. It requires completion of 144 credit hours of coursework and compulsory internship of at least six weeks at an organization approved by the Institute.

Students from Pre Medical background requires to complete following two mathematics courses additionally:

MTH011 Basic College Mathematics

MTH012 Intermediate College Mathematics

### Data Science students learn to:

- Define information needs of individuals and organizations;
- Select and transform data to increase usefulness for solving particular problems;
- Analyze and synthesize unstructured data to create actionable information;
- Create information visualizations for data exploration and presentation;
- Manage very large volume data sources from acquisition through disposal;
- Secure and preserve data in ways consistent with legal and organizational considerations.

### Learning Outcomes for Data Science students include:

1. Knowledge of how to apply analytic techniques and algorithms (including statistical and data mining approaches) to large data sets to extract meaningful insights.
2. Acquisition of hands-on experience with relevant software tools, languages, data models, and environments for data processing and data visualization.
3. Ability to communicate results of analysis effectively (visually and verbally) to a broad audience.

### Career Path

- |                   |                              |
|-------------------|------------------------------|
| 1. Data Architect | 2. Infrastructure Architect  |
| 3. Data Scientist | 4. Data Analyst              |
| 5. Data Engineer  | 6. Machine Learning Engineer |

### Prospective Firms/Companies

- |  |                                |
|--|--------------------------------|
| 1. Real Estate Industry                    | 2. Hospital Industry           |
| 3. Social Media Data Analytics Firms       | 4. Food and Supply Industry    |
| 5. Banking Sector                          | 6. Airline Industry            |
| 7. Communication & Transportation Industry | 8. Government & Private Sector |

## General Education Courses

### Communication

COM107 Academic English  
COM202 Business and Professional Speech  
COM205 Persuasive & Analytical Writing for Bus. Comm

### Information Technology

CSC111 Information and Communication Technology  
CSC111 Information and Communication Technology LAB  
CSC219 Professional Practices

### Religious Studies

REL101 Islamic Studies

### Political Sciences

PSC301 Pakistan Studies

## University Elective Courses

### Social Sciences

SSC301 History of Ideas

### Economics

ECO104 Micro and Macroeconomics

### Natural Sciences

PHY111 Applied Physics  
SSC202 Environmental Studies

### Language

LAN 10\* Foreign Language I  
LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic      \*2 = Introduction to French  
\*4 = Introduction to German      \*6 = Introduction to Italian  
\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic      \*\*2 = Intermediate French  
\*\*4 = Intermediate German      \*\*6 = Intermediate Italian  
\*\*8 = Intermediate Chinese

## Foundation Courses

### Mathematics & Statistics

MTH107 Calculus & Analytical Geometry  
MTH204 Linear Algebra  
MTH215 Differential Equations  
STA203 Probability Theory and Statistics I

## Computing (Core Courses)

CSC113 Programming Fundamentals  
CSL113 Programming Fundamentals LAB  
CSC213 Object Oriented Programming  
CSL213 Object Oriented Programming LAB  
CSC215 Data Structures & Algorithms  
CSL215 Data Structures & Algorithms LAB  
CSC217 Intro to Database Systems  
CSL217 Intro to Database Systems LAB  
CSC231 Discrete Structures  
CSC313 Operating Systems  
CSL313 Operating Systems LAB  
CSC317 Intro to Software Engineering  
CSC319 Computer Networks  
CSL319 Computer Networks LAB  
CSC419 Information Security  
BDS491 Final Year Project I  
BDS492 Final Year Project II

## Computer Science (Core Courses)

CSC115 Digital Logic & Design  
CSC115 Digital Logic & Design LAB  
CSC211 Computer Organization and Assembly Language  
CSL211 Computer Organization & Assembly Language LAB  
CSC315 Design Analysis of Algorithms  
CSC413 Artificial Intelligence  
CSL413 Artificial Intelligence LAB  
CSC418 Parallel & Distributed Computing

## Data Science (Core Courses)

STA205 Probability Theory & Statistics II  
BDS101 Introduction to Data Science  
BDS301 Data Mining  
BDS401 Data Visualization  
BDS403 Big Data & Analytics  
BDSxxx Data Warehousing & Business Intelligence  
STA301 Model & Inference  
STA302 Methods of Data Analysis



## Elective Courses

### Data Science

BDS410	Stochastic Processes	BDS404	Machine Learning
CSC311	Theory of Automata & Formal Languages	BDS201	Business Process Analysis
BDS402	Big Data & Concepts	BDS411	Time Series Analysis & Forecasting
BDS418	Health Informatics	BDS413	Bioinformatics
BDS414	Game Theory	BDS415	Financial Data Analytics
BDS421	Deep Learning	BDS417	Artificial Neural Networks
BDS422	Platform & Architecture for Data Science	BDS423	Privacy Preservation
BDS424	Speech Processing	BDS425	Text Mining
ECO304	Introduction to Econometrics	BDS429	Topics in Data Science

## Course Structure

<b>Semester One (19 Credit Hours)</b> Programming Fundamentals (3+0) [Pre Req. NA] Programming Fundamentals LAB (0+1) [Pre Req. NA] Applied Physics (3+0) [Pre Req. NA] Information and Comm. Tech. (2+0) [Pre Req. NA] Information and Comm. Tech. LAB (0+1) [Pre Req. NA] Academic English (3+0) [Pre Req. NA] Micro & Macroeconomics (3+0) [Pre Req. NA] Islamic Studies (3+0) [Pre Req. NA]	<b>Semester Two (19 Credit Hours)</b> Environmental Studies (3+0) [Pre Req. NA] Object Oriented Programming (3+0) [Pre Req. CSC113] Object Oriented Programming LAB (0+1) [Pre Req. CSC113] History of Ideas (3+0) [Pre Req. NA] Discrete Structures (3+0) [Pre Req. NA] Persuasive & Analytical Writing for Bus. Comm. (3+0) [Pre Req. COM107] Professional Practices (3+0) [Pre Req. NA]
<b>Semester Three (19 Credit Hours)</b> Pakistan Studies (3+0) [Pre Req. NA] Calculus & Analytical Geometry (3+0) [Pre Req. NA] Probability Theory & Statistics I (3+0) [Pre Req. NA] Digital Logic & Design (3+0) [Pre Req. PHY111] Digital Logic & Design LAB (0+1) [Pre Req. PHY111] Business & Professional Speech (3+0) [Pre Req. COM107] Foreign Language I (3+0) [Pre Req. NA]	<b>Semester Four (16 Credit Hours)</b> Differential Equations (3+0) [Pre Req. MTH224] Comp. Organization & Assembly Lang. (3+0) [Pre Req. NA] Comp. Organization & Assembly Lang. LAB (0+1) [Pre Req. NA] Probability Theory & Statistics II (3+0) [Pre Req. STA203] Introduction to Data Science (2+0) [Pre Req. NA] Introduction to Data Science LAB (0+1) [Pre Req. NA] Foreign Language II (3+0) [Pre Req. LAN10*]
<b>Semester Five (17 Credit Hours)</b> Model & Inferences (3+0) [Pre Req. MTH205] Computer Networks (3+0) [Pre Req. NA] Computer Networks LAB (0+1) [Pre Req. NA] Linear Algebra (3+0) [Pre Req. MTH107] Data Structures & Algorithms (3+0) [Pre Req. CSC213] Data Structures & Algorithms LAB (0+1) [Pre Req. CSC213] Intro. to Software Engineering (3+0) [Pre Req. NA]	<b>Semester Six (17 Credit Hours)</b> Intro. to Database Systems (3+0) [Pre Req. CSC215] Intro. to Database Systems LAB (0+1) [Pre Req. CSC215] Methods of Data Analysis (3+0) [Pre Req. BDS301] Data Visualization (3+0) [Pre Req. BDS301] Operating Systems (3+0) [Pre Req. CSC215] Operating Systems LAB (0+1) [Pre Req. CSC215] Design & Analysis of Algorithms (3+0) [Pre Req. CSC215]
<b>Semester Seven (19 Credit Hours)</b> Artificial Intelligence (3+0) [Pre Req. CSC231] Artificial Intelligence LAB (0+1) [Pre Req. CSC231] Big Data & Analytics (3+0) [Pre Req. NA] Data Mining (3+0) [Pre Req. NA] Elective I (3+0) [Pre Req. NA] Elective II (3+0) [Pre Req. NA] Final Year Project I (0+3) [Pre Req. NA]	<b>Semester Eight (18 Credit Hours)</b> Data Warehousing & Bus. Intelligence (2+0) [Pre Req. NA] Data Warehousing & Bus. Intelligence LAB (0+1) [Pre Req. NA] Information Security (3+0) [Pre Req. NA] Parallel & Distributed Computing (3+0) [Pre Req. CSC313] Elective III (3+0) [Pre Req. NA] Elective IV (3+0) [Pre Req. NA] Final Year Project II (0+3) [Pre Req. NA]

## BS MATHEMATICS AND COMPUTATIONAL FINANCE

The BS in Mathematics and Computational Finance is an applied Mathematics program with a well-developed application in Finance structured for the students who might be interested in Mathematics and desired for a career in Business. BS Mathematics and Computational Finance program offers a comprehensive variety of modules across mathematics, statistics, finance, and programming. The program will empower the student to cultivate expertise in creative problem-solving and logical reasoning, to analyze market forces, minimize risk and maximize profitability, which are in great demand in a wide range of career sectors.

BS in Mathematics and Computational Finance will be a 4-year degree program with two semesters in each year. It will require the completion of 138 credit hours of course work, 6 credit hours of the project approved by the college and compulsory computational finance internship of at least 6 weeks in an approved firm. Students must take a minimum load of 12 credit hours (four courses) or a maximum load of 18 credit hours (six courses) in a semester. In order to obtain a BS degree in four years, a student is required to cover twelve courses in a year. Full load of six courses can be taken each in the Fall and Spring semesters with an option of four courses in the latter and making up the shortfall in the summer session. Students must maintain a CGPA of 2.5 for the conferment of the degree.

### BS Mathematics and Computational Finance students learn to:

- Learn the computational and modelling techniques used to price tradable assets such as bonds, securities, loans, energy and associated derivatives.
- Learn to generate, model, value, hedge and trade ingenious financial products.
- Acquire an analytical and strategic judgement for controlling the risk connected with complex financial transactions
- Be equipped with the engineering-driven approaches widely used to construct and deploy the financial transactions and processes that, in their context, function as the international financial system and capital markets.
- Be provided with the educational background to pursue increasingly responsible management roles in industry.
- Be prepared to enter leadership positions in the financial industry and government where they will use their quantitative skills and creativity to provide innovative solutions and develop new or improved products and services.

### Learning Outcomes for Business Analytics Students include:

1. Ability to apply knowledge of mathematics and mathematical methods to the pricing and hedging of financial derivative securities.
2. An ability to use empirical evidence to assess the validity of mathematical and financial argument. This shall involve the use of financial data and mathematical methodology, ability to interpret results and conduct appropriate mathematical analysis.
3. Ability to work effectively, both independently and as part of an interdisciplinary group.
4. A recognition of the need for and an ability to engage in lifelong learning.

### Eligibility Criteria

The BS (Mathematics and Computational Finance) is a four-year program. Applicants who have successfully completed HSc with minimum 50% marks in Pre-Engineering or in General Group (with Mathematics) or A-Levels with a maximum 2 'C's in three principal subjects (with Mathematics) are eligible to apply for admission.

### Required Courses

#### Communication

COM107 Academic English (3+0)  
COM202 Business and Professional Speech (3+0)  
COM205 Persuasive & Analytical Writing for Business Comm.

#### Economics

ECO101 Principles of Microeconomics (3+0)  
ECO102 Principles of Macroeconomics (3+0)



### Finance

FIN201	Introduction to Business Finance (3+0)
FIN202	Financial Management (3+0)
FIN503	Corporate Finance (3+0)
FIN509	Financial Derivatives (3+0)
FIN613	Financial Modeling (3+0)
FIN***	FinTech (3+0)
FIN***	Finance Elective I (3+0)
FIN***	Finance Elective II (3+0)

### Language

LAN10\* Foreign Language I

\*1 = Introduction to Arabic      \*2 = Introduction to French

\*4 = Introduction to German      \*6 = Introduction to Italian

\*8 = Introduction to Chinese

### Religious Studies

REL101 Islamic Studies

### Political Sciences

PSC301 Pakistan Studies

### Statistics

STA203	Probability Theory and Statistics (3+0)
STA207	Qualitative Data Analysis (3+0)
STA301	Model and Inference (3+0)
STA304	Quantitative Data Analysis (1+2)
STA306	Applied Econometrics (2+1)

### Social Sciences

SSC301 History of Ideas<sup>1</sup>

<sup>1</sup> OR any subject from pool of General Education

### Internship

Internship related to Financial Mathematics

### Mathematics

MTH102	Calculus I (3+0)
MTH106	Calculus II (3+0)
MTH204	Linear Algebra (3+0)
MTH224	Multivariable Calculus (3+0)
MTH203	Introduction to Formal Mathematics (3+0)
MTH303	Real Analysis I (3+0)
MTH304	Real Analysis II (3+0)
MTH309	Stochastic Processes (3+0)
MTH344	Differential Equations (3+0)
MTH346	Partial Differential Equations (3+0)
MTH403	Numerical Analysis (3+0)
MTH310	Discrete Time Finance (3+0)
MTH410	Continuous Time Finance (3+0)
MTH***	Mathematics Elective I (3+0)
MTH***	Mathematics Elective II (3+0)
MTH***	Mathematics Elective III (3+0)

### Finance and Risk Management

FRM201	Principles of Risk Management (3+0)
FRM401	Advance Financial Risk Management (3+0)

### Programming

CSC113	Programming Fundamentals
CSC213	Object Oriented Programming
CSC215	Data Structure and Algorithms

### Natural Science Courses Pool

NSC301	Everyday Science
PHY111	Applied Physics
NSC302	Environmental studies

### Project

Computational Finance Project I	(0+3)
Computational Finance Project II	(0+3)

## Elective Courses

### Mathematics

MTH430	Operations Research (3+0)
MTH439	Introduction to Dynamical Systems
MTH437	Functional Analysis
MTH406	Finite Element Methods
MTH456	Statistical Machine Learning
MTH457	Deep Learning
MTH440	Advanced Methods for Data Analysis
MTH452	Convex and Non-Linear Analysis
MTH451	Number Theory

### Finance

FIN403	Islamic Banking and Finance
FIN506	Investment Banking and Security Analysis
FIN507	Portfolio Management
FIN511	Analysis of Financial Statement
FIN512	Money and Capital Market
FIN515	Foreign Trade and Banking

## Course Structure

<b>Semester One (19 Credit Hours)</b> Islamic studies (3+0) [Pre req NA] Academic English (3+0) [Pre req NA] Principles of Microeconomics (3+0) [Pre req NA] Calculus I (3+0) [Pre req NA] Natural Science I (3+0) [Pre req NA] Programming Fundamentals (3+1) [Pre req NA]	<b>Semester Two (19 Credit Hours)</b> Probability Theory and Statistics (3+0) [Pre req MTH102] Persuasive & Analytical Writing for Business Communication (3+0) [Pre req COM107] Principles of Macroeconomics (3+0) [Pre req NA] Calculus II (3+0) [Pre req MTH102] Natural Science II (3+0) [Pre req NA] Object Oriented Programming (3+1) [Pre req CSS113]
<b>Semester Three (19 Credit Hours)</b> Introduction to Business Finance (3+0) [Pre req ACC201] Introduction to Formal Mathematics (3+0) [Pre req NA] Model and Inference (3+0) [Pre req STA203] Multivariable Calculus (3+0) [Pre req MTH106] Business and Professional Speech (3+0) [Pre req COM107] Data Structure and Algorithms (3+1) [Pre Req CSC213]	<b>Semester Four (18 Credit Hours)</b> Financial Management (3+0) [Pre req MCF201] Real Analysis I (3+0) [Pre req MTH203] Qualitative Data Analysis (3+0) [Pre req STA301] Linear Algebra (3+0) [Pre req NA] Foreign Language I (3+0) [Pre req NA] Pakistan Studies (3+0) [Pre req NA]
<b>Semester Five (18 Credit Hours)</b> Principal of Risk Management (3+0) Real Analysis II (3+0) [Pre req MTH301] Quantitative Data Analysis (1+2) [Pre req STA301] Applied Econometrics (2+1) [Pre req STA301] Introduction to Differential Equations (3+0) [Pre req MTH224] Financial Modeling (3+0) [Pre req MCF202]	<b>Semester Six (18 Credit Hours)</b> Numerical Analysis (3+0) [Pre req MTH105, MTH204 & MTH344] Probability and Measure Theory (3+0) [Pre req MTH304] Stochastic Process (3+0) [Pre req 304] Corporate Finance (3+0) [Pre req MCF202] Partial Differential Equations (3+0) [Pre req MTH344] Financial Derivatives (3+0) [Pre req MCF202]
<b>Semester Seven (18 Credit Hours)</b> Advance Financial Risk Management (3+0) [Pre req FRM201] Discrete Time Finance (3+0) [Pre req STA309] Finance Elective I (3+0) Mathematics Elective I (3+0) Mathematics Elective II (3+0) Computational Finance Project I (0+3)	<b>Semester Eight (15 Credit Hours)</b> Fintech (3+0) [Pre req MCF201 & MCF202] Continuous Time Finance (3+0) [Pre req MTH310] Finance Elective II (3+0) Mathematics Elective III (3+0) Computational Finance Project II (0+3)

## BS SOFTWARE ENGINEERING (BS SE)

This program is devised to gear students in acquiring skills to undertake the issues of designing and developing reliable software with a clear understanding of problem-solving techniques, software quality, software testing, and management practices.

The graduates of this program would have the confidence and skills to become technology entrepreneurs. They may also join careers as software engineers and may move on to become analysts, designers, and architects in software houses or freelance solution providers. The program is designed to satisfy general requirements and meets the criteria adopted by the Higher Education Commission (HEC) of Pakistan. The aim is to prepare students to serve the productive needs of Pakistan's software industry. It requires completion of 138 credit hours of coursework. Students are required to take 43 courses (including Final Year Project and relevant labs) & internship, approved by the institute, in order to complete their degree requirements. Students must maintain a CGPA of 2.5 for the conferment of the degree.

Students from Pre-Medical background requires to complete following two mathematics courses additionally:

MTH011 Basic College Mathematics

MTH012 Intermediate College Mathematics

### BS Software Engineering students learn:

- To enable the graduates to apply knowledge gained during the program effectively and efficiently in software industry
- To contribute, manage and lead, computer science and software development teams
- To actively pursue lifelong learning and innovation skills
- To equip graduates with latest software tools and techniques
- To groom graduates to occupy senior technical and managerial positions
- To successfully bring innovation in IT technology as a whole

### Learning Outcomes for BS Software Engineering Students include:

1. Equip themselves with latest software tools
2. Successfully bring innovation in it technology
3. An ability to function effectively on teams to accomplish a common goal
4. An understanding of professional, legal, security and social issues of it
5. An ability to communicate effectively with a range of audiences
6. An ability to develop software systems of varying complexity
7. Will develop logical thinking process

### Major Requirements for students:

- a) Student from BS Computer Science and BS Data Science requires to complete following:
- |                  |                 |
|------------------|-----------------|
| 1. SE Core       | 24 Credit Hours |
| 2. SE Elective   | 15 Credit Hours |
| 3. SE Supporting | 09 Credit Hours |
| Total            | 48 Credit Hours |
- b) Students from other Colleges or other Department within CCSIS requires to complete following:
- |                   |                 |
|-------------------|-----------------|
| 1. Computing Core | 39 Credit Hours |
| 2. SE Electives   | 15 Credit Hours |
| Total             | 54 Credit Hours |

### Minor Requirements for students:

Student from BS Software Engineering and BS Data Science requires to complete following:

- |                |                 |
|----------------|-----------------|
| 1. SE Elective | 15 Credit Hours |
| Total          | 15 Credit Hours |



### Career Path:

- |                        |                                   |                                  |
|------------------------|-----------------------------------|----------------------------------|
| 1. Web Developer       | 2. Software Engineer              | 3. Software Developer            |
| 4. Front End Developer | 5. Entry Level Software Developer | 6. Entry Level Software Engineer |
| 7. SQL Developer       | 8. Entry Level Web Developer      | 9. Data Engineer                 |
| 10. Unity Developer    |                                   |                                  |

### Prospective Employers:

- |                            |                               |                                |
|----------------------------|-------------------------------|--------------------------------|
| 1. Cyber Internet Services | 2. Internet Service Providers | 3. Banking Sector              |
| 4. Real Estate Industry    | 5. Hospital Industry          | 6. Software Houses             |
| 7. Communication Industry  | 8. Transportation Sector      | 9. Governemnt & Private Sector |

### Eligibility Criteria

The BS (Software Engineering) is a four-year program. Applicants who have successfully completed HSc with minimum 50% marks in Pre-Engineering or in General Group (with Mathematics/Computer Science) or A-Levels with a maximum 2 'C's in three principal subjects (with Mathematics/Computer Science) are eligible to apply for admission.

### General Education Courses

#### Communication

COM107 Academic English  
COM202 Business and Professional Speech  
COM205 Persuasive & Analytical Writing for Business Comm.

#### Social Sciences

CSC219 Professional Practices

#### Information Technology

CSC111 Information & Communication Technology  
CSC111 Information & Communication Technology LAB

#### Religious Studies

REL101 Islamic Studies

#### Political Sciences

PSC301 Pakistan Studies

### University Elective Courses

#### Arts & Humanities

SSC301 History of Ideas  
MAN101 Principles of Management  
MMM388 Introduction to video Productions

#### Social Sciences

ECO104 Micro and Macroeconomics

#### Natural Sciences

SSC202 Environmental Studies

### Language

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic \*2 = Introduction to French

\*4 = Introduction to German \*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic

\*\*2 = Intermediate French

\*\*4 = Intermediate German

\*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

### Foundation Courses

#### Mathematics & Science Foundation Courses

MTH107 Calculus & Analytical Geometry  
MTH204 Linear Algebra  
PHY111 Applied Physics  
STA203 Probability Theory and Statistics

#### Computing (Core Courses)

CSC113 Programming Fundamentals  
CSC113 Programming Fundamentals LAB  
CSC213 Object Oriented Programming  
CSC213 Object Oriented Programming LAB  
CSC215 Data Structures & Algorithms  
CSC215 Data Structures & Algorithms LAB  
CSC217 Intro to Database Systems  
CSC217 Intro to Database Systems LAB  
CSC231 Discrete Structures  
CSC313 Operating Systems  
CSC313 Operating Systems LAB  
CSC317 Intro to Software Engineering  
CSC319 Computer Networks  
CSC319 Computer Networks LAB  
CSC419 Information Security  
BSE491 Final Year Project I  
BSE492 Final Year Project II



### Software Engineering Supporting Courses (any three)

SEC351	Business Process Engineering
SEC352	Formal Methods in Software Engineering
SEC354	Operations Research
SEC355	Simulation and Modelling
SEC353	Stochastic Processes

### Software Engineering Core Courses

SEC212	Human Computer Interaction
SEC311	Software Construction and Development
SEC211	Software Design & Architecture
SEC323	Software Project Management
SEC321	Software Quality Engineering
SEC411	Software Re-Engineering
SEC111	Software Requirements Engineering
SEC322	Web Engineering

### Elective Courses

SEC461	Computer Graphics
SEC462	Visual Programming
SEC463	E-Commerce
SEC464	Systems Programming
SEC465	Game Application Development
SEC466	Mobile Application Development
SEC471	Agent Based Software Engineering
SEC472	Semantic Web
SEC473	Natural Language Processing
SEC474	Real-Time Systems
SEC481	Cloud Computing
SEC482	Big Data Analytics
SEC483	Multimedia Communication
SEC491	Management Information Systems
SEC492	Data Encryption and Security
SEC493	Information Systems Audit
SEC494	Global Software Development
SEC495	Software Engineering Economics
SEC496	Software Metrics
SEC499	Topics in Software Engineering
MAN411	Project Management

### Course Structure

<b>Semester One</b> Intro to Info. & Comm. Technology (2+0) [Pre Req. NA] Intro to Info. & Comm. Technology LAB (0+1) [Pre Req. NA] Programming Fundamentals (3+0) [Pre Req. NA] Programming Fundamentals LAB (0+1) [Pre Req. NA] Micro and Macroeconomics (3+0) [Pre Req. NA] Academic English (3+0) [Pre Req. NA] Applied Physics (3+0) [Pre Req. NA] Islamic Studies (3+0) [Pre Req. NA]	<b>Semester Two</b> Object Oriented Programming (3+0) [Pre Req. CSC113] Object Oriented Programming LAB (0+1) [Pre Req. CSC113] Discrete Structure (3+0) [Pre Req. NA] Environmental Studies (3+0)[Pre Req. NA] History of Ideas (3+0)[Pre Req. NA] Persuasive & Analytical Writing for Bus. Comm. (3+0) [Pre Req. COM107]
<b>Semester Three</b> Data Structures and Algorithms (3+0) [Pre Req. CSC213] Data Structures and Algorithms LAB (0+1) [Pre Req. CSC213] Pakistan Studies (3+0) [Pre Req. NA] Business and Professional Speech (3+0) [Pre Req. COM 107] Foreign Language I (3+0) [Pre Req. NA] Calculus and Analytical Geometry (3+0) [Pre Req. NA]	<b>Semester Four</b> Intro. to Database Systems (3+0) [Pre. Req. CSC215] Intro. to Database Systems LAB (0+1) [Pre. Req. CSC215] Foreign Language II (3+0) [Pre Req. LAN 10] Intro to Software Engineering (3+0) [Pre Req. NA] Probability Theory and Statistics (3+0) [Pre Req. NA] Principles of Management (3+0) [Pre. Req. NA]
<b>Semester Five</b> Web Engineering (3+0) [Pre Req. NA] Software Requirements Engineering (3+0) [Pre Req. CSC317] SE Supporting I (3+0) [Pre Req. NA] SE Supporting II (3+0) [Pre Req. NA] Linear Algebra (3+0) [Pre. Req. MTH107]	<b>Semester Six</b> Software Design and Architecture(3+0) [Pre Req. NA] Software Construction and development(3+0) [Pre Req. NA] Operating Systems (3+0) [Pre Req. NA] Operating Systems LAB (0+1) [Pre Req. NA] Computer Networks (3+0) [Pre Req. NA] Computer Networks LAB (0+1) [Pre Req. NA] SE Supporting III (3+0) [Pre Req. NA]
<b>Semester Seven</b> Software Project Management(3+0) [Pre Req. NA] Software Re-Engineering (3+0) [Pre Req. NA] SE Elective I (3+0) [Pre Req. NA] SE Elective II (3+0) [Pre Req. NA] Human Computer Interaction (3+0) [Pre Req. NA] FYP I (0+3) [Pre Req. NA]	<b>Semester Eight</b> Software Quality Engineering (3+0)[Pre Req. NA] Information Security (3+0) [Pre Req. NA] SE Elective III (3+0) [Pre Req. NA] SE Elective IV (3+0) [Pre Req. NA] SE Elective V (3+0) [Pre Req. NA] FYP II (0+3) [Pre Req. NA]

## BS STATISTICS & BUSINESS ANALYTICS

BS (Statistics and Business Analytics) is designed to give you substantial hands-on digital skills, teaching you statistical theory and data analysis techniques with the perspective of business analytics. You will learn how to use these skills to solve business problems, applying them to specific areas in marketing, finance, and economics. In addition, you will learn international and sustainable business management from both theoretical and experiential viewpoints. The latest developments in Business Analytics' technology are playing a crucial role in automating the analysis process. It is also enabling both data analysis experts and business users to interpret data more easily and quickly. Business analytics are key differentiators, which provide a competitive edge to companies across industries.

BS (Statistics and Business Analytics) is a four-year degree program. It requires completion of 141 credit hours of course work, 6 credit hours of the project approved by the college and compulsory internship of at least six weeks in an organization approved by the Institute. A major component of this degree is the final year two-semester project that teaches students how to apply statistical and computational principles to solve large-scale, real-world data analysis problems.

### Statistics and Business Analytics students learn to:

- Apply knowledge of Computing, Mathematics, and Statistics and integrate it with the business that is appropriate for the program.
- Get a thorough understanding of tools and methods and enhance their ability to do in-depth research.
- Analyze the data pertinent to business problems to explore solutions.
- Acquire the knowledge and skills to get a greater insight regarding the day-to-day challenges that businesses face.
- Use knowledge of data analytics to apply in the important branches of business management such as Marketing, Human Resource Management, Finance and Risk Management, Supply Chain Management.
- Change the world for the better – in areas like healthcare, transportation, and education, etc.

### Learning Outcomes for Statistics and Business Analytics Students include:

1. Design, implement and evaluate a computer-based system, process, component or program to meet desired needs.
2. Communicate effectively with different audiences.
3. Improve business-related decision-making skills by exploring and mining data from various aspects.

### Career Path

- |                         |                               |                       |
|-------------------------|-------------------------------|-----------------------|
| 1. Marketing Analyst    | 2. Financial Analyst          | 3. CRM Analyst        |
| 4. Supply Chain Analyst | 5. Funds and Security Analyst | 6. Research Scientist |

### Prospective Firms/Companies

- |                           |   |                                  |
|---------------------------|---|----------------------------------|
| 1. Banking Sector         | 2. Real Estate Sector                   | 3. Business Industry             |
| 4. Communication Industry | 5. Transportation & Supply Chain Sector | 6. Government and Private Sector |

### Eligibility Criteria

The BS (Statistics and Business Analytics) is a four-year program. Applicants who have successfully completed H.Sc with minimum 50% marks in Science Group (Pre-Engineering) or in General Group (with Mathematics/Statistics/Computer Science) or A-Levels with a maximum 2 'C's in three principal subjects (with Mathematics/Statistics/Computer Science) are eligible to apply for admission.



## Required Courses

### Accounting

- ACC101 Introduction to Financial Accounting  
ACC201 Intermediate Financial Accounting

### Finance

- FIN201 Introduction to Business Finance  
FIN202 Financial Management

### Management

- MAN101 Principles of Management  
MAN302 Organizational Behavior  
MAN303 Production and Operations Management

### Communication

- COM107 Academic English  
COM202 Business and Professional Speech  
COM205 Persuasive & Analytical Writing for Bus. Communication

### Marketing

- MKT301 Principles of Marketing  
MKT302 Marketing Management  
MKT404 Methods in Business Research

### Political Sciences

- PSC301 Pakistan Studies

### General Education

- SSC301 History of Ideas<sup>1</sup>

<sup>1</sup> or any subject from pool of General Education

### Language

- LAN 10\* Foreign Language I

\*1 = Introduction to Arabic      \*2 = Introduction to French

\*4 = Introduction to German      \*6 = Introduction to Italian

\*8 = Introduction to Chinese

## Elective Courses

### Statistics

- STA315 Design of Experiment II  
STA316 Operations Research I  
STA317 Operations Research II  
STA309 Loss Models I  
STA310 Loss Models II  
STA319 Statistical Quality Control  
FRM201 Principles of Risk Management

### Elective (Business Analytics)

- MKT602 Marketing Analytics  
HRM512 HR Analytics  
FINXXX Financial Analytics

### Economics

- ECOXXX Introduction Micro and Macroeconomics  
ECO103 Intermediate Micro and Macroeconomics  
ECO304 Introduction to Econometrics  
ECO402 Pakistan Economic Policy

### Management Information Systems

- MIS401 Computer Applications

### Human Resource Management

- HRM301 Human Resource Management

### Religious Studies

- REL101 Islamic Studies

### Mathematics

- MTH100 Mathematics for Business  
MTH104 Calculus I  
MTH105 Calculus II  
MTH204 Linear Algebra  
MTH403 Numerical Analysis

### Statistics

- STA203 Probability Theory and Statistics I  
STA205 Probability Theory and Statistics II  
STA210 Sampling Theory  
STA301 Model and Inferences  
STA302 Methods of Data Analysis  
STA305 Applied Regression Analysis  
STA307 Decision Theory  
STA311 Design of Experiment I  
STA313 Applied Multivariate Analysis  
STA303 Time Series Analysis and Forecasting

### Natural Science

Natural Science 1<sup>NS</sup>

Natural Science 2<sup>NS</sup>

<sup>NS</sup>Two courses from Natural Science pool

### Natural Science Courses Pool

- NSCXXX Everyday Science  
PHY111 Applied Physics  
NSCXX Environmental studies

### Final Year Project

- STA491 Final Year Project I  
STA492 Final Year Project II

## Course Structure

<b>Semester One (18 Credit Hours)</b> Islamic Studies (3+0) [Pre Req. NA] Mathematics for Business (3+0) [Pre Req. NA] Principles of Management (3+0) [Pre Req. NA] Introduction to Micro and Macroeconomics (3+0) [Pre Req. ECO102] Probability Theory and Statistics I (3+0) [Pre Req. NA] Academic English (3+0) [Pre Req. NA]	<b>Semester (18 Credit Hours)</b> Persuasive and Analytical Writing for Bus. Comm. (3+0) [Pre Req. COM107] Pakistan Studies (3+0) [Pre Req. NA] Calculus I (3+0) [Pre Req. NA] Probability Theory and Statistics II (3+0) [Pre Req. STA203] Principles of Marketing (3+0) [Pre Req. NA] Foreign Language I [Pre Req. NA]
<b>Semester Three (18 Credit Hours)</b> Computer Applications (2+1) [Pre Req. NA] Intermediate Micro and Macroeconomics (3+0) [Pre Req. ECOXXX] Calculus II (3+0) [Pre Req. MTH104] Introduction to Financial Accounting (3+0) [Pre Req. NA] Model and Inferences (3+0) [Pre Req. STA205] Business and Professional Speech (3+0) [Pre Req. COM107]	<b>Semester Four (18 Credit Hours)</b> Linear Algebra (3+0) [Pre Req. NA] Organizational Behavior (3+0) [Pre Req. MAN101] Intermediate Financial Accounting (3+0) [Pre Req. ACC101] Marketing Management (3+0) [Pre Req. MKT301] Methods of Data Analysis (2+1) [Pre Req. STA301] Natural Science I (3+0) [Pre Req. NA]
<b>Semester Five (18 Credit Hours)</b> Human Resource Management (3+0) [Pre Req. MAN302] Introduction to Econometrics (2+1) [Pre Req. ECO102] Introduction to Business Finance (3+0) [Pre Req. NA] Methods in Business Research (3+0) [Pre Req. MKT302] Applied Regression Analysis (2+1) [Pre Req. STA302] Natural Science II (3+0) [Pre Req. NA]	<b>Semester Six (18 Credit Hours)</b> Financial Management (3+0) [Pre Req. FIN201] Sampling Theory (2+1) [Pre Req. STA302] Numerical Analysis (3+0) [Pre Req. MTH204] Elective I (STATISTICS) (3+0) [Pre Req. NA] Pakistan Economic Policy (3+0) [Pre Req. ECO103] History of Ideas
<b>Semester Seven (18 Credit Hours)</b> Decision Theory (3+0) [Pre Req. STA301] Design of Experiment I (2+1) [Pre Req. STA305] Production and Operations Management (3+0) [Pre Req. NA] Elective I (BUSINESS ANALYTICS) (3+0) [Pre Req. NA] Elective II (STATISTICS) (3+0) [Pre Req. NA] Final Year Project I (0+3) [Pre Req. MKT404, STA305]	<b>Semester Eight (15 Credit Hours)</b> Applied Multivariate Analysis (2+1) Time Series Analysis and Forecasting (2+1) [Pre Req. STA305] Elective III (STATISTICS) (3+0) [Pre Req. NA] Elective II (BUSINESS ANALYTICS) (3+0) [Pre Req. NA] Final Year Project II (0+3) [Pre Req. STA491]

## MS COMPUTER SCIENCE

The Master of Science program in Computer Science provides intensive preparation in the concepts and techniques related to the design, programming, and application of computing systems. The program requires students to take a broad spectrum of courses and simultaneously allows for emphasis on the desired areas of specialization. The program is based on HEC guidelines. The program comprises two years of study over at least 4 semesters. It requires the completion of 33 credit hours of course work. Students are required to complete 9 courses and a thesis of an equivalent of 6 credit hours equivalent of 2 courses to fulfill degree requirements. Students must maintain a CGPA of 3.0 for the conferment of the degree.

### MS Computer Science students learn to:

- To impart a breadth of knowledge in core areas of Computer Science which include theoretical foundations and fundamentals of systems.
- Instill opportunities for a research-oriented program, in preparation for the Ph.D. program in computer science.
- Link theory with practice and demonstrate analytical and proper decision-making abilities while developing computer systems or solutions
- Use their knowledge and critical independent thinking skills while working independently and/or in team environments.

### Learning Outcomes for MS Computer Science students include:

1. Acquisition of hands-on experience with relevant software tools, languages, data models, and environments for data processing.
2. Ability to communicate results of analysis effectively (visually and verbally) to a broad audience in the fields of biology, environment, finance and risk management, data science, business management, and other disciplines.
3. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
4. An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs
5. Be well-prepared for research and development in Computer Science in industry or academia.
6. Deal with the challenges of the IT industry with global changes
7. Develop logical thinking process

### Career Path:

- |                                |                           |                             |
|--------------------------------|---------------------------|-----------------------------|
| 1. Application Analyst         | 2. Applications Developer | 3. Data Analyst             |
| 4. UX Designer                 | 5. IT Consultant          | 6. Cybersecurity Consultant |
| 7. Information Systems Manager | 8. Multimedia Programmer  | 9. Systems Analyst          |
| 10. Games Developer            |                           |                             |

### Prospective Employers:

- |  |                               |                                |
|--|-------------------------------|--------------------------------|
| 1. Cyber Internet Services               | 2. Internet Service Providers | 3. Banking Sectors             |
| 4. Industrial Sectors                    | 5. Software Houses            | 6. Real Estate Sector          |
| 7. Communication & Transportation Sector | 8. Colleges & Universities    | 9. Government & Private Sector |

### Eligibility

BS(CS) / MCS / BE in Computer Engineering candidates are required to fulfill the requirement as proposed by the Department Board of Studies. Minimum CGPA of 2.5 (on a scale of 4.0). MS (Computer Science) program consists of two groups of courses, core and elective. The following core courses are recommended to be completed before entering the MS (CS) program.

- |                           |   |
|---------------------------|---|
| 1. Analysis of Algorithms | 2. Assembly Lang. / Computer Architecture |
| 3. Computer Networks      | 4. Computer Programming                   |
| 5. Data Structures        | 6. Database Systems                       |
| 7. Operating Systems      | 8. Software Engineering                   |
| 9. Theory of Automata     |   |

A student selected for admission having a deficiency in the above-stated courses may be required to study a maximum of FOUR courses, which must be passed in the first two semesters. A student cannot register in MS courses unless all specified deficiency courses have been passed.

## Program Requirements

MS requires completion of course work and dissertation/thesis. The minimum duration is 2 years and the maximum is 4 years:

- MS course work requirements consist of nine graduate-level courses (27 credit hours)
- On completion of the dissertation/thesis, the student is awarded 6 credits

An MS student must additionally complete the following requirements:

- MS Proposal/Synopsis Development
- MS Proposal/Synopsis Defense
- BASR Approval of MS Proposal/Synopsis
- Continuous enrollment in supervised research courses for meeting the full-time residency requirements
- Completion of MS Dissertation/Thesis
- Selection of External Evaluators by BASR
- Evaluation of MS Dissertation by two external faculty members as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of MS dissertation
- Acceptance Letter of Reserch Paper (as a first author) from MS Dissertation/Thesis in (HJRS/WoS/Scopus Indexed Journal/Conference)
- Any other HEC requirement
- Final Dissertation/Thesis Submission to BASR

## Core Courses

CSC540 Research Methodology  
CSC543 Advanced Computer Architecture  
CSC548 Advanced Analysis of Algorithm  
CSC547 Advanced Operating Systems  
CSC549 Theory of Programming Languages  
CSC591 MS Thesis-I  
CSC592 MS Thesis-II

## Elective Courses

CSC561 Advanced Software Engineering	CSC562 Object-Oriented Software Engineering
CSC563 Software Quality Assurance	CSC564 Software Requirement Engineering
CSC565 Software Testing Strategies	CSC571 Advanced Database Management Systems
CSC572 Data Warehousing	CSC573 Data Mining
CSC574 Distributed Systems	CSC575 Parallel and Distributed Algorithms
CSC578 Communication and Information Policy	CSC581 Neural Networks
CSC582 Pattern Recognition	CSC583 Fuzzy Systems
CSC584 Artificial Intelligence	CSC585 Machine Learning
CSC586 Deep Learning	

## Course Structure

<b>Semester One</b> Research Methodology Advanced Computer Architecture Advanced Analysis of Algorithm	<b>Semester Two</b> Advanced Operating Systems Theory of Programming Languages Elective I
<b>Semester Three</b> Elective II Elective III MS Thesis-I	<b>Semester Four</b> Elective IV MS Thesis-II



## MS MATHEMATICS AND SCIENTIFIC COMPUTING

The MS program in Mathematics & Scientific Computing develops rigorous foundational mathematical tools that help in careers as researchers and solution providers.

The MS program in Mathematics & Scientific Computing prepares students for careers in research, applications, and teaching. Students choose courses from two areas of concentration for their course work: Mathematics and Computations. Students are required to qualify successfully for nine courses (5 compulsories and 4 electives) each of 3 credit hours' duration. On successful completion of MS, course work students will be allowed to work on a 6 credit hour thesis on a subject of their interest depending on the availability of the faculty. The program comprises two years of study over at least 4 semesters. It requires completion of 33 credit hours of course work. Students must maintain a CGPA of 3.0 for the conferment of the degree.

### MS Mathematics & Scientific Computing students learn to:

- Develop a thorough understanding of mathematical methods before going to apply analytical skills to solve real-life problems.
- Apply rigorous mathematical and computational skills used to handle problems to get meaningful results.
- Establish and understand a connection between the techniques of mathematical analysis and scientific computing and their link with the real-life problems.

### Learning Outcomes for MS Mathematics & Scientific Computing students include:

1. Use knowledge to apply mathematical and scientific computing techniques and algorithms to real-life problems to extract meaningful insights.
2. Acquisition of hands-on experience with relevant software tools, languages, data models, and environments for data processing.
3. Ability to communicate results of analysis effectively (visually and verbally) to a broad audience in the fields of biology, environment, finance and risk management, data science, business management, and other disciplines.

### Eligibility

16 Years of education in Computer Science, Engineering, Mathematics, Statistics or any other relevant field. Minimum CGPA of 2.5 (on a scale of 4.0).

### Program Requirements

MS requires completion of course work and dissertation/thesis. Minimum duration is 2 years and the maximum is 4 years:

- MS course work requirements consist of nine graduate-level courses (27 credit hours)
- On completion of the dissertation/thesis, the student is awarded 6 credits

### A MS student must additionally complete the following requirements:

- MS Proposal/Synopsis Development
- MS Proposal/Synopsis Defense
- BASR Approval of MS Proposal/Synopsis
- Continuous enrollment in supervised research courses for meeting the full-time residency requirements
- Completion of MS Dissertation/Thesis
- Selection of External Evaluators by BASR
- Evaluation of MS Dissertation by two external faculty members as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of MS dissertation
- Any other HEC requirement
- Final Dissertation/Thesis Submission to BASR



## Required Courses

### Compulsory Courses (15 credit hours)

MTS609 Research Methodology  
MTS613 Advanced Topics in Algebra  
MTS616 Advanced Real Analysis  
MTS617 Advanced Numerical Analysis  
MTS618 Statistical Modeling and Computing

## Elective Courses

### Mathematics Concentration\* (6 credit hours)

MTS615 Dynamical System  
MTS612 Numerical Methods for ODEs and PDEs  
MTS619 Special Topics in Mathematics  
MTH621 Financial Mathematics  
MTS627 Computational Fluid Dynamics  
MTS629 Numerical Computing and Optimization  
MTS631 Advance Functional Analysis  
MTS634 Advanced Numerical Linear Algebra

*\* or any other elective subjects approved in BoS and published in previous Catalogues.*

### Computer Concentration\* (6 credit hours)

MTS622 Fundamental of Algorithms  
MTS635 Information Retrieval and Data Mining  
MTS657 Machine Learning  
MTS623 Special Topics in Computing  
MTS625 Advance design analysis and Algorithm

*\* or any other elective subjects approved in BoS and published in previous Catalogues.*

### Thesis

MTS691 Thesis I  
MTS692 Thesis II

## Course Structure

<b>Semester One</b> Research Methodology Advanced Numerical Analysis Advance Real analysis	<b>Semester Two</b> Statistical Modeling & Computing Advanced Topics in Algebra Mathematics Concentration I
<b>Semester Three</b> Mathematics Concentration II Computation Concentration I Thesis I	<b>Semester Four</b> Computation Concentration II Thesis II



## MS STATISTICS & SCIENTIFIC COMPUTING

The MS program in Statistics & Scientific Computing develops rigorous foundational mathematical and statistical tools that help in careers as researchers, and solution providers. It prepares students for careers in research, applications, and teaching. Students choose courses from two areas of concentration for their course work: Statistics and Computations. Students are required to qualify successfully for 9 courses (5 compulsory and 4 electives) each of 3 credit hours duration. On successful completion of MS course work students will be allowed to work on a 6 credit hour thesis on a subject of their interest depending on the availability of the faculty. The program comprises two years of study over at least 4 semesters. It requires completion of 33 credit hours (27 credit hours of course work and 06 credit hours of the dissertation/thesis). Students must maintain a CGPA of 3.0 for the conferment of the degree.

### MS Statistics & Scientific Computing students learn to:

- Develop a thorough understanding of statistical methodology before going to apply statistical skills to solve real-life problems
- Apply rigorous statistical techniques used to handle data to get meaningful results
- Select and transform data to increase usefulness for solving particular problems
- Create information visualizations for data exploration and presentation
- Establish and understand a connection between the techniques of data analysis and scientific computing and their link with the real-life data

### Learning Outcomes for Data Science students include:

1. Knowledge of how to apply statistical and scientific computing techniques and algorithms to real-life data sets to extract meaningful insights.
2. Acquisition of hands-on experience with relevant software tools, languages, data models, and environments for data processing.
3. Ability to communicate results of analysis effectively (visually and verbally) to a broad audience in the fields of biology, environment, finance and risk management, data science, business management, and other disciplines.

### Eligibility

16 Years of education in Computer Science, Engineering, Mathematics, Statistics or any other relevant field. Minimum CGPA of 2.5 (on a scale of 4.0).

### Program Requirements

MS requires completion of course work and dissertation/thesis. Minimum duration is 2 years and the maximum is 4 years:

- MS course work requirements consist of nine graduate-level courses (27 credit hours)
- On completion of the dissertation/thesis, the student is awarded 6 credits

### A MS student must additionally complete the following requirements:

- MS Proposal/Synopsis Development
- MS Proposal/Synopsis Defense
- BASR Approval of MS Proposal/Synopsis
- Continuous enrollment in supervised research courses for meeting the full-time residency requirements
- Completion of MS Dissertation/Thesis
- Selection of External Evaluators by BASR
- Evaluation of MS Dissertation by two external faculty members as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of MS dissertation
- Any other HEC requirement
- Final Dissertation/Thesis Submission to BASR

## Required Courses

### Compulsory Courses (15 credit hours)

MSS609 Research Methodology  
MSS611 Advanced Statistical Inference  
MSS614 Mathematical Statistics  
MSS617 Advanced Numerical Computing  
MSS618 Statistical Modeling & Computing

## Elective Courses

### Statistics Concentration (6 credit hours)

MSS647 Advanced Design of Experiments  
MSS648 Time Series Analysis  
MSS649 Stochastic Processes  
MSS650 Applied Regression Models  
MSS651 Theory & Practice of Forecasting  
MSS652 Statistical Quality Control  
MSSXXX Survey Sampling

### Computer Concentration (6 credit hours)

MSS622 Fundamental of Algorithms  
MSS635 Information Retrieval & Data Mining  
MSS645 Decision Theory  
MSS657 Machine Learning  
MSS658 Pattern Recognition  
MSS661 Simulation & Modeling  
MSS663 Artificial Intelligence

### Thesis

MSS691 Thesis I  
MSS692 Thesis II

## Course Structure

<b>Semester One</b> Research Methodology Mathematical Statistics Advanced Numerical Computing	<b>Semester Two</b> Statistical Modeling & Computing Advanced Statistical Inference Statistics Concentration I
<b>Semester Three</b> Statistics Concentration II Computation Concentration I Thesis I	<b>Semester Four</b> Computation Concentration II Thesis II

## PhD (COMPUTER SCIENCE)

## PhD (STATISTICS & SCIENTIFIC COMPUTING)

PhD programs will connect knowledge of three disciplines mathematics, statistics and computer science to policy-relevant decision-making in business and government. The program aims to train researchers to contribute to theory, develop inventive and useful models and methods, and conduct applied scientific investigations. Although individual researchers will vary in their emphases, the field includes all these aspects. This program emphasizes rigorous course work and high-quality research that should be published in international conferences and HEC recognized journals. Course and research work are arranged as per HEC criteria.

### Learning Outcomes:

1. In-depth understanding of academic theory and the preparation of high-quality research
2. Lead and manage research projects
3. Support and participate in academic, government, and industrial projects
4. Apply theories and models to solve real problems

### Career Path:

- |                                 |   |
|---------------------------------|---|
| 1. IT Consultant                | 2. Data Scientists  |
| 3. Cyber-security Consultant    | 4. Information Systems Manager                              |
| 5. Machine Learning Expert      | 6. Technical Writer   |
| 7. Data Modeler                 | 8. Security Architect                                       |
| 9. Software Development Manager | 10. College/University Prof. of Computer Science/Statistics |

### Prospective Employers:

- |                            |  |
|----------------------------|--|
| 1. Cyber Internet Services | 2. Internet Service Providers            |
| 3. Real Estate Sector      | 4. Banking Sectors                       |
| 5. Hospital Sector         | 6. Communication & Transportation Sector |
| 7. Colleges & Universities | 8. Government & Private Sector           |

### Eligibility

BS/ BBA/ BE / MS /ME/ MPhil or equivalent degree from HEC recognized institutions meeting the following criteria:

- A minimum CGPA of 3.00 on a scale of 4.00 in Bachelors (16 years)
- A minimum CGPA of 3.00 on a scale of 4.00 (or overall 60% marks) or equivalent in Masters (18 years)
- An interview conducted by the Institute
- Any other requirements as communicated by the HEC from time to time.

### Program Requirements

PhD requires completion of course work and dissertation/thesis. Minimum duration is 3 years and the maximum is 10 years:

- 1) Masters (18 years) in CS/ SE/ IT or relevant field  
18 Credit Hours of PhD Courses plus 30 Credit Hours of PhD Thesis
- 2) Masters (18 years) with irrelevant degree  
Maximum 12 Credit Hours of deficiency Courses (from MS CS program approved by Doctoral Committee) plus 18 Credit Hours of PhD Courses plus 30 Credit Hours of PhD Thesis
- 3) Bachelors (16 years) in CS/ SE/ IT or relevant field  
30/33 Credit Hours of Courses of MS Program (instead of thesis two Independent Studies of 3 Credit Hours each) plus 18 Credit Hours of PhD Courses plus 30 Credit Hours of PhD Thesis
- 4) Bachelors (16 years) with irrelevant degree  
Maximum 12 Credit Hours of deficiency Courses (from BS CS program approved by Doctoral Committee) plus 30/33 Credit Hours of Courses of MS Program (instead of thesis two Independent Studies of 3 Credit Hours each) plus 18 Credit Hours of PhD Courses plus 30 Credit Hours of PhD Thesis

**A PhD student must additionally complete the following requirements:**

- Comprehensive Exam
- PhD Proposal/Synopsis Development
- PhD Proposal/Synopsis Defense
- BASR Approval of PhD Proposal/Synopsis
- Continuous enrollment in supervised research courses for meeting the full-time residency requirements
- Completion of PhD Dissertation/Thesis
- Selection of External Evaluators by BASR
- Publication or an official acceptance of at least one paper in an ISI impact factor journal as a first author
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Any other HEC requirement
- Final Dissertation/Thesis Submission to BASR

**Course Structure**

Select Six courses

**PhD (Computer Science)**

PCS701 Big Data Analytics and Knowledge Discovery  
PCS703 Natural Language Processing Information Retrieval  
PCS705 Advance Theory of Computation  
PCS707 Advances in Machine Learning  
PCS709 Computational Intelligence  
PCS711 Heuristic Search Theory & Methods  
PCS713 Advanced Neural Network  
PCS715 Intelligent Web Technologies  
PCS717 Parallel and Distributed Systems  
PCS719 Formal Research Methods  
PCS723 Computer Vision and Robotics  
PCS725 Temporal and Spatial Database Management System  
PCS731 Advanced Digital Signal Processing  
PCS733 Advanced Decision Support System  
PCS739 Advances in Simulation and Modeling  
PCS743 Fuzzy Topologies with Human Centric Computing  
PCS745 Advanced Algorithm Analysis  
PCS749 Seminar on Logic and Scientific Computing  
PCS751 Seminar on Emerging Computing Technologies  
PCS753 Advances in Artificial Intelligence  
PCS755 Advances in Deep Learning  
PCS921 Research Thesis (3 Units)  
PCS922 Research Thesis (6 Units)  
PCS923 Research Thesis (9 Units)

**PhD (Statistics & Scientific Computing)**

PST701 Advanced Statistical Computing and Graphics  
PST703 Regression Modeling and Computing  
PST705 Advanced Mathematical Statistics  
PST707 Advanced Bayesian Inference and Stochastic Modeling  
PST713 Nonlinear and Integer Programming  
PST715 Advanced Design and Analysis of Experiments  
PST717 Advances in Time Series Analysis  
PST719 Advances in Bioinformatics & Biostatistics  
PST721 Statistical Quality Control  
PST723 Stochastic Modeling in Finance  
PST725 Special topics in Statistics  
PST850 Research Thesis (30 Credit Hours)





# COLLEGE OF ENGINEERING AND SCIENCES

*“Entrepreneurial Engineering with Excellence”*

College of Engineering and Sciences (CES) was established to realize IoBM’s mission of creating an impact as a multidimensional institution of higher learning. The college strives to develop entrepreneurial engineers who have the technical skills and confidence to create new engineering technologies and design innovative engineering products and processes.

# BE ELECTRICAL ENGINEERING IN ELECTRONICS AND TELECOMMUNICATION

Electrical Engineering graduates are empowered to enable the growth of electrical, electronics and telecommunication industry through their technical expertise, confidence and entrepreneurial spirit.

## Specializations

- Electronic Engineering
- Telecommunication Engineering

## Careers

Engineering careers in firms providing solutions for building automation, industrial control for processes and machinery, IOT based control and monitoring of environment, water supply and quality, pollution, road congestion, agriculture yield, energy supply, borders, logistics, safety, security, natural disasters etc.

The program is Pakistan Engineering Council (PEC) approved (see [http://www.pec.org.pk/schedule\\_first.aspx](http://www.pec.org.pk/schedule_first.aspx)) and designed in close consultation with leading engineering firms and scholars from reputable academic Institutions. The electrical engineering curriculum is a four-year degree program comprising 8 semesters. The emphasis is on laboratory work, experimental knowledge and innovative teaching methods. One of its special features is an Internship of 6 to 8 weeks in a reputable engineering organization. During the first four semesters, the same courses are offered to all students. At the end of the fourth semester, students are allowed to select either of two of the above-mentioned areas of specialization. The course work offered in the last four semesters is especially designed to enhance students' knowledge of a given area of interest and provide them with a thorough understanding of the advanced subjects.

Completion of course work with 2.5 CGPA and 138 credit hours with internship automatically qualify students for the Master's programs offered by IoBM. They can also proceed further for postgraduate studies or work in the fields of Telecommunication and Electronics at leading universities and organizations throughout the world. IoBM course credits are easily transferable to a number of international universities. BE (EE) program is spread over 18 sessions per semester.

## Program Educational Objectives (PEOs)

1. To equip students with fundamental and advance concepts in electrical engineering, to become analytical problems solvers, to be creative in design and development of solutions and to lead solutions of complex engineering problems in a structured way making best of modern tools
2. To develop successful engineering professionals who have confidence, skills in communication, project management and ethical values applicable to varying team working environments and society
3. To foster a learning environment where entrepreneurial engineers are developed and students are motivated to make learning an on-going life-long process leading to sustainable development in societal and environmental context

## Program Learning Outcomes (PLOs)

- PLO-1: Engineering Knowledge: An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems
- PLO-2: Problem Analysis: An ability to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences
- PLO-3: Design/Development of Solutions: An ability to design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations



- PLO-4: Investigation: An ability to investigate complex engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis and interpretation of experimental data, and synthesis of information to derive valid conclusions
- PLO-5: Modern Tool Usage: An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations
- PLO-6: The Engineer and Society: An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solution to complex engineering problems
- PLO-7: Environment and Sustainability: An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development
- PLO-8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice
- PLO-9: Individual and Team Work: An ability to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings
- PLO-10: Communication: An ability to communicate effectively, orally as well as in writing, on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions
- PLO-11: Project Management: An ability to demonstrate management skills and apply engineering principles to one's own work, as a member and/or leader in a team, to manage projects in a multidisciplinary environment
- PLO-12: Lifelong Learning: An ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.

### Mapping of PEOs to PLOs/Graduate Attributes (GAs)

S. No.	PLOs/GAs	Program Educational Objectives (PEOs)		
		1	2	3
1	Engineering Knowledge	*		
2	Problem Analysis	*		
3	Design/Development of Solutions	*		
4	Investigation	*		
5	Modern Tool Usage	*		
6	The Engineer and Society			*
7	Environment and Sustainability			*
8	Ethics		*	
9	Individual and Team Work		*	
10	Communication		*	
11	Project Management		*	
12	Lifelong Learning			*



## Required Courses

### Communication

COM100 Foundation English\*\*

COM117 Functional English

COM119 Communication Skills

COM208 Technical Report Writing

*\*\*Students with low marks in English at the time of admission, will do Foundation English Course with Credit Hours:0*

### Computer Engineering

CME102 Fundamentals of Computing

CME104 Computer Programing and Problem Solving

CME203 Data Structures and Algorithms

CME205 Microcontroller and Microprocessor Systems

CME301 Computer Communication and Networks

### Electronic Engineering

ELE200 Electronic Devices and Circuits

ELE201 Digital Logic Design

ELE202 Electronic Workshop Practices

ELE370 Instrumentation and Measurements

ELE419 Linear Control Systems

ELE420 Power Electronics

ELE450 Senior Design Project I

ELE451 Senior Design Project II

### Electrical Power Engineering

EPE101 Linear Circuit Analysis

EPE200 Electrical Network Analysis

EPE201 Computer Aided Engineering Design

EPE302 Electrical Machines

### Telecommunication Engineering

TCE201 Communication System

TCE204 Electromagnetic Field Theory

TCE205 Signal and Systems

TCE301 Probability Methods in Engineering

TCE321 Wave Propagation and Antennas

TCE404 Digital Signal Processing

TCE450 Senior Design Project I

TCE451 Senior Design Project II

### Engineering Management

ENG203 Engineering Economics

### Mathematics

MTH107 Calculus and Analytical Geometry

MTH204 Linear Algebra

MTH215 Differential Equation

MTH216 Complex Variable and Transforms

MTH405 Numerical Analysis

### Religious Studies / Ethics

REL101 Islamic Studies OR

SSC203 Ethical Behavior



### General Sciences

GSC103 Applied Physics

### Entrepreneurship

ENT403 Small Business and Entrepreneurship

### Management

MAN418 Management and Organizational Dynamics

### Political Sciences

PSC301 Pakistan Studies

### Community Service

ENT308 Social Advocacy and Community Service OR

SSC100 Community Service

### Inter-Disciplinary Engineering

IDE400 Introduction to ERP

IDE401 Principles of Applied Mechatronics

IDE402 Renewable Energy Methods

IDE403 Project Management

### Course Structure

**First two years are common to both Electrical Engineering streamlines (Electronic and Telecommunications)**

<b>Semester One</b> Applied Physics (3+1) Functional English (3+0) Linear Circuit Analysis (3+1) Fundamentals of Computing (2+1) Calculus & Analytical Geometry (3+0) Electronic Workshop Practices (0+1)	<b>Semester Two</b> Linear Algebra (3+0) Islamic Studies (3+0) Communication Skills (2+0) Basic Electronics (3+1) Computer Programming & Problem Solving (2+1) Electrical Network Analysis (3+1)
<b>Semester Three</b> Pakistan Studies (3+0) Digital Logic Design (3+1) Data Structure & Algorithms (3+1) Complex Variables & Transforms (3+0) Computer Aided Engineering Designs (0+1) Electronic Devices and Circuits (3+1)	<b>Semester Four</b> Signals & Systems (3+1) Differential Equations (3+0) Technical Report Writing (3+0) Electromagnetic Field Theory (3+0) Microcontroller & Microprocessor Systems (3+1)

**Note: Students will be allowed to register in SDP 1 only after successfully completing the course work of first six semesters**

## Course Structure

### Stream 1: Electronic Engineering

<b>Semester Five</b> Electrical Machines (3+1) Numerical Analysis (3+0) Linear Control Systems (3+1) Instrumentation and Measurements (3+1) Probability Methods in Engineering (3+0)	<b>Semester Six</b> Elective I (3+0) Engineering Economics (2+0) Communication System (3+1) Digital Signal Processing (3+1) Power Electronics (3+1)
<b>Semester Seven</b> Elective II (3+0) Elective III (3+1) Management and Organizational Dynamics (3+0) Senior Design Project I (0+3) Renewable Energy Methods (3+0)	<b>Semester Eight</b> Elective IV (3+1) Community Service (0 ch) Senior Design Project II (0+3) Small Business and Entrepreneurship (3+0) Principles of Applied Mechatronics (3+1)

### Elective Courses

ELE415 Opto-Electronics	ELE417 Industrial Electronics
ELE423 Digital Control Systems	ELE422 VLSI Design
ELE429 Introduction to Nano Technology	ELE428 Digital Electronics
ELE433 Artificial Neural Networks	ELE430 Solid State Devices
ELE432 Wireless Power Transmission	CME414 Digital Image Processing
CME301 Computer Communication Networks	TCE416 Digital Communication
EPE432 IoT Based Wireless Power Transfer	EPE433 Power Quality Analysis
EPE434 Introduction to Smart Grid	CME415 Cyber Physical Systems and Industry
ELE435 Technology and Society	

## Course Structure

### Stream 2: Telecommunication Engineering

<b>Semester Five</b> Numerical Analysis (3+0) Linear Control Systems (3+1) Electrical Machine (3+1) Computer Communication Networks (3+1) Probability Methods in Engineering (3+0)	<b>Semester Six</b> Elective I (3+0) Engineering Economics (2+0) Digital Signal Processing (3+1) Communication System (3+1) Wave Propagation and Antennas (3+1)
<b>Semester Seven</b> Elective II (3+0) Elective III (3+1) Management & Organizational Dynamics (3+0) Senior Design Project I (0+3) Renewable Energy Methods (3+0)	<b>Semester Eight</b> Elective IV (3+0) Social Advocacy and Community Service (1+0) Senior Design Project II (0+3) Small Business and Entrepreneurship (3+0) Principles of Applied Mechatronics (3+1) OR Project Management

### Elective Courses

TCE415 Transmission and Switching Systems	TCE416 Digital Communications
TCE420 Information Theory and Coding	TCE423 RF and Microwave Engineering
TCE424 Radar Systems	TCE425 Telecom Management
TCE426 Electromagnetic Compatibility	TCE427 Antenna Theory and Design
TCE428 Mobile and Pervasive Computing	TCE429 Teletraffic Engineering
TCE430 Satellite Communication	TCE431 Digital Filter Design
TCE433 Multimedia and Optical Fiber	TCE434 Wireless Sensor Networks
TCE461 Wireless and Mobile Communications	TCE471 Optical Fiber Communication
CME414 Digital Image Processing	ELE415 Opto-Electronics
EPE432 IoT Based Wireless Power Transfer	EPE433 Power Quality Analysis
EPE434 Introduction to Smart Grid	ELE435 Technology and Society
CME415 Cyber Physical Systems and Industry	



## MS ENGINEERING MANAGEMENT

The MS in Engineering Management degree bridges the gap between engineering potential and its gainful exploitation for business and economic advantage by focusing on efficiency, productivity and effectiveness.

The need for engineering management is felt at all managerial levels, particularly in the professional management work environment. Also, management is applicable to every aspect of an organization's functions and at all levels of top management, middle and lower management. Basic and specialized knowledge in the field of engineering management is a crucial need for every engineer and a profitable business.

Engineering management entails planning, organizing, allocating resources, and directing and controlling activities that have a technological component. The course has been designed by engineers and business experts with experience at the International level, keeping in view the requirements of the country.

This is a weekend program with a minimum load of 6 credit hours (2 courses) and a maximum of 9 credit hours (3 courses) in each of the 3 sessions (Fall, Spring and Summer).

### Program Objectives

- To exemplify excellence in engineering management through in depth knowledge and skills in the field of engineering management and applied sciences
- To engage in continuous professional development and exhibit quest for lifelong learning
- To demonstrate professional integrity and commitment to social and ethical responsibilities required of them as leaders and entrepreneurs.

### Course Contents

Duration:	Minimum 1.5 - Maximum 04 years
Total credit hours:	30
- Teaching:	24
- Thesis:	6

A minimum of eight courses (500 Level) of 3 credit hours each with individual research project / thesis of 6 credit hours in a relevant area shall be required for the completion of the MS degree in the discipline of Engineering Management. A minimum of four courses from core subjects and four courses from optional subjects are selected.

### Entry Test Policy

The admission for MS Program would be based on the following:

#### Eligibility for entrance to MS-Engineering Management Program:

It is based on the following:

- Sixteen years of education in any engineering discipline with minimum 55% marks in overall academic career in annual system and CGPA 2.5 in a semester system or equivalent from HEC recognized Institutes/Universities having PEC registration status.

#### In addition:

- All admissions to MS are subject to Higher Education Commission (HEC) based testing services such as National Testing Services (NTS) or Education Testing Council (ETC), etc.

### Compulsory Core Courses (Five Courses)

MEM501 Project Management (3+0)  
MEM502 Designs, Patents, Contract and Legal Engineering (3+0)  
MEM503 Quality Processes for Design and Production (3+0)  
MEM504 Research Methodology (3+0)  
MEM600 Independent Study (3+0)

MS Projects (Compulsory)

MEM601 Thesis I (3+0)

MEM602 Thesis II (3+0)

### Elective Courses (Any Three Courses)

MEM505 Applied Engineering Analysis (3+0)	MEM506 Production System Design and Analysis (3+0)
MEM507 Operations Analysis & Resource Allocation(3+0)	MEM508 Operation Management (3+0)
MEM509 Simulation Modeling (3+0)	MEM510 Production Planning and Control (3+0)
MEM511 Advanced Practices in Engineering Management (3+0)	MEM512 Environmental and Safety Management (3+0)
MEM513 Industrial Costing Management (3+0)	MEM514 Technology Management (3+0)
MEM515 Lean Six Sigma & Lean Manufacturing(3+0)	MEM516 Marketing Management (3+0)
MEM517 Global Business Strategy (3+0)	MEM518 Leadership, Innovation & Entrepreneurship (3+0)
MEM519 Financial Statement Analysis (3+0)	MEM520 Engineering Economics (3+0)
MEM521 Problem Solving & Decision Making (3+0)	MEM523 Supply Chain Management (3+0)
MEM524 Management of Organizations (3+0)	MEM525 Advanced Topics in Project Management (3+0)

### Course Structure

<b>Semester One</b> Project Management (3+0) Quality Processes for Design & Production (3+0) Research Methodology (3+0)	<b>Semester Two</b> Design, Patents, Contract & Legal Engineering (3+0) Independent Study (3+0) Elective I (3+0)
<b>Semester Three</b> Elective II (3+0) Elective III (3+0) Thesis-I (3+0)	<b>Semester Four</b> Thesis-II (3+0)

#### Notes:

- Students will be allowed to register in Thesis I only after successfully completing the course work of first two semesters. Attendance in three research seminars per semester is mandatory.
- Mandatory research paper Requirement for MS thesis submission: MS scholars must provide acceptance letter from their respective journal (any HJRS/WOS/Scopus Indexed Journal or any conference proceedings) before forwarding MS thesis for evaluation



## MS IN ELECTRICAL ENGINEERING

The MS Electrical Engineering program (MS EE) enables the graduates to be research-based designers of devices and systems that provide innovative solutions for entrepreneurial engineering.

The profession of electrical engineering demands a strong foundation in physical science and mathematics, a broad knowledge of engineering techniques, and an understanding of the relation between technology and society. Curricula at IoBM are planned to offer the breadth of education and depth of training necessary for leadership in industry as well as a precursor to further education.

There is a need for an ability to investigate electrical engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis using first principles of mathematics, natural science and engineering sciences, and interpretation of experimental data, and synthesis of information to derive valid conclusions.

### Scope of Program

In Pakistan, we are seeing a shift towards rapid growth of data networks, as well as a shift towards electronically facilitated services particularly in the public sector. Electrical engineers design develop test and supervise deployment of electrical systems and electric devices. They are expected to work on the design of sub-micron Digital and Analogue Integrated Circuits, Digital Signal Processors, Control System Design and Testing services. The Master of Science (MS) program in Electrical Engineering is designed to prepare students for technically demanding careers in industry as well as for research career in Electrical Engineering or related fields. More specifically:

- It requires students to build depth in an Electrical Engineering specialization, selected from areas such as signal processing and communication, systems and control, electromagnetics and photonics, and material circuits and devices.
- It affords students the opportunity to flexibly choose graduate electives to explore technical or professional interests within engineering.

The MS in Electrical Engineering (MS EE) can be either an academic or professional master's degree that bridges the gap between the field of engineering, technology and the field of business by equipping students with the technical expertise and leadership skills required to advance their career in the fast-paced world of technology.

### Program Objectives

The program has been orchestrated to meet the market demand and encompasses a broad area covering advanced digital and analogue electronics, power systems, communication, signal processing and multimedia, computer vision and advanced controls for robotics. The stream based approach aims to include hands on training, case studies and research thesis. The specific objectives of the program are :

- To produce graduates who are highly skilled professionals having domain knowledge of research and development of electrical and electronics engineering profession
- To engage in continuous professional development and exhibit quest for lifelong learning
- To demonstrate professional integrity and commitment to social and ethical responsibilities required of them as leaders and entrepreneurs.
- To understand impact of power, communications and control systems on engineering solutions in a global, economic and cultural aspect.

## Entry Test Policy

The admission for MS Program would be based on the following:

### Eligibility for entrance to MS-Engineering Management Program:

It is based on the following:

- Sixteen years of education in electrical engineering discipline with minimum 55% marks in overall academic career in annual system and CGPA 2.5 in a semester system or equivalent from HEC recognized Institutes/Universities having PEC registration status.

### In addition:

- All admissions to MS/MPhil are subject to Higher Education Commission (HEC) based testing services such as National Testing Services (NTS) or Education Testing Council (ETC), etc.

## Courses:

Master's program in electrical engineering provides students with latest and in depth knowledge in electrical engineering. Students enrolled have the option of designing MS studies in a way that facilitates PhD and technologically advanced careers. As per HEC guidelines the program is divided into the following streams

Stream 1: Power Systems Engineering  
Stream 2: Control Automation Engineering  
Stream 3: Communication Systems and Networks

### Stream based Courses Module

MEE504 Research Methodology 3+0  
MEE509 Simulation and Modeling 2+1  
MEE600 Independent Study 3+0

### Thesis

MEE601 Thesis I  
MEE602 Thesis II

Stream 1 Power Systems Engineering	Stream 2 Control Automation Engineering	Stream 3 Communication Systems and Networks	Credit Hours
EPE602 (Core) Power Electronics	ELE602 (Core) Linear Control Theory	ECE602 (Core) Wireless Communication	3+0
Elective Courses			
EPE611 Power System Analysis	CME601 Advanced Digital Signal Processing		3+0
EPE612 Computer Methods in Power System Analysis	ELE612 Detection and Estimation	ECE612 Information & Coding Theory	3+0
EPE613 Power System Reliability	ELE613 Adaptive Control Systems	MTH601 Stochastic System Process	3+0
CME602 Artificial Intelligence and Machine Learning		ECE614 Advanced Communication Systems	3+0
EPE615 Renewable Energy Systems	ELE615 Optimal Control Systems	ECE615 Advanced Computer Networks	3+0
EPE616 Embedded Power Generation	GSC601 Semiconductor Device Physics		3+0
<i>Special topics on Smart Grid (upon the discretion of course instructor)</i>	<i>Special topics on Automation (upon the discretion of course instructor)</i>	<i>Special topics on Communications (upon the discretion of course instructor)</i>	3+0



## Course Structure:

<b>Semester One</b> Research Methodology (3+0) Simulation Modeling (2+1) Required Stream based Course (3+0)	<b>Semester Two</b> Independent study(3+0) Elective-I Elective-II Initial Seminar / Symposium
<b>Semester Three</b> Elective-III Elective-IV Thesis (3+0)	<b>Semester Four</b> Thesis (3+0) Final Seminar/ Symposium

Stream 1	Stream 2	Stream 3
EPE617 / ECE624 Internet of Things	ELE617 Guidance Navigation & Control	ECE617 RF Circuits Design
EPE618 Flexible AC Transmission System	ELE618 Stochastic Control Systems	ECE618 Radar Signal Processing
EPE619 High voltage DC Transmission System	ELE619 / EPE624 Control of Power Electronics Convertors	ECE619 Mobile and Sensor Networks
EPE620 Power Quality	ELE620 Control of Electric Machine Drives	ECE620 Cellular and Mobile Communications
EPE621 / ECE623 Smart Grids	ELE621 Distributed Control Systems	ECE621 Medical Image Processing
EPE622 Energy Audit	ELE622 Multivariable Feedback Control	ECE622 Telecommunication Economics
EPE623 Energy Management	ELE623 Probabilistic Robots	ECE623 / EPE621 Smart Grid
EPE624 / ELE619 Control of Power Electronics Convertors	ELE624 / EPE626 Filtering and Tracking	ECE624 / EPE617 Internet of Things
EPE625 Special Purpose Electrical Machines	ELE625 / ECE626 Image and Video Processing	ECE625 Smart Antennas
EPE626 / ELE624 Control of Electric Machine Drives	ELE626 Control Systems with Embedded Implementations	ECE626 / ELE625 Image and Video Processing

## Program Summary:

Duration	Minimum 1.5 - Maximum 04 years
Total Credit hours	30 credit hours
Course work	24 credit hours
Thesis	06 credit hours

### Notes:

- Students will be allowed to register in Thesis I only after successfully completing the course work of first two semesters. Attendance in three research seminars per semester is mandatory.
- Mandatory research paper Requirement for MS thesis submission: MS scholars must provide acceptance letter from their respective journal (any HJRS/WOS/Scopus Indexed Journal or any conference proceedings) before forwarding MS thesis for evaluation





# COLLEGE OF ECONOMICS AND SOCIAL DEVELOPMENT

The College of Economics and Social Development (CESD) is a social science and liberal arts college with graduate and undergraduate programs in areas such as economics, psychology, education, media, law and international relations. Mission of the College is to contribute to the social and economic development by focusing on creative, professional and research-based interventions.

## BS (HONORS) ACCOUNTANCY, MANAGEMENT AND LAW

The BS (Hons) Accountancy, Management, and Law program is an innovative and dynamic qualification that incorporates the disciplines of Accounting, Business Management, and Regulations, strengthening the potential and setting up for success in the corporate world. The program designs to provide young graduates with opportunities to acquire academic degrees and professional certification from Accountancy bodies with international and national charters. The program is accredited by two world-renowned accountancy bodies: The Institute of Chartered Accountants of Pakistan (ICAP) and the Association of Chartered Certified Accountants (ACCA), United Kingdom.

Students opting for the ICAP qualification may get exemption from all four papers of Assessment of Fundamental Competencies (AFC) and the first four papers of Certificate in Accounting and Finance (CAF). After graduation, students can register as CA Trainees with already exempted 8 Courses. Students can Join registered organizations as regular employees or join Audit Firm. Students opting for the ACCA qualification may get exemption in eight subjects.

- |                                  |                              |                            |
|----------------------------------|------------------------------|----------------------------|
| 1. F1-Accountant in Business     | 2. F2-Management Accounting  | 3. F3-Financial Accounting |
| 4. F4-Corporate and Business Law | 5. F5-Performance Management | 6. F6-Taxation             |
| 7. F7-Financial Reporting        | 8. F9-Financial Management   |                            |

It requires completion of 144 credit hours of course work and internship of at least six weeks in a firm approved by the College. Students may take a maximum of six courses per semester with summer as an optional semester. This program will lead to an MBA or a professional accountancy qualification.

### Career Options

- Auditors/Accountant
- Tax Consultants
- Compliance Managers
- Financial Analysts/Managers

### Required Courses

#### Accounting

- ACC104 Accounting Principles (ICAP-CAF-1, ACCA-F3)
- ACC205 Intermediary Accounting (ICAP-CAF-5, ACCA-F3)
- ACC207 Principles of Taxation (ICAP – CAF-6, ACCA-F6)
- ACC208 Cost Accounting (ICAP – CAF-8, ACCA-F2)
- ACC309 Auditing 1: Conceptual Foundations of Auditing (ICAP – CAF-9, ACCA-F8)
- ACC310 Management Accounting & Decision Making (ICAP – CAF-8, ACCA-F5)
- ACC311 Financial Reporting (ICAP – CAF-5 & CAF-7, ACCA-F3)
- ACC313 Intermediary Financial Reporting (ICAP – CAF-7, ACCA-F7)
- ACC314 Advance Taxation (ICAP – CAF-6, ACCA-F6)
- ACC315 Auditing-II: The Practice of Auditing (ICAP – CAF-9, ACCA-F8)
- ACC403 Strategic Performance Measurement & Evaluation (ACCA-F5)
- ACC404 Islamic Accounting and Reporting
- ACC406 Internal Audit, Control, and governance (ICAP – CAF-9, ACCA-F8)
- ACC408 Advanced Audit and Assurance (ICAP – CAF-9, ACCA-F8)
- ACC409 Strategic financial reporting (ICAP – CAF-7, ACCA-F7)

#### Expository Writing/Communication

- COM103 Functional English I (ICAP – AFC-1)
- COM104 Functional English II (ICAP – AFC-1)
- COM105 Business Communication - AML (ICAP – AFC-2, ACCA-F1)

#### Civilized Studies

- REL101 Islamic Studies
- PSC301 Pakistan Studies

#### Finance

- FIN203 Principles to Business Finance (ACCA-F9)
- FIN204 Theory of Business Finance (ACCA-F9)
- FIN312 Islamic Finance: Principles and Practice
- FIN405 Applied Business Finance (ACCA-F9)

#### Human Resource Management

- HRM301 Human Resource Management

#### Marketing

- MKT301 Principles of Marketing

#### Natural Sciences

- BED101 General Sciences
- SSC202 Environmental Studies



**Economics**

ECO107 Fundamentals of Microeconomics (ICAP-CAF-2, ACCA-F1)  
ECO201 Fundamentals of Macroeconomics (ICAP-CAF-2, ACCA-F1)

**LAW**

LAW105 Mercantile Law (ICAP-CAF-3, ACCA-F4)  
LAW106 Company Law & Secretarial Practices (ICAP-CAF-3, ACCA-F4)  
LAW202 Banking Laws in Pakistan  
LAW302 Intellectual Property laws  
LAW407 Statutory Compliance  
LAW408 Consumer Protection Act & Electronic Crimes Law

**Languages**

LAN 10\* Foreign Language I

\*1 = Introduction to Arabic \*2 = Introduction to French

\*4 = Introduction to German \*6 = Introduction to Italian

\*8 = Introduction to Chinese

**Management**

MAN101 Principles of Management (ICAP- CAF-4, ACCA-F1)  
MAN309 Leadership Journey (ACCA-F1)  
MAN405 Strategic Management

**Management Information Systems**

MIS402 Computer concepts and application (ICAP-AFC-4)  
MIS404 Introduction to ERP systems

**Reasoning**

STA101 Quantitative Methods-I (ICAP -AFC-3)  
STA102 Quantitative Methods-II (ICAP -AFC-3)

**Social Sciences**

SSC103 Behavioral Studies (ICAP -CAF-4, ACCA-F1)  
SSC401 Business Ethics (ICAP -AFC-2, ACCA-F1)

**Project**

ACC407 Final Year Project

**Research**

RES401 Research Methodology

**Course Structure**

<b>Semester One</b> Functional English I Quantitative Methods I Islamic Studies Fundamentals of Microeconomics Accounting Principles General Science	<b>Semester Two</b> Functional English II Quantitative Methods II Pakistan Studies Fundamentals of Macroeconomics Intermediary Accounting Mercantile Law
<b>Semester Three</b> Environmental Studies Principle of Management Principles of Business Finance Behavioral Studies Company Law and Secretarial Practices Business Communication - AML	<b>Semester Four</b> Cost Accounting Principle of Marketing Theory of Business Finance Computer Concepts and Application Principle of Taxation Business Ethics
<b>Semester Five</b> Auditing 1: Conceptual Foundations of Auditing Banking Laws in Pakistan Management Accounting for Decision making Human Resource Management Financial Reporting Introduction to a Foreign Language	<b>Semester Six</b> Auditing-II: The Practice of Auditing Statutory Compliance Intellectual Property Laws Intermediary Financial Reporting Islamic Finance: Principles and Practice Advance Taxation
<b>Semester Seven</b> Strategic Performance Measurement and evaluation Leadership Journey Islamic Accounting and Reporting Internal Audit, Control, and governance Consumer Protection Act & Electronic Crimes Law Research Methodology	<b>Semester Eight</b> Advance Audit and Assurance Strategic Financial Reporting Strategic Management Applied Business Finance Final Year Project Introduction to ERP Systems



## BS (HONORS) MEDIA STUDIES

BS (Honors) Media Studies is a multidisciplinary hands-on program, designed to provide students with a strong grounding in and a broad academic base for pursuing a professional career - institutional or entrepreneurial - in the wider field of media and film arts.

Although the program has been progressively strengthened since its inception in Fall-2010, by refining the curriculum and pedagogy, backed by investments in infrastructure upgrades, major curricular changes incorporated over the last year, now allow students to delve deeper into the realm of new media and arts, and acquire the skillsets necessary for success in the emerging world of media and visual communication.

Students continue to have the option to major either in Journalism or Production. However, they share common foundation courses in the first four semesters, before concentrating on their chosen major in the remaining four semesters. A total of 144 credit hours of coursework is required for completing the degree requirements, along with a compulsory 6-week internship. The program owes its success to the support it has received over the years from media experts, practitioners, and specialists from the field of journalism and filmmaking, who complement the department's permanent teaching faculty.

### Foundation Courses

#### Communication

COM111 Critical Reading & Creative Writing

#### Economics

ECO106 Basic Economics

#### Islamic Studies

REL101 Islamic Studies

#### Language

LAN112 Urdu I

LAN113 Urdu II

#### Law

LAW405 Media Law & Business Ethics

#### Management

MAN305 International Relations

#### Pakistan Studies

PSC301 Pakistan Studies

#### Social Sciences

MMM398 Social Sciences for Media

### Core Course (All Students)

MMM320 Editing & Post Production

MMM328 Methods in Media Research

MMM344 Screenplay I: Writing & Adapting Stories

MMM354 Introduction to Sound Design

MMM360 Introduction to Photography

MMM362 History of Filmmaking

MMM363 Introduction to Design Tools

MMM373 Content Creation

MMM376 Introduction to Performing Arts

MMM383 Introduction to Video Production

MMM384 Design Thinking

MMM385 Writing for Digital Media

MMM390 Digital Marketing Basics

MMM394 Introduction to Creative Arts

MMM395 Media History - From Cave-paintings to TikTok

MMM405 Cinematography

### Core Courses (Production Major)

MMM342 Filmmaking – The Art & Craft: Thesis I (6C)

MMM345 Screenplay II: Screenwriting for Short Films

MMM351 Production Management

MMM363 Introduction to Design Tools

MMM366 Filmmaking – The Art & Craft: Thesis II (6C)

MMM371 Creative Portfolio Management

MMM377 Direction

MMM387 Introduction to 3D Animation & Motion Graphics

MMM391 Advanced Post Production

MMM393 Content Distribution & Promotion

MMM396 Concept Art – From Art to 'Akbarnama'

MMM397 Interface Design

MMM399 New Media Technologies: Tools & Applications

MMM405 Cinematography

## Core Courses (Journalism Major)

ECO106 Basic Economics  
MMM301 Photojournalism  
MMM308 Contemporary World Media  
MMM312 Introduction to Advertising & PR  
MMM316 Sub-Editing & Page Design  
MMM318 Business Journalism  
MMM332 News Production/ News Anchoring  
MMM333 Sports Journalism  
MMM336 Human Rights & Gender Reporting  
MMM355 Production of Documentary  
MMM367 Digital Journalism  
MMM372 Environmental Journalism  
MMM374 Introduction to Journalism  
MMM378 Investigative Journalism [Thesis I]  
MMM392 Investigative Journalism [Thesis II] (6C)  
MMM400 Data Visualization: Tools & Application

## Elective Courses (Production Major)

MMM302 Logic & Critical Thinking  
MMM312 Introduction to Advertising & PR  
MMM329 Creative Writing Workshop  
MMM355 Production of Documentary  
ENT403 Entrepreneurship & Small Business  
MMM555 Discovering Film

## Elective Courses (Journalism Major)

MMM302 Logic & Critical Thinking  
MMM308 Contemporary World Media  
MMM329 Creative Writing Workshop  
MMM356 Ad-Film Production  
MMM386 Introduction to Podcast & Audio Journalism  
ENT403 Entrepreneurship & Small Business

## Special Summer Course offered to all BS/BBA students

MMM555 Discovering Film

## Course Structure

<b>Semester One</b> Critical Reading & Creative Writing History of Filmmaking Introduction to Photography Urdu I Introduction to Creative Arts Pakistan Studies	<b>Semester Two</b> Design Tools Introduction to Journalism Introduction to Video Production Introduction to Performing Arts Media History - From Cave-paintings to TikTok International Relations
<b>Semester Three</b> Writing for Digital Media Introduction to Podcast & Audio Journalism Cinematography Concept Art - From Art to 'Akbarnama' Editing & Post Production Urdu II	<b>Semester Four</b> Introduction to 3D Animation & Motion Graphics Introduction to Sound Design Interface Design Introduction to Advertising & PR Screenplay I: Writing & Adapting Stories Digital Journalism



<b>Semester Five</b> UI/UX Design for Interactive Media News Production/ News Anchoring Digital Marketing Basics Social Sciences in Media Production Design (P) Sports Journalism (J) Screenplay II: Screenwriting for Short Films (P)	<b>Semester Six</b> Methods in Media Research Production of Documentary (J) New Media Technologies: Tools & Applications (P) Contemporary World Media (J) Content Creation Production Management (P) Direction (P) Business Journalism (J) Data Visualization: Tools & Applications (J)
<b>Semester Seven</b> Design Thinking Media Law and Ethics Sub-Editing & Page Design (J) Ad-Film Production (J) Logic & Critical Thinking Creative Portfolio Management (P) Entrepreneurship & Small Business Filmmaking – The Art & Craft: Thesis I (6C) Investigative Journalism: Thesis I	<b>Semester Eight</b> Discovering Film Human Rights & Gender Reporting (J) Content Distribution & Promotion Photojournalism (J) Advanced Post Production (P) Filmmaking – The Art & Craft: Thesis II (6C) Investigative Journalism: Thesis II (6C)

*Note: (J) = Journalism; (P) = Production*

*6C = 6 Credit Hours*

*Internship (2 credit hours)*

## BS ECONOMICS, LAW & INTERNATIONAL RELATIONS (ELI)

This program focuses on international negotiations for trade and commerce for business and economic advantages. Graduates of this program can evaluate the comparative advantage of trading with businesses and countries. They can evaluate the economic implications of policies related to GMOs, geopolitical dynamics, trade routes and economic corridors such as CPEC etc. The graduates can help large importers, exporters and logistic organizations in designing their business strategies. They can also help government bodies in evaluating and designing bilateral and multilateral agreements

The professional development of economists is a pivotal factor for building the human capital index. IoBM has always taken the lead in providing the much needed human capital to Pakistan's business industry. Keeping in view the dire need for a dynamic and enterprising industry IoBM offers BS-ELI 4-year program to contribute towards building the backbone of the economy. This 4-year program has been particularly developed to fill in the niche in Pakistan's industrial and banking sector. The purpose of the program is to provide a strong foundation in the field of economics and integrate the core principles of effective management of organizations as well as the economy. This is a 144 credit hours program that will be offered during the weekdays.

It is a 144 credit hour program with 22 compulsory courses (3 credit hours each), 8 elective courses (3 credit hours each), 5 aligned courses (3 credit hours each), and 13 other courses (3 credit hours each). The maximum time limit to complete the BS-ELI degree is four years.

### Eligibility Criteria:

Intermediate (any group)/A-Levels with at least 50% marks CGPA 2.0 out of 4 from a recognized university/institution.

### Learning Outcomes

- Students should not only get well familiar with economic theories and laws but also with applied economics.
- They should be able to enhance their contribution towards the growth of the whole country/economy.
- Students should be able to apply quantitative techniques and modelling to analyze key economic indicators for the performance of an organization.
- Students should be well equipped with mathematical/statistical/economic tools to demonstrate strong analytical and problem-solving skills.
- They should be well equipped with software such as E-Views and SPSS.
- Students should be able to produce a research paper or research article independently in any journal of international repute.
- They should develop a thirst for research-based studies like going for M.Phil. or PhD.
- They can further set an example by getting success in their lives for their juniors to go for research base studies
- Students should be able to focus on the humanistic aspect of Economics w.r.t IR and Law and also its impact on society.
- Students should be prepared for future careers in our interconnected society, whether in mass media or advanced study
- Students should be able to analyze financial documents, like budget, critically.
- They should be capable of analyzing fiscal policy, monetary policy and trade policy so that they can provide problem-solving solutions.
- Students should be able to get admission to institutes of international repute.
- They should get international or national scholarships.
- Understanding of the institutions, processes, constitutional background, and policy outcomes of the Pakistani government and the ability to compare the Pakistani government to other countries around the world
- Knowledge of key theories and concepts, historical developments, organizations, and modern issues in international relations.

### Career Path

- Business Journalist/Content Developer
- Supply Chain & Logistic Analyst
- Quantitative Risk Analyst
- Public Sector/Civil Services
- Policy Analyst/Research Economist
- Portfolio Manager
- Financial Sector



## Foundation Courses

COM101	General English
COM107	Academic English
COM119	Communication Skills
PSC301	Pakistan Studies
REL101	Islamic Studies
BED101	General Science
SSC202	Environmental Studies
SSC104	Principles of Sociology
PSY300	Introduction to Psychology
MTH100	Mathematical Economics
MTH101	College Algebra
MTH104	Calculus I
MTH105	Calculus II
STA301	Models of Inferences
STA302	Methods of Data Analysis
SSC301	History of Ideas
LAN 10*	Foreign Language I
LAN 20**	Foreign Language II
*1 = Introduction to Arabic	*2 = Introduction to French
*4 = Introduction to German	*6 = Introduction to Italian
*8 = Introduction to Chinese	
**1 = Intermediate Arabic	**2 = Intermediate French
**4 = Intermediate German	**6 = Intermediate Italian
**8 = Intermediate Chinese	

## Core Courses

### Law

LAW105	Mercantile Law
LAW106	Company Law
LAW202	Banking Law in Pakistan
LAW203	Insurance Law in Pakistan
LAW301	Intellectual Property Patents, Copyrights
LAW400	Company Secretarial Practices

### Economics

ECO101	Principles of Microeconomics
ECO102	Principles of Macroeconomics
ECO302	International Trade
ECO304	Econometrics-1
ECO307	Monetary Theory & Policy
ECO315	Microeconomics Analysis
ECO316	Macroeconomics Analysis
ECO323	Development Economic
ECO402	Pakistan Economic Policy
ECO412	Econometrics-2

### International Relations

BIR301	Introduction to IR
BIR302	Political Geography
BIR303	World Politics
BIR305	Religion, Culture & IR
BIR308	Peace Building and Conflict Zones
BIR312	Globalization

## Elective Courses

### Economics

ECO207	Game Theory
ECO310	History of Economics Thought
ECO314	Contemporary Issues in Macroeconomics
ECO321	General Equilibrium and Welfare Economics
ECO407	Analysis of Pakistan Industry
ECO410	Issues in Political Economy
ECO411	Islamic Economics
ECO418	Resources & Environmental Economics
ECO442	Public Finance
ECO444	Economics of Logistics
ECO518	Governance & Public Policy
ECOXXX	Agronomics
ECOXXX	Merger, Acquisition & Restructuring

### International Relations (IR)

BIR314	Confidence Building Measures
BIRXXX	Introduction to Political Science
BIRXXX	Global Governance
BIRXXX	Muslim Political Thought

### Law

LAW404	Arbitration
LAW407	Statutory Compliance
LAWXXX	Taxation Law
LAWXXX	Consumer Protection Act & Electronic Crime Law



## Course Structure

<b>Semester One</b> Principles of Microeconomics Islamic Studies General English Introduction to Psychology Principles of Sociology College Algebra	<b>Semester Two</b> Principles of Macroeconomics Foreign Language-1 General Science Academic English Calculus-1 Environmental Studies
<b>Semester Three</b> Microeconomics Analysis Foreign Language-2 Introduction to IR Mercantile Law Models and Inferences Mathematical Economics	<b>Semester Four</b> Macroeconomics Analysis Methods of Data Analysis Pakistan Studies History of Ideas Communication skills Calculus II
<b>Semester Five</b> Econometrics-1 Development Economics Company Law Banking Law World Politics Religion, Culture & IR	<b>Semester Six</b> Econometrics-2 International Trade Insurance law in Pakistan Intellectual property, Patents and copyright Borders in a Globalization World Energy Politics
<b>Semester Seven</b> Monetary Theory & Policy Pakistan Economic Policy Company Secretarial Practices Peacebuilding & Conflict Zone Law Elective-I IR Elective-I	<b>Semester Eight</b> Economics Elective-I Economics Elective-II Economics Elective-III Economics Elective-IV Law Elective-II IR Elective-II

## BS ECONOMICS, MEDIA & INTERNATIONAL RELATIONS (EMI)

This program focuses on international negotiations for trade and commerce for business and economic advantages. Graduates of this program can evaluate the comparative advantage of trading with businesses and countries. They can evaluate the economic implications of policies related to GMOs, geopolitical dynamics, trade routes and economic corridors such as CPEC etc. The graduates can help large importers, exporters and logistic organizations in designing their business strategies. They can also help government bodies in evaluating and designing bilateral and multilateral agreements

The professional development of economists is a pivotal factor for building the human capital index. IoBM has always taken the lead in providing the much needed human capital to Pakistan's business industry. Keeping in view the dire need for a dynamic and enterprising industry. IoBM offers BS-EMI 4-year program to contribute towards building the backbone of the economy. This 4-year program has been particularly developed to fill in the niche in Pakistan's industrial and banking sector. The purpose of the program is to provide a strong foundation in the field of economics and integrate the core principles of effective management of organizations as well as the economy. This is a 144 credit hours program that will be offered during the weekdays.

It is a 144 credit hour program with 22 compulsory courses (3 credit hours each), 8 elective courses (3 credit hours each), 5 aligned courses (3 credit hours each), and 13 other courses (3 credit hours each). The maximum time limit to complete the BS-EMI degree is four years.

### Eligibility Criteria:

Intermediate (any group)/A-Levels with at least 50% marks CGPA 2.0 out of 4 from a recognized university/institution.

### Learning Outcomes

- Students should not only get well familiar with economic theories and laws but also with applied economics.
- They should be able to enhance their contribution towards the growth of the whole country/economy.
- Students should be able to apply quantitative techniques and modelling to analyze key economic indicators for the performance of an organization.
- Students should be well equipped with mathematical/statistical/economic tools to demonstrate strong analytical and problem-solving skills.
- They should be well equipped with software such as E-Views, STATA and SPSS.
- Students should be able to produce a research paper or research article independently in any journal of international repute.
- They should develop a thirst for research-based studies like going for M.Phil. or PhD.
- They can further set an example by getting success in their lives for their juniors to go for research base studies
- Students should be able to focus on the humanistic aspect of media and its impact on society.
- Students should be prepared for future careers in our interconnected society, whether in mass media or advanced study
- Students should be able to analyze financial documents, like budget, critically.
- They should be capable of analyzing fiscal policy, monetary policy and trade policy so that they can provide problem-solving solutions.
- Students should be able to get admission to institutes of international repute.
- They should get international or national scholarships.
- Understanding of the institutions, processes, constitutional background, and policy outcomes of the Pakistani government and the ability to compare the Pakistani government to other countries around the world
- Knowledge of key theories and concepts, historical developments, organizations, and modern issues in international relations.

### Career Path

- |   |                                     |
|---|-------------------------------------|
| • Business Journalist/Content Developer | • Policy Analyst/Research Economist |
| • Supply Chain & Logistic Analyst       | • Portfolio Manager                 |
| • Quantitative Risk Analyst             | • Financial Sector                  |
| • Public Sector/Civil Services          |                                     |

## Foundation Courses

COM101 General English  
COM107 Academic English  
COM119 Communication Skills  
PSC 301 Pakistan Studies  
REL 101 Islamic Studies  
BED 101 General Science  
SSC 202 Environmental Studies  
SSC 104 Principles of Sociology  
PSY300 Introduction to Psychology  
MTH100 Mathematical Economics  
MTH101 College Algebra  
MTH104 Calculus I  
MTH105 Calculus II  
STA301 Models of Inferences  
STA302 Methods of Data Analysis  
SSC301 History of Ideas  
LAN 10\* Foreign Language I  
LAN 20\*\* Foreign Language II  
\*1 = Introduction to Arabic      \*2 = Introduction to French  
\*4 = Introduction to German      \*6 = Introduction to Italian  
\*8 = Introduction to Chinese  
  
\*\*1 = Intermediate Arabic      \*\*2 = Intermediate French  
\*\*4 = Intermediate German      \*\*6 = Intermediate Italian  
\*\*8 = Intermediate Chinese

## Core Courses

### Media

MMM318 Business Journalism  
MMM367 Digital Journalism  
MMM374 Introduction to Journalism  
MMM384 Design Thinking  
MMM385 Writing for Digital Media  
MMM395 Media History

### Economics

ECO101 Principles of Microeconomics  
ECO102 Principles of Macroeconomics  
ECO315 Microeconomics Analysis  
ECO316 Macroeconomics Analysis  
ECO304 Econometrics-1  
ECO323 Development Economic  
ECO412 Econometrics-2  
ECO302 International Trade  
ECO307 Monetary Theory & Policy  
ECO402 Pakistan Economic Policy

### International Relations

BIR301 Introduction to IR  
BIR302 Political Geography  
BIR303 World Politics  
BIR305 Religion, Culture & IR  
BIR308 Peace Building and Conflict Zones  
BIR312 Globalization

## Elective Courses

### Economics

ECO407 Analysis of Pakistan Industry  
ECO410 Issues in Political Economy  
ECO411 Islamic Economics  
ECO418 Resources & Environmental Economics  
ECO442 Public Finance  
ECO518 Governance & Public Policy  
ECO310 History of Economics Thought  
ECO321 General Equilibrium and Welfare Economics  
ECO207 Game Theory  
ECO314 Contemporary Issues in Macroeconomics  
ECO444 Economics of Logistics  
ECOXXX Agronomics  
ECOXXX Merger, Acquisition & Restructuring

### International Relations (IR)

BIR314 Confidence Building Measures  
BIRXXX Introduction to Political Science  
BIRXXX Global Governance  
BIRXXX Muslim Political Thought

### Media

MMM308 Contemporary World Media  
MMM555 Discovering Film  
MMM405 Media, Law and Ethics



## Course Structure

<b>Semester One</b> Principles of Microeconomics Islamic Studies General English Introduction to Psychology Principles of Sociology College Algebra	<b>Semester Two</b> Principles of Macroeconomics Foreign Language-1 General Science Academic English Calculus-1 Environmental Studies
<b>Semester Three</b> Microeconomics Analysis Foreign Language-2 Introduction to IR Mercantile Law Models and Inferences Mathematical Economics	<b>Semester Four</b> Macroeconomics Analysis Methods of Data Analysis Pakistan Studies History of Ideas Introduction to Journalism Calculus II
<b>Semester Five</b> Econometrics-1 Development Economics Media History Digital Journalism World Politics Religion, Culture & IR	<b>Semester Six</b> Econometrics-2 International Trade Business Journalism Design Thinking Globalization Political Geography
<b>Semester Seven</b> Monetary Theory & Policy Pakistan Economic Policy Writing for Digital Media Peacebuilding & Conflict Zone Media Elective-I IR Elective-I	<b>Semester Eight</b> Economics Elective-I Economics Elective-II Economics Elective-III Economics Elective-IV Media Elective-II IR Elective-II

## BS JOINT (HONORS) IN BUSINESS & PSYCHOLOGY

The BS Joint (Hons) in Business and Psychology program is designed to provide strong foundation in business and to integrate core psychological principles. The main goal of this program is to produce graduates who have the ability to apply science of human behavior to practical business problems. Students learn to apply theories in psychology to business challenges. They learn to analyze business problems through psychological approach, utilizing research skills and developing effective solutions.

The four-year program requires completion of 129 credit hours of coursework. Students can take minimum load of 12 credit hours (4 courses per semester) or maximum load of 18 credit hours (6 courses per semester).

**Entry Requirement:** HSSC/FSc/FA/A' level

### General Education Courses

LAN 10\* Foreign Language I

LAN 20\*\* Foreign Language II

\*1 = Introduction to Arabic

\*2 = Introduction to French

\*4 = Introduction to German

\*6 = Introduction to Italian

\*8 = Introduction to Chinese

\*\*1 = Intermediate Arabic

\*\*2 = Intermediate French

\*\*4 = Intermediate German

\*\*6 = Intermediate Italian

\*\*8 = Intermediate Chinese

COM107 Academic English

COM202 Business and Professional Speech

COM205 Persuasive & Analytical Writing for Business Communication

STA201 Quantitative Business Analysis

STA202 Quantitative Skills and Managerial Statistics

SSC104 Principles of Sociology

SSC202 Environmental Studies

SSC401 Business Ethics

BED101 General Science

PSC301 Pakistan Studies

REL101 Islamic Studies

### Psychology Core Courses

PSY300 Introduction to Psychology

PSY301 Research Methods in Business Psychology

PSY302 Writing Business Psychology Research

PSY303 Introduction to Psychological Testing

PSY304 Experimental Psychology

PSY305 Contemporary Social Psychology

PSY306 Understanding Individual: Personal Construct

PSY307 Psychology of Organizational Change

PSY308 Psychological Aspects of Advertising

PSY309 Developmental Psychology

PSY310 Positive Psychology

PSY311 Consumer Psychology



## Business Core Courses

ACC101 Introduction to Financial Accounting  
 ACC201 Intermediate Financial Accounting  
 ECO101 Principles of Microeconomics  
 ECO102 Principles of Macroeconomics  
 ENT307 Entrepreneurial Leadership and Motivation  
 ENT308 Social Advocacy and Community Service  
 ENT 202 Entrepreneurial Business Operations  
 MAN101 Principles of Management  
 MAN302 Organizational Behavior  
 MKT302 Marketing Management  
 MKT 405 Marketing Research  
 LAW409 Corporate and Business Law

## Elective Courses

### Elective Psychology (3 courses)

PSY501 Work Motivation and Attitude  
 PSY515 Projective Methods  
 PSY507 Cyber Psychology, Behavior and Social Networking  
 PSY508 Health Promotion in Corporate Setting

### Elective Business (3 courses)

HRM505 Organizational Change & Development  
 MAN405 Strategic Management  
 HRM514 Occupational Health and Safety  
 HRM515 Employees Engagement & Wellbeing

## Course Structure

<b>Semester One</b> Academic English(W/R) Introduction to Financial Accounting Principles of Microeconomics Principles of Management Introduction to Psychology Principles of Sociology	<b>Semester Two</b> Principles of Macroeconomics Pakistan Studies General Science Organizational Behavior Entrepreneurial Leadership and Motivation Research Methods in Business Psychology
<b>Semester Three</b> Islamic Studies Intermediate Financial Accounting Marketing Management Persuasive & Analytical Writing for Business Communication Quantitative Business Analysis Introduction to Psychological Testing	<b>Semester Four</b> Business and Professional Speech Business Ethics Contemporary Social Psychology Marketing Research Experimental Psychology Quantitative Skills and Managerial Statistics
<b>Semester Five</b> Writing Business Psychology Research Developmental Psychology Social Advocacy and Community Service Psychological Aspects of Advertising Foreign Language I Environmental Studies	<b>Semester Six</b> Understanding Individual: Personal Construct Psychology of Organizational Change Consumer Psychology Entrepreneurial Business Operations Corporate and Business Law Foreign Language II
<b>Semester Seven</b> Positive Psychology Elective I Elective II Elective III	<b>Semester Eight</b> Elective I Elective II Elective III <i>Internship (Non Credit)</i>

## B.Ed (HONORS) 4 Year

B.Ed. honors (4 years) degree program is offered to forthcoming pre-service teachers, potential school administrators, enterprising educational entrepreneurs and prospective administrators of educational organizations.

Professional development of school teachers and administrators is a pivotal factor for building the human capital index. IoBM has always taken the lead in providing the much needed human capital to Pakistan's business industry. Keeping in view the dire need of dynamic and enterprising teachers and administrators in schools and educational organizations, IoBM offers B.ED honors (4 year) program to contribute towards building the backbone of the educational sector. This 4-year program has been particularly developed to fill in the niche in Pakistan's educational milieu. The purpose of the program is to provide a strong foundation in the field of education and integrate the core principles of effective teaching and managing educational organizations. The main goal of this program is to produce graduates, who have the ability to apply the science of learning to practical educational problems. The program not only meets the basic criteria of effective skills based pedagogy and foundations for solid administration in public and private schools, but also provides a clear path to pursue higher studies in Education (M.Phil/Ph.D).

This is a 144 credit hours program which will be offered during the weekdays.

**Areas of Specialization:** School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences.

### Eligibility Criteria:

- Intermediate (any group)/A-Levels with at least 50% marks CGPA 2.0 out of 4 from a recognized university/institution.
- Success in aptitude test and interview conducted by IoBM

### Compulsory (6 Courses)

COM101 General English  
REL101 Islamic Studies  
COM107 Academic English  
BED110 Introduction to Info. and Communication Technology (ICT)  
BED203 Foundation and history of Education  
PSC301 Pakistan Studies

### Content (10 Courses)

LAN112 Urdu I  
BED101 General Science  
BED107 General Mathematics  
SEM103 Ethical Leadership: Islamic Perspective  
BED303 Contemporary Issues & Trends in Education  
SSC202 Environmental Studies  
BED401 Area of Specialization 1  
BED403 Area of Specialization 2  
BED405 Area of Specialization 3  
BED205 Early Childhood Education

### Foundation (8 Courses)

BED206 Educational Psychology  
BED103 General Methods and Principles of Teaching  
SED102 Philosophy of Education & its Psychological Roots  
BED213 School, Community and Teacher  
BED231 Educational Policy and Economics  
BED421 Sociology of Education  
BED301 Curriculum Development  
BED233 Evaluation and Assessment



## Professional (17 Courses)

BED211	Teaching of Mathematics
BED415	Lifelong Learning
BED209	English language Teaching
BED341	Teacher Education
BED238	Interpersonal Communication Skills in Edu. Setting
BED201	Teaching of Science
BED426	Comparative Education System
BED351	Edupreneurship
BED337	Educational Counseling
BED353	Teaching of Social Science Subjects
BED361	Research Methods in Education I (Qualitative)
BED357	Critical Thinking and Reading
BED359	School Management
BED362	Research Methods in Education II (Quantitative)
BED407	Innovations and Technology in Education
BED405	Inclusive Education
BED491	Research Project

## Teaching Practice (4 courses)

BED281	Teaching Practicum - I
BED381	Teaching Practicum - II
BED383	Teaching Practicum – III
BED481	Teaching Practicum - IV

## Course Structure

<b>Semester One</b> General English Islamic Studies Introduction to Psychology Urdu I General Science Foundation and History of Education	<b>Semester Two</b> Academic English Introduction to Info. and Communication Technology (ICT) General Mathematics General Methods and Principles of Teaching Pakistan Studies Philosophy of Education and its Psychological Roots
<b>Semester Three</b> Educational Psychology Interpersonal Communication Skills in Educational Setting Early Childhood Education Environmental Sciences English Language Teaching Teaching of Mathematics	<b>Semester Four</b> Evaluation and Assessment Teaching in Early Years Educational Policy and Economics Sociology of Education Teaching of Science Teaching Practicum – I
<b>Semester Five</b> Contemporary Issues & Trends in Edu. Edupreneurship Teacher Education Educational Counseling Teaching of Social Science Subjects Teaching Practicum – II	<b>Semester Six</b> Curriculum Development Research Methods in Education I (Qualitative) Critical Thinking and Reading Ethical Leadership: Islamic Perspective School Management Teaching Practicum III
<b>Semester Seven</b> Lifelong Learning Research Methods in Education II (Quantitative) Area of Specialization – I * Area of Specialization – II* Area of Specialization – III * Comparative Education System	<b>Semester Eight</b> Innovations and Technology in Education Inclusive Education Research Project (6 credits) Teaching Practicum IV (6 credits)

\* Areas of Specialization: School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences



## B.Ed (HONORS) 2.5 Year

B.Ed. honors (2.5 years) degree program is offered to pre-service and in-service teachers, enterprising educational entrepreneurs, potential and current administrators of schools and other educational organizations.

Professional development of school teachers and administrators is a pivotal factor for building the human capital index. IoBM has always taken the lead in providing the much-needed human capital to Pakistan's business industry. Keeping in view the dire need of dynamic and enterprising teachers and administrators in schools and educational organizations, IoBM offers B.ED (honors) 2.5 year program to contribute towards building the backbone of the educational sector. This 2.5-year program has been particularly developed to fill in the niche in Pakistan's educational milieu. The purpose of the program is to provide a strong foundation in the field of education and integrate the core principles of effective teaching and managing educational organizations. The main goal of this program is to produce graduates, who have the ability to apply the science of learning to practical educational problems. The program not only meets the basic criteria of effective skills based pedagogy and foundations for solid administration in public and private schools, but also provides a clear path to pursue higher studies in Education (M.Phil/PhD).

This is a 90 credit hours weekend program.

**Areas of Specialization:** School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences

### Eligibility Criteria:

- BA / BSc. / B.Com or equivalent degree (14 years of education) with minimum 45%/ 2.00 CGPA Division from a university recognized by HEC
- Success in aptitude test and interview conducted by IoBM

### Foundation Courses (6 Course)

COM107 Academic English  
BED203 Foundation and history of Education  
BED301 Curriculum Development  
BED233 Evaluation and Assessment  
BED421 Sociology of Education  
BED206 Educational Psychology  
SED102 Philosophy of Education and its Psychological Roots  
BED231 Educational Policy and Economics

### Content courses (4 Courses)

BED205 Early Childhood Education  
BED401 Area of Specialization 1  
BED403 Area of Specialization 2  
BED405 Area of Specialization 3



## Professional courses (13 Courses)

BED341 Teacher Education  
 BED337 Educational Counseling  
 BED352 Strategic Management of Schools  
 BED363 Research Methods in Education  
 BED357 Critical Thinking and Reading  
 BED407 Innovations and Technology in Education  
 BED405 Inclusive Education  
 BED426 Comparative Education System  
 BED238 Interpersonal Communication Skills in Educational Settings  
 BED415 Lifelong Learning  
 BED359 School Management  
 BED351 Edupreneurship

### BED491 Research Project: 6 Credit hours

BED281 Teaching Practicum - I  
 BED381 Teaching Practicum - II  
 BED383 Teaching Practicum – III

## Course Structure

<b>Semester One</b> Foundations and History of Education Curriculum Development Evaluation & Assessment Innovations and Technology in Education	<b>Semester Two</b> Inclusive Education Teacher Education Critical Thinking and Reading Educational Psychology
<b>Semester Three</b> Philosophy of Education and its Psychological Roots Research Methods in Education Academic English Teaching Practicum-I	<b>Semester Four</b> Edupreneurship Sociology of Education Teaching Practicum-II School Management
<b>Semester Five</b> Interpersonal Communication Skills in Educational Setting Educational Policy and Economics Early Childhood Education Lifelong Learning	<b>Semester Six</b> Area of Specialization – I * Area of Specialization – II * Area of Specialization – III* Strategic Management of Schools
<b>Semester Seven</b> Comparative Education Systems Educational Counselling Teaching Practicum (6 credit hours) Research Project (6 credit hours)	

\* Areas of Specialization: School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences.

## B.Ed (HONORS) 1.5 Year

B.Ed. honors (1.5 years) degree program is offered to pre-service and in-service teachers, enterprising educational entrepreneurs, potential and current administrators of schools and other educational organizations.

Professional development of school teachers and administrators is a pivotal factor for building the human capital index. IoBM has always taken the lead in providing the much needed human capital to Pakistan's business industry. Keeping in view the dire need of dynamic and enterprising teachers and administrators in schools and educational organizations, IoBM offers B.ED (honors) 1.5-year program to contribute towards building the backbone of the educational sector. This 1.5-year program has been particularly developed to fill in the niche in Pakistan's educational milieu. The purpose of the program is to provide a strong foundation in the field of education and integrate the core principles of effective teaching and managing educational organizations. The main goal of this program is to produce graduates, who have the ability to apply the science of learning to practical educational problems. The program not only meets the basic criteria of effective skills based pedagogy and foundations for solid administration in public and private schools, but also provides a clear path to pursue higher studies in Education (M.Phil/Ph.D).

This is a 54 credit hours program is offered during the weekends.

**Areas of Specialization:** School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences

### Eligibility Criteria

- 16-years of Education (MA, M.Sc., M.Com. or equivalent) in any discipline like Sciences, Social Sciences, Humanities and others, with at least 45%/2.00 CGPA from a university recognized by HEC.
- Success in aptitude test and interview conducted by IoBM

### Foundation courses (3 Course)

BED203 Foundation and history of Education  
BED301 Curriculum Development  
BED233 Evaluation and Assessment

### Content courses (3 Courses)

BED401 Area of Specialization 1  
BED403 Area of Specialization 2  
BED405 Area of Specialization 3

### Professional courses (8 courses)

BED341 Teacher Education  
BED337 Educational Counseling  
BED359 School Management  
BED363 Research Methods in Education  
BED357 Critical Thinking and Reading  
BED407 Innovations and Technology in Education  
BED405 Inclusive Education  
BED351 Edupreneurship  
BED481 Teaching Practicum  
BED491 Research Project



## Course Structure

<b>Semester One</b> Foundations and History of Education Curriculum Development Evaluation & Assessment Innovations and Technology in Education	<b>Semester Two</b> Critical Thinking and Reading Educational Counselling Inclusive Education Teacher Education
<b>Semester Three</b> Area of Specialization – I * Area of Specialization – II * Area of Specialization – III * Research Methods in Education	<b>Semester Four</b> School Management Edupreneurship Teaching Practicum (6 credit hours) Research Project (6 credit hours)

*\* Areas of Specialization: School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences*

## MBA EDUCATIONAL MANAGEMENT

The MBA program is designed for students with 16 years of education with degrees in a wide range of disciplines such as business, commerce, law, science, and social sciences. This program provides knowledge, skills and tools required for 21st century leadership and management for educational institutions in the fast-changing economy. Students selecting the domain-based specialization in MBA Educational Management program are expected to have completed 30 credit hours of foundation stage of the MBA program. Specialization stage consists of 42 credit hours of course work covering strategic and operational areas. The Department of Education has developed operational and elective courses to help students attain the knowledge and skills required in the leadership and management of educational institutions.

### Eligibility Criteria

The admission in MBA Educational Management Program is based on any of the following:

- 16 years of education from HEC/Provincial Government approved Institutes/Colleges/Universities in Pakistan
- A final qualification examination of a professional body recognized by the Higher Education Commissions of Pakistan, for example, ACMA, CA, ACCA (HEC equivalence certificate required)
- Four years overseas bachelor's degree or equivalent recognized by HEC
- Minimum 55% marks in last qualification in annual examination system
- Minimum CGPA 2.5 on a scale of 4 in semester system
- Success in aptitude test and interview conducted by IoBM

### Required Courses

#### Accounting

ACC419 Financial Accounting

#### Economics

ECO409 Business Economics

#### Educational Management

EDM602 Educational Policy and Economics

EDM518 Evaluation and Assessment in Education

EDM526 Curriculum Management and Planned Change

EDM415 Educational Philosophy and Ethics

EDM689 Thesis Writing-Capstone Project I (Research Methods)

EDM690 Thesis Writing-Capstone Project II

#### Finance

FIN408 Theory and Practice of Financial Management

#### Human Resource Management

HRM410 Managing Human Capital

HRM606 Leadership, Ethics and Change

#### Law

LAW409 Corporate and Business Law



## Communication

COM402 Business Communication

## Maths & Stats

STA411 Quantitative Analysis and Decision Making

## Management

MAN418 Management and Organizational Dynamics

MAN612 Strategic Management\*

MAN606 Business Analytics

## Marketing

MKT402 Marketing Management

MKT404 Methods in Business Research

MKT509 Consumer Behavior

MKT610 Marketing Strategies and Value Innovation\*

## Elective Courses

### Educational Management

EDM624 Innovations and Technology in Education

EDM621 Edupreneurship in the Changing World

EDM654 Lifelong Learning in Changing Contexts

EDM656 Teacher Education

EDM625 Distance Learning in the 21st Century

EDM606 Global Trends in Education

## Course Structure

<b>Semester One</b> Consumer Behavior Financial Accounting Corporate and Business Law Business Communication	<b>Semester Two</b> Management and Organizational Dynamics Marketing Management Quantitative Analysis and Decision Making Marketing Strategies and Value Innovations
<b>Semester Three</b> Methods in Business Research Business Economics Theory and Practice of Financial Management Business Analytics	<b>Semester Four</b> Educational Philosophy and Ethics Leadership Ethics and Change Evaluation and Assessment in Education Educational Policy and Economics
<b>Semester Five</b> Curriculum Management and Planned Change Managing Human Capital Thesis Writing - Capstone I (Research Methods) Elective I	<b>Semester Six</b> Strategic Management Thesis Writing - Capstone II Elective II Elective III

# **MSc ORGANIZATIONAL PSYCHOLOGY AND HUMAN RESOURCE MANAGEMENT FOR STUDENTS WITH 16 YEARS EDUCATION**

The program is intended for professionals looking for a better understanding of the organization they work for. It is concerned with the social and psychological processes operating in organizations, and how these processes relate to organizational systems and structures.

This two-year weekend program requires successful completion of 72 credit hours of course work, including 23 courses plus a research project of 3 credit hours each spread over six semesters. Students are expected to maintain a CGPA of 3.0 and successfully complete research projects for conferment of the degree. This program combines study in psychology with courses in human resource management, workplace relations, leadership and team dynamics, and management strategy.

Students can take a minimum load of 6 credit hours (two courses) or maximum of 12 credit hours (four courses) in each of the semesters.

## **Foundation Courses**

### **Psychology**

PSY400 Introduction to Organizational Psychology

### **Management**

MAN418 Management and Organizational Dynamics

### **Human Resource Management**

HRM410 Managing Human Capital

### **Statistics**

STA410 Introduction to Behavioral Statistics

## **Core Courses**

### **Psychology**

PSY402 Counseling Psychology  
PSY405 Group Dynamics  
PSY406 Research Methods in Organizational Psychology  
PSY407 Personnel Psychology  
PSY408 Consumer Psychology  
PSY430 Psychological Testing-I  
PSY431 Psychological Testing-II  
PSY432 Behavior Modification in Industry  
PSY433 Leadership and Strategic Change



## Human Resource Management

HRM408 Human Resource Issues in Pakistan

HRM409 Organizational Consulting Skills

HRM607 Talent Acquisition

HRM608 Labour Studies and Employee Relations

HRM609 Learning and Organizational Development

HRM610 Negotiations and Conflict Resolution Skills

HRM530 Research Practicum in HRM

## Elective Courses Courses

### Psychology

PSY501 Work Motivation Attitude

PSY506 Quality of Work Life

PSY515 Projective Methods

### Human Resource Management

HRM615 Leadership Studies

HRM617 HR Analytics

HRM624 Talent Management and Performance Development

HRM625 Total Rewards Management

## Course Structure

### (Career Option I Majors Psychology)

<b>Semester One</b> Introduction to Organizational Psychology Management and Organizational Dynamics Managing Human Capital Introduction to Behavioral Statistics	<b>Semester Two</b> Group Dynamics Organizational Consulting Skills Psychological Testing-I Human Resource Issues in Pakistan
<b>Semester Three</b> Research Methods in Organizational Psychology Consumer Psychology Recruitment and Selection Industrial Relation and Labor Law	<b>Semester Four</b> Counseling Psychology Personnel Psychology Employee Training and Development Negotiation Skills
<b>Semester Five</b> Psychological Testing-II Behavior Modification in Industry Leadership and Strategic Change Research Practicum in HRM	<b>Semester Six</b> Elective I Elective II Elective III Elective IV

*\*Note: For the 6th Semester students are required to choose 2 Psychology electives and 2 HRM electives.*



# **MSc ORGANIZATIONAL PSYCHOLOGY AND HUMAN RESOURCE MANAGEMENT FOR STUDENTS WITH 14 YEARS EDUCATION**

The program is geared towards professionals who wish for a better understanding of the organization they work for. It is concerned with the social and psychological processes operating in organizations, and how these processes relate to organizational systems and structures.

This three-year weekend program requires successful completion of 108 credit hours of course work, including 36 courses and 3 credit hours research project each spread over six semesters. Students are expected to maintain a CGPA of 3.0 and successfully complete research projects for conferment of the degree. This program combines study in psychology with courses in human resource management, workplace relations, leadership and team dynamics, and management strategy.

Students can take a minimum load of 6 credit hours (two courses) or maximum of 12 credit hours (four courses) in each of the semesters.

## **Foundation Courses**

### **Psychology**

PSY400 Introduction to Organizational Psychology

### **Management**

MAN418 Management and Organizational Dynamics

MAN612 Strategic Management

### **Entrepreneurship**

ENT308 Social Advocacy and Community Service

### **Human Resource Management**

HRM410 Managing Human Capital

### **Marketing**

MKT401 Principles of Marketing

### **Statistics**

STA410 Introduction to Behavioral Statistics

### **Communication**

COM402 Business Communication

COM403 Interpersonal Communication Skills

### **Social Sciences**

SSC401 Business Ethics

SSC407 Principles of Sociology

### **Management Information System**

MIS401 Computer Applications



## Core Courses

### Psychology

- PSY402 Counseling Psychology
- PSY405 Group Dynamics
- PSY406 Research Methods in Organizational Psychology
- PSY407 Personnel Psychology
- PSY408 Consumer Psychology
- PSY430 Psychological Testing-I
- PSY431 Psychological Testing-II
- PSY432 Behavior Modification in Industry
- PSY433 Leadership and Strategic Change
- PSY434 Personality Theories

### Human Resource Management

- HRM408 Human Resource Issues in Pakistan
- HRM409 Organizational Consulting Skills
- HRM530 Research Practicum in HRM
- HRM612 Strategic Human Resource Management
- HRM619 Talent Acquisition
- HRM620 Labour Studies and Employee Relations
- HRM621 Learning and Organizational Development
- HRM622 Negotiations and Conflict Resolution Skills
- HRM623 Managing Organizational Change
- HRM624 Talent Management and Performance Development
- HRM625 Total Rewards Management

## Elective Courses

### Psychology

- PSY501 Work Motivation Attitude
- PSY506 Quality of Work Life
- PSY515 Projective Methods

### Human Resource Management

- HRM614 Rewards Management
- HRM615 Leadership Studies
- HRM616 Talent Management and Performance Development
- HRM617 HR Analytics

## Course Structure

<b>Semester One</b> Intro. to Organizational Psychology Introduction to Behavioral Statistics Principles of Sociology Computer Applications	<b>Semester Two</b> Management & Organizational Dynamics Principles of Marketing Personality Theories Business Ethics	<b>Semester Three</b> Managing Human Capital Strategic Management Performance Appraisal Business Communication (3+0) [Pre req NA]
<b>Semester Four</b> Social Advocacy and Community Service Group Dynamics Industrial Relation and Labor Law Organizational Consulting Skills	<b>Semester Five</b> Human Resource Issues in Pakistan Psychological Testing-I Organizational Change & Development Interpersonal Communication Skills (3+0) [Pre Req. COM402]	<b>Semester Six</b> Research Methods in Org. Psychology Consumer Psychology Recruitment and Selection Strategic HRM
<b>Semester Seven</b> Counseling Psychology Personnel Psychology Employees Training and Development Negotiation Skills	<b>Semester Eight</b> Psychological Testing-II Behavior Modification in Industry Leadership & Strategic Change Research Practicum in HRM	<b>Semester Nine</b> Elective I Elective II Elective III Elective IV

*\*Note: For the 9th Semester students are required to choose 2 Psychology electives and 2 HRM electives.*

## MPhil IN ORGANIZATIONAL PSYCHOLOGY

The MPhil program in Organizational Psychology is designed specifically for the training of professional industrial-organizational psychologists. Students will receive comprehensive training in utilizing psychological knowledge for improving organizational effectiveness and employee satisfaction.

### Eligibility

Candidates with 16 years of education holding a master's degree in Psychology with 1st division/CGPA with at least 3 on a scale of 4 from an HEC recognized university are eligible for admission to the MPhil program at IoBM.

### Program Structure

MPhil is a 30 credit hour program with 8 courses and one thesis of 6 credit hours. Each of the 8 courses will be of 3 credit hours. After successful completion of course work, students are required to undertake research for a thesis under the guidance of a research supervisor assigned by IoBM.

### Course Structure

#### Semester One

MPP601 Qualitative Research Methods in Psychology  
MPP603 Quantitative Research Methods in Psychology  
MPP605 Psychological Testing and Measurement

#### Semester Two

MPP607 Independent Study in Organizational Psychology  
MPP609 Personnel Psychology at Workplace  
MPP611 Human Factors in Work Environment

#### Semester Three

MPP613 Organizational Conflict & Management  
MPP615 Project Practicum in Organizational Psychology

#### Semester Four

MPP620 MPhil Thesis (6 credit hours)

*It is mandatory for research students of MPhil programs to attend at least five sessions of the Psychology Research Seminar Series in each semester.*



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## MS ECONOMICS

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This program is proposed for students with 16 years of education as well as for in-house BS Economics and Finance students of IoBM and those with equivalent qualifications. The students enrolled will complete one year of course work of 24 credit hours and six credit hours of thesis writing.

### Required Courses

#### Economics

- ECO601 Microeconomics
- ECO602 Macroeconomics
- ECO603 Econometrics and Research Methods
- ECO607 Development Economics
- ECO606 Financial Econometrics
- ECO608 Theory and Practice of Economic Policy

### Elective Courses

#### Economics

- ECO706 Monetary Economics
- ECO708 Mathematical Economics
- ECO709 Industrial Economics
- ECO710 Mergers, Acquisitions and Restructuring
- ECO711 Taxation and Business Strategy
- ECO712 Trade and Globalization

Thesis writing (6 credit hours)

### Course Structure

#### Semester One

- Microeconomics
- Macroeconomics
- Econometrics and Research Methods

#### Semester Two

- Theory and Practice of Economic Policy
- Development Economics
- Financial Econometrics

#### Semester Three

- Elective I
- Elective II
- Thesis Writing (6 credit hours)

*It is mandatory for research students of MPhil and PhD programs to attend at least five sessions of the Multi-disciplinary Research Seminar Series in each semester.*

## MPhil EDUCATION

MPhil in Education is specially designed for educators at all levels in private and public sector institutions as well as administrators who have an interest in research. The program provides a strong foundation in the field of educational research and integrates the core principles of research and development backed by innovative practices.

### Eligibility

- As per HEC policy, 16 years of education with 2.5 CGPA or C-Grade.
- Candidates from relevant degree background are required to do coursework of 24 credit hours.
- Candidates from other disciplines are required to take 4 deficiency courses\* as a pre-requisite to the M.Phil. program.
- Candidates must have cleared GAT General (NTS) test at the time of admission.

### Program Requirements

- MPhil requires completion of course work of 24 credit hours and a 6 credit hour thesis.
- Minimum duration is 1.5 years and maximum are 4 years.

### Core Courses

MPE604 Developing a Research Project  
MPE610 Philosophical Foundations in Education  
MPE615 Qualitative Research Methods in Education  
MPE617 Statistical Testing and Inferences in Education  
MPE620 Analysis of Educational Policies  
MPE625 Authentic Assessment in Education

### Thesis

MPE790 Research Thesis (6 credit hours)

### Deficiency Courses

BED203 Foundation and History of Education  
BED301 Curriculum Development  
BED233 Evaluation and Assessment  
BED341 Teacher Education

### Electives

MPE706 Global Trends in Education  
MPE711 Readings and Critical Analysis in Education  
MPE714 Innovations and Technology in Education  
MPE717 Teacher Education  
MPE721 Edupreneurship in the Changing World  
MPE725 Distance Learning in 21st Century  
MPE727 Lifelong Learning in Changing Contexts  
MPE730 Planning Developing and Evaluating Curriculum



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## PhD IN EDUCATION

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The aim of PhD in Education program is to promote scholarship, research and service at national and international levels. The research-oriented doctoral program is the highest academic degree facilitating candidates to remain updated in research literature and conducting socially relevant and intellectually competent research studies in specialized areas. The program offers a range of courses in contemporary topics of education and development, assisting the scholars to compete for leadership positions.

### Eligibility:

Qualification:

- i. The candidates already holding an M.Phil./MS (Education) or equivalent will complete a course work of 24 credit hours from Column –I.
- ii. The candidates already holding an M.Phil./MS or equivalent from other disciplines will complete a course work of 24 credit hours from Column –I and 4 deficiency courses from Column-III.
- iii. The candidates coming after 16 years of education in the relevant discipline i.e., B.Ed/BS (Education) will be required to take 48 credit hours from Column-I and Column II.
- iv. The candidates coming after 16 years of education from other disciplines will be required to take 48 credit hours from Column-I and Column II and 4 deficiency courses from Column-III.

(All candidates applying for Ph.D. must have at least a CGPA of 3.00 out of 4.00 in their last degree)

### Testing Requirement:

The Graduate Record Examination (GRE) test administered by the Education Testing Service or a graduate admission test administered by the Education Testing Council.

### Statement of Purpose:

Required as part of the application to admission in PhD program

### Program Requirements:

PhD requires completion of course work and dissertation/thesis. Minimum duration is 3 years and maximum are 8 years:

- On completion of dissertation/thesis the student is awarded 30 credit hours
- Any other HEC requirement

Column I	Column II	Column III
<b>Core Courses</b>  PED701 Methods and Issues in Advanced Qualitative Research PED703 Methods and Issues in Advanced Quantitative Research PED705 Ways of Knowing PED733 Designing and Developing a Research Framework  <b>Elective Courses</b>  PED741 Application of Research Methods in Education PED831 Writing Proposals for Grants PED833 Independent Research Study PED835 Global Insights in Teacher Education PED837 Research & Innovation in Educational Leadership PED820 Innovations & Pedagogies in Teacher Education PED839 Designing & Conducting Action Research in Education	<b>Core Courses</b>  MPE610 Philosophical Foundations in Education MPE620 Analysis of Educational Policies MPE625 Authentic Assessment in Education  <b>Elective Courses</b>  MPE706 Global Trends in Education MPE711 Readings and Critical Analysis in Education MPE714 Innovations and Technology in Education MPE717 Teacher Education MPE721 Edupreneurship in the Changing World MPE725 Distance Learning in 21st Century MPE727 Lifelong Learning in Changing Contexts MPE730 Planning Developing and Evaluating Curriculum	<b>Deficiency Courses</b>  BED203 Foundation and history of Education BED301 Curriculum Development BED233 Evaluation and Assessment BED341 Teacher Education

## PhD IN ECONOMICS

The PhD in Economics focuses on providing state-of-the-art teaching and research skills within the broader economics discipline. This program aims to produce scholars with thorough knowledge of economic theory, technical and quantitative skills and the ability to apply these to study economic problems. These goals are achieved through teaching, workshops, research seminars, term papers and thesis writing.

### Eligibility

BS or equivalent graduates from HEC recognized institutions meeting the following criteria:

- A minimum CGPA of 3.00 on a scale of 4.00 (or overall 60% marks) or equivalent
- A minimum of 16 years of schooling that corresponds to BS or MS/MPhil equivalent degree from HEC recognized institutions in a relevant discipline
- GRE subject specific or GAT subject test conducted by the NTS, or equivalent in the relevant discipline. A minimum of 60% (percentage) marks is required
- Pass interview conducted by the Institute
- Meet all other HEC stipulated requirements Program Requirements PhD requires completion of course work and dissertation/thesis. Minimum duration is 3 years and maximum is 8 years.

PhD course work requirements for MS/MPhil degree with Economics background consist of six graduate level courses (18 credit hours). for BS/MS/MPhil degree with non-economics background completion of four deficiency courses (12 credit hours) is also required. BS with Economics background are required to complete 11 additional graduate level courses (33 credit hours).

On completion of dissertation/thesis the student is awarded 30 credit hours.

A PhD student must additionally complete the following requirements:

- Comprehensive Exam
- PhD Proposal/Synopsis Development
- PhD Proposal/Synopsis Defense
- BASR Approval of PhD Proposal/Synopsis
- Continuous enrollment in supervised research courses for meeting the full-time residency requirements
- Completion of PhD Dissertation/Thesis
- Selection of External Evaluators by BASR
- Publication of at least one paper in an ISI indexed or an HEC recognized journal or an official acceptance of the paper
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Any other HEC requirement
- Final Dissertation/Thesis Submission to BASR

### PhD Course Structure

#### Deficiency Courses

##### **BS (Without Economics background) (Maximum 12 Credit hours)**

4 Economics courses to be selected from BS (Economics) courses by a Doctoral Committee of the department

##### **MS (Without Economics background) (Maximum 12 Credit hours)**

- ECO601 Microeconomics
- ECO602 Macroeconomics
- ECO603 Econometrics and Research Methods
- ECO611 Mathematics for Economists



## **BS degree/Background (33 Credit hours)**

### **Core Courses**

ECO601 Microeconomics  
ECO602 Macroeconomics  
ECO603 Econometrics and Research Methods  
ECO607 Development Economics I  
ECO608 Theory and Practice of Economic Policy  
ECO609 Mathematics for Economists  
ECO611 Applied Econometrics  
ECO612 Qualitative Research Methods  
ECO613 International Trade & Globalization  
ECO651 Independent Study I  
ECO652 Independent Study II

## **PhD (18 Credit hours)**

### **Core Courses**

PDE701 Advanced Research Methodology  
PDE702 Advanced Applied Econometrics  
PDE704 New Dimensions in Economics and Public Policies  
PDE705 Advance Microeconomics

### **Elective Courses**

PDE711 Industrial Economics In a Globalized World  
PDE712 Public Finance  
PDE714 Selected Topics in Monetary Economics  
PDE715 Selected Topics in Islamic Economics  
PDE716 Mergers, Acquisitions and Restructuring  
PDE717 Topics in Labor Economics  
PDE718 Topics in Financial Economics  
PDE719 Agricultural Policy  
PDE720 Topics in Environmental Economics  
PDE 721 Economics of Governance  
PDE722 Topics in Health Economics

## **Course Structure (MS With Economics background)**

<b>Semester One</b>	<b>Semester Two</b>	<b>Semester Three</b>
Advanced Research Methodology Advanced Applied Econometric Advance Microeconomics	New Dimensions in Economics and Public Policy Elective I Elective II	Research Thesis



### Course Structure (MS Without Economics background)

<b>Semester One</b> Microeconomics (Deficiency Course) Macroeconomics (Deficiency Course) Econometrics & Research Methods (Deficiency Course)	<b>Semester Two</b> Mathematics for Economists (Deficiency Course) Advanced Research Methodology Advanced Applied Econometric	<b>Semester Three</b> New Dimensions in Economics and Public Policy Advance Microeconomics
<b>Semester Four</b> Elective I Elective II		

### Course Structure (BS with Economics background)

<b>Semester One</b> Microeconomics Macroeconomics Econometrics & Research Methods	<b>Semester Two</b> Development Economics I Theory and Practice of Economic Policy Mathematics for Economists	<b>Semester Three</b> Applied Econometrics Qualitative Research Methods International Trade & Globalization
<b>Semester Four</b> Independent Study I Independent Study II	<b>Semester Five</b> Advanced Research Methodology Advanced Applied Econometric Advance Microeconomics	<b>Semester Six</b> New Dimensions in Economics and Public Policy Elective I Elective II
<b>Semester Seven</b> Research Thesis		

### Course Structure (BS without Economics background)

<b>Semester One</b> Deficiency Course I Deficiency Course II Deficiency Course III	<b>Semester Two</b> Deficiency Course IV Microeconomics Macroeconomics	<b>Semester Three</b> Econometrics & Research Methods Development Economics I Theory and Practice of Economic Policy
<b>Semester Four</b> Mathematics for Economists Applied Econometrics Qualitative Research Methods	<b>Semester Five</b> International Trade & Globalization Independent Study I Independent Study II	<b>Semester Six</b> Advanced Research Methodology Advanced Applied Econometric Advance Microeconomics
<b>Semester Seven</b> New Dimensions in Economics and Public Policy Elective I Elective II	<b>Semester Eight</b> Research Thesis	

# **ADMINISTRATIVE AND ACADEMIC REQUIREMENTS**

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## COMPREHENSIVE EXAMINATION

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After completion of their MBA program, all students are required to pass a comprehensive examination conducted by the Institute. The comprehensive examination provides students an opportunity to integrate, synthesize and apply the various aspects of academic achievements and overall work done in their chosen majors and the core courses studied during their MBA. Preparation for the comprehensive examination would develop a broader understanding of the significance of the major chosen by the students within the framework of their overall educational experience.

### Structure

The comprehensive examination is of a three hour duration divided equally into three segments and consisting of three case studies, each of a one hour duration.

The case studies/questions are related to all majors available to MBA students.

1. To pass the comprehensive examination, a students must get satisfactory grades in one of their majors and in one non-major. The examination is to be conducted twice a year in the months of March and September. Students will be charged Rs. 5,000 as comprehensive examination fee. Passing the comprehensive examination is a mandatory requirement for obtaining the MBA degree.
2. Students are allowed a maximum of two attempts to qualify for the comprehensive examination. A third attempt may be availed only after the Dean's permission. The comprehensive examination is taken only after the students have completed all course requirements and attained a CGPA of at least 3.0 in their program.
3. A refresher course will be arranged by EMEC in the month of August for students who will appear in the comprehensive exam in September and will be conducted by faculty from within IoBM or hired from outside. Students will be charged a nominal fee for attending the refresher course.

## PROCEDURE FOR SUBMITTING MS, MPhil & PhD THESIS

### MS / MPhil Thesis

- Candidates must pass NTS (50% or more marks in General Exam) or equivalent test taken by IoBM / GRE
- Candidates must pass 08 courses (24 credit hours) with a minimum CGPA of 3.0. D grades will not be considered
- Qualified candidates to inform MPhil program coordinator/ HoD to decide on a specialized area for research
- Candidates to suggest supervisor as per relevant area of interest
- BASR's decision to be shared with the candidate and supervisor in writing
- Candidates to submit thesis on a CD for plagiarism (19% acceptable) check to the program BASR Office
- (Reference section to be excluded from thesis)
- After Plagiarism check, candidates will submit four copies of final thesis to the BASR
- BASR to approve the examiners' names: 2 for Thesis Evaluation and 1 for Thesis Defense (equal number of alternative names will also be shared with the BASR) which will be provided by the supervisor
- Reports from the examiners to be directed to the respective Deans
- Dean to submit the report to BASR for recommendations (if any)
- Final copy of the thesis to be submitted to BASR for thesis defense
- Supervisor, coordinator, respective Dean, external examiner, relevant department faculty to form the thesis defense committee
- Candidates to defend the thesis through PowerPoint presentation
- Viva report to be submitted to the respective dean
- Dean to forward the examiners' report to BASR for the final approval of degree
- The Rector to confirm the award of the degree

### PhD Thesis / Dissertation

*For prescribed forms and details, refer to PhD manual for students*

- Candidates must pass NTS (60% or more marks in subject exam) or equivalent test i.e. GRE or by IoBM
- Candidates must pass 06 courses (18 credit hours) with a minimum CGPA of 3.0. D grades will not be considered
- Qualified candidates to inform PhD program coordinator/HoD to decide on a specialized area for research
- Candidate to suggest supervisor as per relevant area of interest
- BASR's decision to be shared with the candidate and supervisor in writing
- Candidates to submit thesis on a CD for plagiarism (19% acceptable) check to the BASR Office (Reference section to be excluded)
- After Plagiarism check, candidates submit four copies of final thesis to the BASR Office
- BASR to approve the examiners' names: Two international thesis evaluators and one national evaluator (equal number of alternative names will also be shared with the BASR committee members) which will be provided by the supervisor
- Reports from the examiners to be directed to the respective deans
- Dean to submit the report to BASR for recommendations (if any)
- Final copy of the thesis to be submitted to BASR for thesis defense.
- Supervisor, coordinator, respective dean, external examiners, relevant department faculty to form the thesis defense committee
- Candidates to defend the thesis through PowerPoint presentation
- Examiners' report to be submitted to the respective dean
- Dean to forward the examiners' report to BASR for final approval of degree
- The Rector to confirm the award of the degree



## TEACHING AND LEARNING AT IOBM

IoBM has been, and continues to aim at harnessing the best researched and the most widely implemented methods of dissemination of information to support excellence in teaching, learning and research. Multifaceted teaching strategies at IoBM include experiential learning, cooperative learning, directed class discussions and activities in critical thinking.

- Experiential learning methodology enables industry engagement through “learning by doing” approach. Adoption of experiential learning in all programs is a strategic initiative of IoBM.
- The case method of instruction continues to be a significant classroom teaching strategy at IoBM with a view to integrating the best practices with management theory.
- Field-based learning encourages students to complement their conceptual knowledge with off-campus learning experiences that deepen their understanding of business issues.
- Research-based assignments under the supervision of trained faculty aim to hone the research skills of students and maximize participant-centered learning experiences by exploring specific topics of interest related to real business situations.
- Specially-designed classrooms reinforce instruction through multimedia technology.
- Understanding being the purpose of instruction, the process of assessment at IoBM is more than just evaluation. It is a substantive contribution to learning that aims to identify gaps in student learning. IoBM’s approach to learning is rooted deeply in assessment that fosters understanding and is more than an end-of-the-semester test. It informs students and faculty about what students currently understand and how to proceed with subsequent teaching and learning.

### Performance Evaluation and Standards

The performance of students is constantly evaluated through surprise quizzes, hourly examinations, assignments throughout the semester, submission of term reports, presentations and final examinations at the end of the semester. The grades awarded are as follows:

Grade	Marks	Grade Points
A+	96-100	4.00
A	91-95	3.89
A-	87-90	3.78
B+	84-86	3.67
B	79-83	3.33
B-	74-78	3.00
C+	68-73	2.75
C	65-67	2.67
C-	62-64	2.50
D	60-61	1.75
F	<60	0.00

Grade points are assigned to the given grades for calculation of the cumulative Grade Point Average (CGPA).

## 'I' Grade Policy

**Eligibility criteria for approval of 'I' grade:** Student missing final examination of a course due to a genuine reason, for example, serious illness/death in immediate family or official assignment may apply for 'I' grade with documentary evidence.

**Conditions for I grade :** Absences should not exceed the allowed limit; marks obtained in 1st & 2nd hourlies should be at least 60% and I grade processing fee of Rs.1000/= per course to be paid. Marks obtained should be at least 60% 'I' grade final exam otherwise 'I' grade will be changed to F grade.

## Weightage Policy

**Eligibility criteria for approval of Weightage :** Student missing any of the two hourly examination of a course due to a genuine reason, for example, serious illness/death in immediate family or official assignment may apply for weightage with documentary evidence.

**Conditions for weightage :** Absences should not exceed the allowed limit; marks obtained in final examination should be at least 60% and weightage processing fee of Rs.2000/= per course to be paid.

## Rechecking Policy

**Eligibility criteria for Rechecking :** After the final exam results have been posted, a student can apply for rechecking of final exam answer script/term project.

**Conditions for rechecking :** Absences should not exceed the allowed limit; marks obtained in 1st, 2nd hourlies & final examination should be at least 60% and rechecking processing fee of Rs.1000/= per course to be paid.

Note: Detailed policies are available on website in examination section.

## Leave for Absences

A student shall apply for leave for his/her absence from class in advance, duly supported with concrete evidence, for approval of the Rector. Following tables shows the approved absences for a course during a semester.

Regular Semester:	Approved Absences:
Weekdays	4 days
Weekend	2 days
Summer Semester:	
Weekdays (Crash)	3 days
Weekend	2 days

The above absences are allowed on account of serious illness or emergencies and after approval by the Rector.

If a student accumulates more than the approved number of absences in a course, he/she will automatically be awarded an "F" grade in that particular course.

A student will not be eligible to apply for weightage or 'I' grade in case the absences exceed the allowed limit.

In case of a severe constraint, a student may apply for condoning of excess absences supported with concrete evidence to Academics Officer, who will forward the application along with evidence and attendance record duly verified by him, to the Rector for approval. After the Rector's approval, the student will have to sign an attendance undertaking.



## DISCIPLINE

IoBM stands out among other universities for its special emphasis on maintaining good order and discipline among its students. It reserves the right to prescribe such regulations from time to time as may be considered expedient for effectively maintaining the highest standards of conduct. The regulations set out below are IoBM's General Regulations for discipline.

### **The General Regulations provide that:**

#### **No student of IoBM shall**

1. disrupt the activities and functions of the Institute;
2. damage any property of the Institute or of any faculty member, visitor or an employee of the Institute or knowingly misappropriate such property;
3. forge or falsify any certificate/degree issued by IoBM or knowingly make false statements concerning standing or results obtained in examinations;
4. engage in violent, indecent, disorderly, threatening, or offensive behavior or language;
5. engage in the harassment/disrespect of any faculty member, peer, visitor, employee of the Institute;
6. exhibit behavior that is inappropriate in terms of the norms and cultural values of the Institute and society in general;
7. engage in any political activity while enrolled at IoBM;
8. disrespect/disregard any guidelines/instructions prescribed by faculty and management of the Institute;
9. assist or encourage directly or indirectly any person to act in breach of the above-mentioned regulations.

#### **No student of IoBM shall breach any regulation**

- a) relating to the use of the libraries or the information and communication technology facilities at IoBM;
- b) relating to conduct in examinations;
- c) assist or encourage directly or indirectly any person or persons to act in breach of the above-mentioned regulations.



## The Disciplinary Committee

The Disciplinary Committee, IoBM, comprises a Chairman, Executive Director Administration, Academic Heads of Departments, Controller of Examinations, and other members notified by IoBM. If the Disciplinary Committee is satisfied that a student is guilty of breach of conduct it may:

1. impose a fine of such amount as it thinks fit;
2. order the student to pay compensation to any person or body suffering injury, damage, or loss as a result of the student's conduct;
3. make an order banning the student from specified premises or facilities for a certain period or on such terms as it thinks fit;
4. rusticate the student for such period as it thinks fit;
5. expel the student;
6. ask the parents of the student to give an undertaking that henceforth their wards will not get involved in any activity warranting disciplinary action and should any such incident occur, the Disciplinary Committee reserves the right to expel him/her permanently from the Institute without even asking him/her to appear before the Committee for the consideration of his/her case.

If the Disciplinary Committee is satisfied that a student has committed a breach of the disciplinary regulations relating to plagiarism it may:

- (i) exclude any part of the work submitted from assessment;
- (ii) award no mark / reduce or disregard any piece of work;
- (iii) permit a student to re-sit an examination or resubmit a piece of work on such conditions as it thinks fit.

### Appeal / Review of the decision:

The review of the decision taken by the committee shall rest with the President, IoBM.



## ATTENDANCE POLICY

Ensure 100% attendance for each course. 20% absence is permissible, only in case of illness, or emergencies. Absences have to be approved by the Management. Approval is contingent upon the evidence provided. 20% means that a student is allowed a maximum of four approved absences in a course during a regular semester and two in a course offered on weekends. If a student accumulates more than the allowed number of absences, he/she will automatically be awarded an 'F' grade in that particular course.

In case of a severe condition, a student may apply for condonation of excess absences supported with concrete evidence to the Academics Officer, who will forward the application along with evidence and attendance record duly verified by him, to the Rector for approval. After the Rector's approval, the student will have to sign an attendance undertaking. For detail visit the link: <http://www.examination.iobm.edu.pk>

## DRESS CODE POLICY

### A. For Female students:

- At least mid-thigh shirts should be worn with pants ,although knee-length shirts are desirable and preferred. Tucked in shirts with pants or jeans will be treated as a dress code violation.
- Ripped jeans are not allowed.
- Tights to be worn only with closed slit long shirts, otherwise to be avoided ,if worn in an exposed and indecent manner, as judged by the Proctor.
- All sort of revealing and indecent dress-up is not permitted.
- Trousers and shalwars above ankles are to be avoided.
- Clothes offensive in terms of cuts and style ,or by way of messages printed on them are to be avoided.
- Only light make-up, jewelry and perfume is permitted.

### B. For Male Students:

- Only full-length trousers ,jeans and shalwars are allowed. Track/sports lowers ,Bermudas and shorts are strictly not allowed.
- Footwear: Slippers are strictly not allowed . Dress shoes and shoes with back-strap are allowed.
- Male students are advised to maintain a proper hair-cut and refrain from piercing their ears and faces.
- Offensive messages printed on shirts are not permitted.
- Ripped jeans are not allowed.

## EXAMINATION NORMS

Each semester has two hourly exams (6th & 11th week) & one final exam in the 15th week. Mark distribution is explained to the students at the beginning of the semester. Traditionally, 15 marks are given for each hourly exam and 40 marks for the final exam. 30 marks are assigned for quizzes and assignments. In some cases, there might be a slight variation if the concerned faculty so desires.

In its pursuit of excellence, IOBM believes in providing a congenial atmosphere to the students during exams in order to get them to perform at an optimum level. However, there are certain norms which the students are expected to be aware of and observe both in letter and spirit. These norms are as follows:

- Impersonation may lead to permanent expulsion from the Institute.
- Cell phones are strictly prohibited in the exam hall/ room. Defying this rule may result in confiscation or a fine of Rs. 1000/=.
- Valid college ID card is mandatory for entry to the exam room/hall. There is absolutely no relaxation in this rule.
- Punctuality is most important at all times. Students are expected to reach their exam location and be seated at least 10 minutes prior to the exam time. Late comers will be made to wait for 5 minutes in case of hourlies and 15 minutes in the final exam before they are allowed entry. Students arriving late by more than 15 minutes will not be allowed to appear in the exam.
- As per Institute's policy, all question papers are to be returned along with answer scripts.
- Students are required to bring their own stationary and calculators as no lending or borrowing is permitted during examinations.
- Programmable calculators or other kinds of electronic devices are strictly prohibited inside the exam area.
- Indiscipline in the exam hall/room will not be tolerated. Such cases are to be reported to the controller of examinations immediately for appropriate action.
- Possession of any written material related to the subject or communication with their fellow students will result in disciplinary action through the decision of the Disciplinary committee.

### Mid-Term Policy

Students are required to take two mid-terms and one final examination. There would be no N-1 given to a student. All students must take both the mid-term exams, as the aggregate of these would be included in the final grade. The Institute does not exempt students from completing course requirements on medical grounds nor is leave granted for any personal reasons. This is to ensure the market credibility of the Institute's teaching programs and degrees.

### Policy for Course Repetition

Student failing a course twice will not be allowed to register for a third attempt. If it is a compulsory course, a second failure will lead to failure in the degree and withdrawal from the Institute.



## Grade Improvement

The Institute provides an opportunity to students for improvement of their CGPA if it is below 2.5 in the undergraduate and 3.0 in the Graduate program. A student wishing to improve his grade in any course is eligible to reappear in that course with exemption in attendance provided he has secured at least C- in that course in the undergraduate and C in the graduate program. Only courses for which grades C, D or F are received may be repeated for credit. Only one repetition is permitted, unless authorized in writing by the Dean. On repetition of a course, credit hours are applied towards a degree only once.

BBA (Honors) and BS students must maintain a minimum CGPA of 2.0 on a cumulative basis in order to maintain good standing. Any deficiency should be made up in the following semester. Otherwise, the concerned student may be dropped from the rolls of the College. A CGPA of 2.5 is required for conferment of the degree.

MBA and MPhil students are expected to maintain a CGPA of 2.5 to remain in good standing. Any deficiency should be made up in the following semester; otherwise the concerned student may be dropped from the rolls of the College. The cumulative GPA should be 3.0 in order for a student to receive the degree. MBA and MS students are required to repeat those courses in which they receive F and D grades.

## Umrah Leave

Dates of hourly and final exams are announced in the catalog well in advance for subsequent semesters. Students should not plan their personal events including Umrah during these dates. Weightage requests will not be entertained for missing hourly or final exam on such pretext.

Umrah leave of two weeks (four absences) for weekdays and (two absences) for weekend are allowable for a course on production of sufficient evidence, and are subject to the approval by the Rector. Total absences, however, should not exceed the allowed absence.

## Hajj Leave

Hajj leave of three weeks (six absences) for weekdays and (three absences) for weekend are allowable for a course on production of sufficient evidence, and are subject to the approval by the Rector.

## Below Good Standing Policy

As per Institute of Business Management (IoBM) Policy, admission will be cancelled on the following grounds:

- Bachelor's students scoring a CGPA below 2.00 for two consecutive semesters and Summer Crash in an academic year
- Master's (Regular Program) students scoring a CGPA below 2.5 for two consecutive semesters and Summer Crash in an academic year
- Master's Weekend and Evening Program students scoring a CGPA below 2.5 for three consecutive semesters in an academic year (which includes three regular semesters)

Please note that if you have a below good standing CGPA, you cannot take semester gap/s unless approved by ED / Registrar.

## Academic Dishonesty

To maintain credibility and uphold its reputation, the Institute has certain procedures to deal with academic dishonesty which are uniform and should be respected by all. Violations of academic integrity include:

- Unauthorized assistance during an examination
- Falsification or invention of data
- Unauthorized collaboration on an academic exercise
- Plagiarism

## Definition of Plagiarism

Students are required to submit original work. Papers and/or projects submitted as part of a group effort must be clearly identified, with the team members specifically acknowledged. Ideas, data, direct quotations, paraphrasing, or any other indirect incorporation of the work of others must be clearly referenced to avoid plagiarism. Examples of plagiarism include:

- Direct quotation or paraphrasing from published sources that are not properly acknowledged;
- The use of other persons or services to prepare work that is submitted as one's own;
- The use of previously submitted papers or work, written by other students or individuals;
- Misappropriation of research materials;
- Any unauthorized access to an instructor's file or computer account;
- Any other serious violations of academic or moral integrity as established by the instructors of the Institute;
- Conduct during examinations.

Cheating is unacceptable. Examples of cheating are:

- Any written or oral communication among students during an examination
- Providing information about the content of an examination
- Impersonation by another student during an examination
- Using cell phones, programmable calculators or any other kind of electronic devices during an examination
- Using cheat sheet during an examination
- Material written on palm, hand or any other part of the body

***IoBM is a no smoking campus. Any violation of this rule can lead to serious consequences. The penalty for this can amount to the extent of cancellation of registration. Use of drugs is a serious offense and any student found guilty will be rusticated permanently.***



# **ADMISSION AND FINANCE**

## ADMISSION DEPARTMENT

Admissions Department performs various functions to admit eligible and quality students. These functions are performed with full transparency and accuracy while maintaining due confidentiality of personal data of all potential candidates for admission.

Admissions Department ensures that admissions are purely merit based depending upon the candidates' scholastic achievements, performance in aptitude tests and interviews.

Admission to IoBM is on a highly competitive basis, and only those who compete successfully on merit are selected for admission. They come from a variety of backgrounds. After joining IoBM, students continue to pursue their studies with a high level of competitiveness aimed at professional development. The admission criteria for the Institute's academic programs are described below:

### Eligibility for entrance to Bachelor's Programs:

The admission for Bachelor's Programs would be based on the following:

- A Higher Secondary School (HSC) Certificate with at least 55%\* marks awarded by a recognized Provincial Intermediate Board
- 3 A-Levels with at least C grades in any subjects
- American High School Diploma with CGPA 2.5 or equivalent
- Recognized Overseas Equivalence Diploma
- Any other qualification if an authority has issued an equivalence certificate with minimum 55%
- IBCC equivalence may be required for A-Level and other foreign qualifications

#### In addition:

- At least 5C grades in O-Level exams (If you are studying O levels in Pakistan, then you need a total of eight subjects including: English, Urdu, Islamiyat, Pakistan Studies, and Math's as compulsory subjects. The remaining three subjects are electives)
- IBCC equivalence may be required for O-Level and other foreign qualifications
- Minimum 55% marks in SSC or equivalent
- Success in aptitude test and the panel interview conducted by IoBM

### Exemption from Aptitude Test on SAT-1

The applicant can apply for exemption in appearing in the IoBM Aptitude Test:

- A score of 550 (out of 800) in Mathematics
- A score of 550 (out of 800) in Evidence-Based Reading and Writing

Total score of 1100 is required for the exemption

*\*Subject to revision by the IoBM Management*



### Programs List:

- BBA (Honors)
- BS Joint (Honors) Accounting and Finance
- BS Joint (Honors) Economics and Finance
- BS Joint (Honors) in Business & Psychology
- BS (Honors) Accountancy, Management and Law
- BS (Honors) Media Studies
- BS Entrepreneurship
- BS Industrial Management
- BS Logistics and Supply Chain Management
- BS Economics, Law and International Relations (ELI)
- BS Economics, Media and International Relations (EMI)
- BS Software Engineering

### Eligibility for entrance to the undermentioned Bachelor's Programs:

- BS Computer Science
- BS Data Science
- BS Actuarial Science and Risk Management
- BS Mathematics and Economics
- BS Mathematical and Computational Finance
- BS Statistics and Business Analytics

The admission in these Programs would be based on the following:

- A Higher Secondary School (HSC) Pre-Engineering Certificate with at least 55%\* marks awarded by a recognized Provincial Intermediate Board
- 3 A-Levels with atleast C grades including Mathematics subject
- American High School Diploma with CGPA 2.5 or equivalent
- Recognized Overseas Equivalence Diploma
- Any other qualification if an authority has issued an equivalence certificate with minimum 55%
- IBCC equivalence may be required for A-Level and other foreign qualifications

### In addition:

- Atleast 5C grades in O-Level exams (If you are studying O levels in Pakistan, then you need a total of eight subjects including: English, Urdu, Islamiyat, Pakistan Studies, and Math's as compulsory subjects. The remaining three subjects are electives)
- IBCC equivalence may be required for O-Level and other foreign qualifications
- Minimum 55% marks in SSC or equivalent
- Success in aptitude test and the panel interview conducted by IoBM

### Exemption from Aptitude Test on SAT-1

The applicant can apply for exemption in appearing in the IoBM Aptitude Test:

- A score of 550 (out of 800) in Mathematics
- A score of 550 (out of 800) in Evidence-Based Reading and Writing

Total score of 1100 is required for the exemption

*\*Subject to revision by the IoBM Management*



## Eligibility for entrance to BE Electrical Engineering Program:

The admission for Engineering Programs would be based on the following:

- A Higher Secondary School (HSC) Pre-Engineering Certificate with at least 60%\* marks awarded by a recognized Provincial Intermediate Board
- 3 A-Levels with atleast one C grade either in Mathematics, Chemistry and Physics
- American High School Diploma with CGPA 2.5 or any other qualifications
- Any other qualification if an authority has issued an equivalence certificate with minimum 55%
- IBCC equivalence certificate will be required for A-Levels and other foreign qualifications

### In addition:

- Atleast 5C grades in O-Level exams (If you are studying O levels in Pakistan, then you need a total of eight subjects including: English, Urdu, Islamiyat, Pakistan Studies, and Math's as compulsory subjects. The remaining three subjects are electives)
- IBCC equivalence may be required for O-Level and other foreign qualifications
- Minimum 55% marks in SSC or equivalent
- Success in aptitude test and the panel interview conducted by IoBM

### Exemption from Aptitude Test on SAT-1

The applicant can apply for exemption in appearing in the IoBM Aptitude Test:

- A score of 550 (out of 800) in Mathematics
- A score of 550 (out of 800) in Evidence-Based Reading and Writing

Total score of 1100 is required for the exemption

*\*Subject to revision by the IoBM Management*

## Eligibility for entrance to B.Ed. Programs:

### B.Ed. (Honors) 1.5 years Weekend Program:

For admission in the B.Ed. (Honors) 1.5 years Weekend program, the candidate must possess:

16 years of Education (MA / MSc / M.Com or equivalent degree) in any discipline like Sciences, Social Sciences, Humanities and others, with at least 45% or 2.00 CGPA out of 4 from a University/Institution recognized by HEC.

### B.Ed. (Honors) 2.5 years Weekend Program:

For admission in the B.Ed. (Honors) 2.5 years Weekend program, the candidate must possess:

14 years of education (BA / BSc / B.Com or equivalent degree), with minimum 45% or 2.00 CGPA out of 4 from a University/Institute recognized by HEC.

### B.Ed. (Honors) 4 years Program:

For admission in the B.Ed. (Honors) 4 years program, the candidate must possess:

- A Higher Secondary School (HSC) Certificate with at least \*55% marks awarded by a recognized Provincial Intermediate Board
- 3 A-Levels with atleast C grades in any subjects
- American High School Diploma with CGPA 2.5 or equivalent
- Recognized Overseas Equivalence Diploma
- Any other qualification if an authority has issued an equivalence certificate with minimum 55%
- IBCC equivalence may be required for A-Level and other foreign qualifications



#### **In addition:**

- Atleast 5C grades in O-Level exams (If you are studying O levels in Pakistan, then you need a total of eight subjects including: English, Urdu, Islamiyat, Pakistan Studies, and Math's as compulsory subjects. The remaining three subjects are electives)
- IBCC equivalence may be required for O-Level and other foreign qualifications
- Minimum 55% marks in SSC or equivalent
- Success in aptitude test and the panel interview conducted by IoBM

#### **Exemption from Aptitude Test on SAT-1**

The applicant can apply for exemption in appearing in the IoBM Aptitude Test:

- A score of 550 (out of 800) in Mathematics
- A score of 550 (out of 800) in Evidence-Based Reading and Writing

Total score of 1100 is required for the exemption

*\*Subject to revision by the IoBM Management*

#### **Eligibility for entrance to two-year MBA Regular (Weekday) Program:**

**The admission for Master's Programs would be based on the following:**

- Sixteen years of Education in Arts, Science, Law, Commerce, Engineering, Medicine, Pharmacy or any other degree with high second division or equivalent from HEC/Provincial Government approved Institutes/Colleges/Universities in Pakistan.
- A final qualification examination of a professional body recognized by the Higher Education Commissions of Pakistan, for example, ACMA, CA, ACCA (HEC equivalence / membership certificate required)
- Four years overseas Bachelor's degree or equivalent recognized by HEC

#### **In addition:**

- Minimum 55% marks in overall academic career in annual examination system or 5C's in O-Level and 3 A-level with minimum 2C's excluding General Paper and Urdu or equivalent
- Minimum CGPA 2.5 on a scale of 4 in semester system (CGPA will be considered, if both CGPA & Percentage are mentioned in the Transcript)
- Success in aptitude test and interview conducted by IoBM

*\*Eligibility criteria is subject to revision by the IoBM Management.*

#### **Eligibility for entrance to two-year MBA Weekend / Evening Programs:**

The admission in MBA (Regular) Weekend / Evening Programs would be based on the following:

- Sixteen years of Education in Arts, Science, Law, Commerce, Engineering, Medicine, Pharmacy or any other degree with high second division or equivalent from HEC/Provincial Government approved Institutes/Colleges/Universities in Pakistan
- A final qualification examination of a professional body recognized by the Higher Education Commissions of Pakistan, for example, ACMA, CA, ACCA (HEC equivalence certificate required)
- Four years overseas Bachelor's degree or equivalent recognized by HEC

#### **In addition:**

- Minimum 55% marks in last qualification in annual examination system
- Minimum CGPA 2.5 on a scale of 4 in semester system (CGPA will be considered, if both CGPA & Percentage are mentioned in the Transcript)
- Success in aptitude test and interview conducted by IoBM
- Minimum one-year post qualification work experience in Multinational or Domestic Corporation is required (only for MBA Regular on Weekend). Candidate must be working while applying online for admission and also during the period of study.
- Experience in unknown or unregistered companies will not be considered.
- MBA program offered on Weekend

### Experience is not mandatory for the following programs:

- MBA (Regular) – Evening 2Y
- MBA Industrial Management
- MBA Media Management And Marketing
- MBA Logistic & Supply Chain Management
- MBA Educational Management
- MBA Environmental And Energy Management
- MBA Health And Hospital Management
- MBA Finance and Risk Management
- MBA in Entrepreneurship and SME Banking and Finance
- MSC Organizational Psychology and HRM

*\*Eligibility criteria is subject to revision by the IoBM Management*

### Eligibility for entrance to MS/MPhil Programs:

The admission in MS/MPhil Programs would be based on the following:

- Sixteen years of education in relevant field with high second division or equivalent from HEC recognized Institutes/Universities in Pakistan

OR

- Four years overseas Bachelor's degree or equivalent recognized by HEC

#### In addition:

- Minimum 55% marks in overall academic career in annual examination system or 5C's in O-Level and 3 A-level with minimum 2C's excluding General Paper and Urdu or equivalent
- Minimum CGPA 2.5 on a scale of 4 in semester system (CGPA will be considered, if both CGPA & Percentage are mentioned in the Transcript)
- Candidates must score minimum 50% marks in NTS/ETC test
- Success in panel interview conducted at IoBM

#### Programs List:

- MPhil in Business Management
- MS Computer Science
- MS Mathematics and Scientific Computing
- MS Statistics and Scientific Computing
- MS Engineering Management
- MS in Electrical Engineering
- MS in English-Applied Linguistics
- MS in Economics
- MPhil in Education
- MPhil in Organizational Psychology

### Admission Requirements for PhD Programs:

- Candidate having 18 years of education from an HEC recognized university is eligible to apply. For admission into the PhD program, minimum CGPA 3.0 on scale of 4 or First Division in MPhil/MS/ degree is required
- Minimum CGPA 3.0 is required for candidates having MBA or equivalent degrees. They will have to do pre-requisite courses recommended by the committee (HEC equivalence certificate required)
- Students with HEC recognized professional degrees i.e., ACMA, CA, ACCA may also apply subject to equivalence certificate issued by the HEC



#### In addition:

- Minimum 55% marks in overall academic career in annual examination system or 5C's in O-Level and 3 A-Levels with atleast C grades in any subjects
- Success in interview conducted by IoBM
- Candidates must score minimum 60% marks in NTS/ETC test

#### PhD Eligibility Policy:

##### 1) MS with relevant degree

18 Credit Hours of Courses plus 30 Credit Hours of Thesis

##### 2) MS with irrelevant degree

Maximum 12 Credit Hours of deficiency Courses (from BS approved by Doctorial Committee) plus 18 Credit Hours of Courses plus 30 Credit Hours of Thesis

##### 3) BS with relevant degree

30/33 Credit Hours of Courses of MS Program (instead of thesis two Independent Studies of 3 Credit Hours each) plus 18 Credit Hours of Courses plus 30 Credit Hours of Thesis

##### 4) BS with irrelevant degree

Maximum 12 Credit Hours of deficiency Courses (from BS approved by Doctorial Committee) plus 30/33 Credit Hours of Courses of MS Program (instead of thesis two Independent Studies of 3 Credit Hours each) plus 18 Credit Hours of Courses plus 30 Credit Hours of Thesis

#### Program Duration

Program	Credit Hours	Minimum Years	Maximum Years	In special cases IoBM has the right to grant additional extension which will be decided on case to case basis.
All Undergraduate Programs		4	6	
Graduate Programs	108	3.5	5	
	72	2	5	
	36	1.5	3	
Postgraduate / MS / MPhil		1.5	4	
Postgraduate PhD		3	8	

#### Transfer of Credits

Students desiring credit transfer in a specific degree program will be required to submit application along with their transcripts and course outlines/descriptions soon after their admission formalities have been completed. The request for transfer of credit hours will be reviewed if the previous program was incomplete and courses were done during the last 3 years. The credit equivalence committee (CEC) will examine such cases and decide accordingly, keeping in view the following:

- All requests must be for same level of program. Courses completed in Bachelor's program cannot be considered for Master's program.
- Transfer application can be submitted once and in the first semester, late applications for transfer of credits will not be considered.
- Student must have secured B or better grade as per IoBM grading plan in each course meant to be transferred and the course title /outline must match with IoBM course plan.
- Maximum of 3 courses can be transferred in MPhil/PhD program as per the procedure mentioned above.
- Courses of two semesters can be accepted in bachelor's / master's program from highly reputed and HEC recognized institutes of Pakistan and abroad. However, each case will be reviewed separately and the decision will be taken considering the grades and the reasons for transfer.

## Re-Admission and Continuation Policy

- Students who stop attending classes at the Institute, for any reason, without informing the concerned authorities about their absence for more than one semester, their admission shall be suspended.
- Admissions can be deferred for maximum of two semesters with justification and approval of the Executive Director
- Admissions. Any relaxation not beyond two years is subject to approval of Executive Director Admissions.
- Students who complete their Bachelor program from IoBM are eligible to register for MBA if there were no any disciplinary issues. However, if Security Deposit has been withdrawn, candidates may apply for restoration of admission to office of the Executive Director.
- Students dropped due to below good standing (for Master's program below 2.5 CGPA and for Bachelor's below 2 CGPA) may also apply for re-admission and to qualify both the entry test and interview.
- Students dropped out from the Institute for any reason will not be considered for enrollment as an external candidate
- On successful completion of readmission process in undergraduate and graduate program: the degree/transcript section will consider transfer of previous courses completed in IoBM based on grades and their relevancy.
- A MPhil or a PhD student dropped due to below good standing / time barred or absent for more than two years and CGPA is below 3.00, may also apply for readmission and to qualify both the entry test and Interview.
- After readmission, the student will follow current program structure and obsolete courses will not be considered. However, the Program Head and OGS Office may recommend transfer of previous courses having minimum C+ grades to degree/transcript section for consideration.



## SCHOLARSHIPS AND FINANCIAL ASSISTANCE PROGRAMS

### Internal

IoBM has established a financial assistance fund for students who are unable to afford the financial costs associated with an academic program. Financial assistance are provided to students on the basis of merit and need. Currently, about 25% of the students are receiving some form of financial aid.

Special scholarship programs are available under CSR activity for deserving students of selected districts in Sindh through IoBM Outreach Program and TCF Alumni Program.

### Educational Assistance on Need

IoBM grants Educational Assistance (EA) to its regular students. It is a 50% waiver of the tuition fee and is automatically renewed for the next semester, subject to maintaining the specified criteria and GPA.

### Merit Scholarships

IoBM offers Merit Scholarships to its meritorious students which is 50% of the tuition fee and automatically renewed for the next semester, subject to maintaining the specified criteria and GPA in the first semester.

### Sports Scholarship

Sports scholarship awarded to the students who have previous sports achievements and are the active player of IoBM sports team. After the endorsement of student's application by the HoD sports, scholarship is awarded to student which is 50% of tuition fee.

### Program Promotional Waiver

Students of BE (Electrical) and BS (Industrial- Engineering & Mgmt.) are eligible to get 50% tuition fee waiver on maintaining GPA 2.50 with minimum 15 credit hours or 5 courses in a semester This is a promotional-cum- need based assistance.

MBA Educational Management and MS Engineering students are also eligible to receive 50% tuition fee waiver on maintaining GPA 3.00 with a minimum of three and two courses in a semester respectively.

### External

#### Endowment Fund

Various endowment funds have been set up by IoBM, Public donors and Private donors to provide financial assistance for students who deserve and in need.

#### Following external financial assistance are being provided to students:

- IoBM Endowment Fund
- Lucky Cement Scholarships
- Endowment Fund scholarship, Government of Sindh
- Shan Foods Endowment fund
- Bashir Janmohammad CCSIS Building Endowment Fund
- Mitsubishi Corporation Scholarships

#### Scholarships are also available on reciprocal basis to:

- Bilkent University, Turkey
- International Burch University, Bosnia
- University of Florence, Italy
- Vytautas Magnus University, Lithuania
- Hanyang University, South Korea
- Guilin University of Technology, China
- Erfurt University, Germany

## FEE STRUCTURE\*

IoBM operates on a self-financing basis as a non-profit institution. All students are required to pay a one-time CAUTION MONEY of Rs. 15,000.00 which is refundable only as per the policy.

The fee structure for various degree programs, per semester, is as follows:

	Registration Fee	Tuition Fee* (per course)	Fee on the basis of Per Credit Hour	Tuition Fee Full Load**	Total Fee* (per semester)
All Bachelor's Programs	10,000.00	17,490.00	5,830.00	104,940.00	114,940.00
All Master's (Regular) Programs	10,000.00	18,810.00	6,270.00	112,860.00	122,860.00
All Master's (Specialized / Weekend) Programs	7,000.00	18,810.00	6,270.00	75,240.00	82,240.00

\* Subject to change

\*\* Six courses for regular, four courses for weekend / evening programs and three courses for MS/Phil or PhD programs

Note:

Additional fee will be charged for remedial (non-credit) courses such as MTHXXX or COM100 which have to be taken by those students who have not been able to reach the desired level of competence in the relevant section of the admission test.

Rs. 34,980/- will be additional Lab Charges for BE Electrical Engineering in Electronics and Telecommunication program.

Rs. 34,980/- will be additional Lab Charges for BS Computer Science and BS Software Engineering program.

Rs. 20,000/- will be charged for MBA Boot Camp (Page No. 49) for MBA students joining IoBM for the first time.

The summer session fee is charged on the basis of courses taken. A convocation fee of Rs. 12,500.00 is charged on completion of the degree program, inclusive of degree charges of Rs. 4,000.00. MBA executive and weekend students, planning to take less than a full load, would be charged registration and tuition fees accordingly. However, caution money will remain the same.

Post Graduate Programs	Registration Fee (1-2 Courses)	Tuition Fee Per Course	Thesis, External Examiner, Viva Voce, Exam, Supervisors and Foreign Examiner Fee
MS / MPhil Programs	3,500.00	12,650.00	65,300.00
PhD Programs	5,000.00	13,750.00	330,000.00

The registration duration of thesis is one year (3 consecutive semesters) after 3rd semester. Students will be required to get themselves re-registered in thesis by paying registration fee and one course fee for the subsequent semesters.

Note:

5% advance tax as per section 236I of the Income Tax Ordinance 2001 will be collected in addition to the fees, in case the name of the payer of the fees is not appearing in the Active Tax Payer's List (FBR website). Further, tax collected under above section shall be adjustable against the tax liability of either of the parents or guardian making payment of the fee.



## Fee Refund Policy

### Interpretation

1. In this Policy reference to the masculine also includes the feminine.

### Caution Money (Security deposit)

2. Students are eligible to claim refund of caution money:
  - a. after completion of their respective programs or
  - b. upon cancellation of admission by the student or by IOBM if claimed within six months of such cancellation.
3. Any amount receivable from a student for whatsoever reason will be deducted from the amount due to that student on account of caution money.
4. Without prejudice to the above, both provisional students and deferred candidates (details for both appear below) are entitled to be refunded security deposits in accordance with the terms of this Policy if any have been collected.

### Registration Fee

5. Registration fees paid is nonrefundable and nontransferable.

### Continuing students

6. In case a course or courses are dropped during any given semester, and provided that such course or courses had been dropped without penalty, the tuition fee of such course or courses:-
  - a. shall be fully refunded if the course or courses had been dropped within 7 days of commencement of classes.
  - b. shall be refunded 50% if dropped after 7 days but within 14 days of commencement of classes.
  - c. shall not be claimed from the 15th day of commencement of classes.
7. Provided that the refund in clause 6 above shall be made only after completion of program or Admission cancellation.
8. Tuition fee for students suspended for one semester shall also be refunded as per clause 6 above.
9. Tuition fee for courses dropped after the due date (with penalty) will be forfeited.

### Fresh Entrants

10. If after securing admission, a fresh entrant decides to withdraw from the Institute, the tuition fees paid will be refunded as per Higher Education Commission(HEC) refund policy outlined hereunder:-

%age of Tuition Fee	Timeline for Semester System
Full (100%) Fee Refund	up to 7th day of commencement of classes
Half (50%) Fee Refund	From 8th-14th day of commencement of classes
No Fee (%) Refund	From 15th day of commencement of classes



## Provisional Admission

11. Candidates awaiting the results of last required qualification shall be provisionally admitted provided they qualify in the written test as well as the interview. If such a candidate fails to meet the set admission criteria after declaration of the last required results, he will be refunded the tuition fee and the caution money provided that an application for refund is submitted within seven days of declaration of results/grades (along with a copy of result/grades). If a candidate fails to do so the tuition fee shall stand forfeit. The caution money shall remain payable only for refund till six months from the date of application for refund. This is without prejudice to the other terms of this Policy.

## Deferment of Admission-Fresh Entrants

12. In case of a written request of the candidate for deferment of admission for a semester, he must sign an affidavit stipulating the matters stated in this Policy and duly notarized, the paid tuition fee shall be carried forward to next semester.
13. If a candidate of the nature in clause 12, later decides not to join and informs the Institute of his withdrawal or does not join :-
  - a. the tuition fee shall stand forfeit provided the Institute and candidate were otherwise agreed upon admission in the current semester but for the candidate's withdrawal from the Institute.
14. Notwithstanding clause 12 above, if any deferred candidate decides to withdraw from admission at any time, the security deposit, if collected, shall be fully refunded and shall remain payable till six months from the date of intimation of withdrawal from the Institute. Upon expiry of said period the security deposit shall also stand forfeit.
15. If any candidate is allowed a second attempt to improve his grade/percentage/results in order to qualify for the admission, he must sign an affidavit stipulating the matters stated in this Policy and duly notarized. If the candidate fails in the second attempt or does not avail the opportunity of second attempt:-
  - a. caution money, if collected, will be fully refunded and shall remain payable only for refund till six months from the date of intimation of the final refusal of admission from IoBM. Upon expiry of the said period the caution money shall also stand forfeit.
  - b. the tuition fee shall stand forfeit provided the Institute and candidate were otherwise agreed upon admission in the current semester but for the candidate's failure to achieve the results required by the Institute.
16. A candidate will retain his status as candidate until completion of the formalities provided herein.

## Dispute

17. In case of any dispute/disagreement regarding interpretation of any clause of this Policy, the decision of the IoBM management shall be final and binding.

## Amendment

18. This Policy may be amended or changed at the discretion of the management provided always that any amendment or change may only take place at the start of every semester and that such amendment or change must be incorporated in all new admission letters from the semester in which the amendment or change takes place onwards.



# ORGANIZATION

## Board of Governors

The Board of Governors exercises the powers to hold, control and administer the property, funds and resources of the Institute. It also approves the annual report, plan of work, statements of accounts and the annual budget estimates as recommended by the Executive Council. It is also responsible for ensuring the effectiveness of the Institute's operations and the continuity and preservation of its autonomy.

**Members of the Board of Governors (listed on Page No. 8)**

## Executive Council

The Executive Council is responsible for formulating and approving the principles, policies and plans governing the activities and operations of the Institute so as to facilitate teaching and other academic work. It can appoint faculty, researchers and officers on the recommendation of the Selection Board. It can also create new components of the Institute such as faculties/departments/college, and constitute standing committees, subcommittees, councils, and other administrative or academic advisory bodies, if necessary. It can undertake initiatives to ensure efficient and effective management and functioning of the Institute. It proposes plans of work for the approval of the Board of Governors.

### Members of the Executive Council

- Mr. Bashir Janmohammad, Chairman
- Mr. Talib Syed Karim, President
- Chairman, Higher Education Commission
- Mr. Justice Irfan Saadat Khan
- Secretary, Universities & Boards Department.
- Mr. Muhammad Ali Tabba
- Mr. Masood Hashmi
- Dr. Tariq Rahim Soomro
- Dr. Shahida Wizarat
- Dr. Seema Ansari
- Mr. M.W. Jahangir, Secretary

## Academic Council

The Academic Council is responsible for:

- Advising the Executive Council on academic matters
- Regulating the conduct of teaching, research, publications and examinations
- Regulating the admission of students to courses of studies and examinations at the Institute
- Regulating the conduct and discipline of the students of the Institute
- Regulating award of financial assistance, exhibitions, medals and prizes
- Formulating courses of study, syllabi and outlines of all examinations conducted by the Institute

### External Members of the Council:

- Mr. Mazhar ul Haq Siddiqui
- Ms. Rukhsana Asghar
- Mr. Khalid M. Nagra



## Board of Advanced Studies and Research

IoBM has a Board of Studies which reports to the Academic Council. It supervises teaching research and academic discipline. It has three sub-committees on curriculum, resources, and discipline. External members on the Board of Studies are:

### External Members of the Board:

- Prof Dr. Bhawani Shankar
- Dr. Nadeem Hanif
- Dr. Amjad Waheed

## Board of Studies

The following departments exist in the Institute:

### College of Business Management (CBM)

Communication, Management, Marketing, Human Resource Management, Health & Hospital Management, Accounting and Finance, Environment & Energy Management, Risk Management, Industrial Management, Advertising & Media Management and MPhil Business Management

### College of Computer Science and Information Systems (CCSIS)

Mathematics and Statistics, Computer Science & MIS and Actuarial Science

### College of Economics and Social Development (CESD)

Economics, Commercial and Professional Studies, Media Studies, Education, Policy & Area Studies, Business Psychology, Social Sciences and Organizational Psychology

### College of Engineering and Sciences (CES)

Electrical (Electronics & Telecommunication), MS-Engineering Management and MS-Electrical Engineering

HoDs report to the Dean and the academic work of each department is governed by a departmental board of studies consisting of both internal and external members.

## Foundation for Higher Education

Foundation for Higher Education was established in 1994 under the Societies Registration Act, 1860 as a non-profit institution committed to the provision of quality education in Pakistan. IoBM is the first educational institution established by the Foundation. Following are the members of the Foundation:

- Mr. Talib Syed Karim, President
- Ms. Sabina Mohsin
- Mr. Sani Ahmed
- Dr. Mehtab S. Karim
- Dr. Musarrat Hasan
- Mr. Mohsin Furquan
- Mr. Mehboob S. Karim
- Mr. Nabhan Shah Karim
- Mr. Talha S. Karim
- Mr. M. W. Jahangir, Secretary

# FACULTY

## Acting Rector



**Dr. Tariq Rahim Soomro** has received BSc (Hons) and MSc degrees in Computer Science from University of Sindh, Jamshoro, Pakistan and holds a PhD in Computer Applications from Zhejiang University, Hangzhou, China. He has more than twenty-five years of extensive and diverse experience as an administrator, computer programmer, researcher, and teacher. He has served as Coordinator, Head of Department, Head of Faculty, Dean of Faculty, Head of Academic Affairs and he had wide experience in accreditation related matters, including ABET USA, NCEAC, HEC Pakistan and Ministry of Higher Education and Scientific Research, United Arab Emirates (UAE). His research focuses on GIS, IDNs, Distance Education, E-Commerce, Multimedia, UNICODE, WAP, P2P, Bioinformatics, ITIL, Cloud Computing, Green Computing, Big Data, IoT, Quality of Software, Telemedicine, VoIP, Databases, Programming and Higher Education. He has published over ninety peer-reviewed papers and is actively involved in community services in the research field. He is on the editorial and advisory board of several leading HEC recognized journals and national & international conferences. He is Senior Member of IEEE, IEEE computer society and IEEE Geosciences & RS Society since 2005, IEEE Member since 2000, Member ACM since 2019, Member Project Management Institute (PMI) since 2007, Senior Member, International Association of Computer Science and Information Technology (IACSIT) since 2012, Life Member, Computer Society of Pakistan (CSP) since 1999 and Global Member, Internet Society (ISOC) USA since 2006. He has been an active member of IEEE Karachi Section (Region 10) and currently serving as Vice-chair IEEE Karachi Section and R10 Southern Area Coordinator of Computer Society (CS).

## College of Business Management



**Dr. Muhammad Shujaat Mubarik** holds a PhD in Industrial Organization from the University of Malaya. He is currently working as a Professor and Associate Dean, College of Business Management (CBM). Dr. Mubarik brings more than 18 years of blended-experience from industry, academia, and research. His areas of interest are intellectual capital, supply chain management, and sustainability economics. Presently, he is working on a project that aims to develop intellectual capital for adopting the block chain-driven supply chain in Pakistan. He has more than 50 research papers (ISI/ESCI/Scopus indexed) published in journals of high repute, including Technological Forecasting and Social Change journal, Journal of Cleaner Production, Journal of Intellectual Capital, Management Decision Journal, International Journal of Emerging Markets, and Social Indicator Research. He also has Springer Handbook on Intellectual Capital to his credit, which is the only handbook that covers IC from South Asian perspective. Dr. Mubarik has also contributed various book chapters in the international best-selling handbooks; prominent among them are Palgrave's Handbook on Cross-Cultural Negotiation and The Palgrave Handbook of Corporate Sustainability in the Digital Era. He is also a consultant and corporate trainer and has extended his services to many multinational and national firms like Engro Fertilizer and Agha Steel. Owing to his work on the steel sector, he was approached by the Spanish commercial attached and SIDREX for his expert opinion on Spanish investment in the Pakistani steel sector. Dr. Mubarik regularly appears in TV shows to share his opinion on national and international economics and business affairs. He has also been the host of the business talk show "Corporate Lounge" at a private satellite TV channel in Pakistan.

## Accounting and Finance



**Tazeen Aarsalan** holds an MPhil in Business Administration as well as a Master's and a Bachelor's degree in Business Administration from the IoBM. She is currently pursuing a PhD in Business Management. She is the Assistant Professor and Head of Department, Accounting and Finance and has over seventeen years of experience in the corporate sector and academia. She has worked for Saudi Pak Leasing, SMEDA and various reputed business schools as visiting member of faculty before joining IoBM as permanent member of the faculty. Besides teaching Accounting & Finance courses, she is also actively involved in capstone projects where she has supervised more than twelve projects related to financial institutions and markets. She is also faculty advisor of Finance Society of IoBM and has been performing the duties of the Coordinator-BBA program for the last five years.

**Sharique Ayubi** holds a Master in Business Administration (MBA) from IBA, Karachi and another Master's degree in Economics from the University of Karachi. He also has a Banking Diploma from the Institute of Bankers, Karachi. Currently, he is enrolled in the MS/PhD program. He is working with IoBM as an Associate Professor. His experience in industry has been in the National Development Finance Corporation, where he worked for fourteen years. He has been teaching courses in Finance, Accounting and Management for over twelve years at various universities and business schools. His research interests are Corporate Governance; Regulation of Banking and Securities Markets; and Comparative Management.



**Dr. Imam Uddin** holds a PhD in Islamic Banking & Finance from the University of Karachi, a doctoral degree in Islamic Jurisprudence from Jamia Darul Uloom, Karachi, an LLB in International Law & a PGD in Islamic Banking & Finance from the Center for Islamic Economics (CIE). He is working with IoBM as an Associate Professor. He is an active academician and a researcher in the field of Islamic Banking & Finance. He has more than ten years of experience in teaching, research, product development, product management and Sharia compliance and has authored many books as well as numerous research papers that have been published in the International Journal of Islamic Finance recognized by the AAOIFI, IRTI, and IDB, etc. He has served the Islamic Banking Division (IBD) of the National Bank of Pakistan (NBP) as Vice President in the capacity of a member, Sharia' committee.



**Mehboob Moosa** holds an MPhil in Business Management and is currently pursuing a PhD in Business Management at IoBM. He is also FCMA from Institute of Cost & Management Accountants of Pakistan, a CA Finalist from the Institute of Chartered Accountants of Pakistan and holds a PGD in Islamic Banking & Finance from the Center for Islamic Economics (CIE). He is working with IoBM as an Assistant Professor. His 38 years' experience include working with national and multinational companies like BOC (Pakistan) Ltd., Al-Futtaim Engineering, Dubai, Habib Group, World Group of Companies (Automobiles), Liberty Textiles, Century-21 Textiles etc., as well as audit firms like KPMG Taseer Hadi, Sidaat Hyder, Rahim Jan and teaching in educational institutions of UK and Pakistani education streams.



**Bilal Ahmed Chishty** holds a Master in Business Administration (MBA) from Khadim Ali Shah Bukhari Institute of Technology, Karachi and did an MS (Finance) from Hamdard Institute of Management Sciences (HIMS) Karachi. He is currently enrolled in a PhD program of the University of Malaysia, Sarawak in the field of finance. He is working with IoBM as Assistant Professor. He has over 23 years' experience of accounting, finance, management and teaching at middle and senior positions. He has been associated with private and public sector organizations of the country and has served at Pakistan Defense Housing Authority (DHA), the Federal Urdu University Karachi, Suffa University and Decent Exports. His core areas of research are Short-term Financing, Capital Structure, and Corporate Finance. Bilal Ahmed Chishty has been teaching various courses in the field of Accounting, and Finance for the last 14 years at various universities and business institutes at Karachi.





**Syed Sarmad Hasan** received CMA from ICMA, Pakistan in 1994. He is working with IoBM as Assistant Professor. He has worked in the corporate sector and international NGOs for about 25 years at various positions including CFO and Director Finance in several organizations in different countries. After a successful career in Accounting & Financial Management with diverse roles distinguished by commended performance and proven results, he restarted his formal education and completed his MBA in 2016 from UMS, Malaysia and is now pursuing PhD in Management Accounting. Sarmad's area of expertise include strategy development, financial planning, analysis, managerial accounting and change management. His current research interest is in the field of organizational performance management in the not-for-profit sector. He has recently published two articles in peer reviewed journals on the subject.



**Dr. Muhammad Ali** completed his PhD degree in Finance from University Malaysia Sarawak (UNIMAS). He is currently associated with the Institute of Business Management (IoBM) as Assistant Professor. Dr. Ali has a vast experience of working with industry and academia. He served for banking industry along with leading higher education institutes of Pakistan. He has published several impact factor research articles in the area of Finance. His area of research includes Behavioral Finance, Islamic Banking, Corporate Finance and Financial Econometrics. Dr. Muhammad Ali presented his research papers in various national and international conferences. He also participated in several international conferences as guest speaker and panel discussant. Dr. Ali provided his consultancy to the industry projects that helps organizations to solve their business problems. He has supervised many undergraduate and graduate level students. At present, Dr. Ali is pursuing his Postdoctoral fellowship from University of Malaya under the supervision of Distinguished Professor Dr. Raja Rasiah.



**Dr. Arslan Qayyum** did his Bachelor of Commerce (B.Com Honors with specialization in Finance) from Hailey College of Commerce, Punjab University in 2009. He got his M.Phil (Finance) from University of Central Punjab in 2012. He got his PhD (in Finance) from University of International Business and Economics (UIBE), Beijing, China in 2019. He is currently working with IoBM as Assistant Professor. He has a vast teaching experience in the field of accounting and finance and served nationally and internationally. He has also published research articles in reputable international journals and has presented working papers in international conferences. He has also won best tutor award at UIBE in 2018.



**Kamran Rabbani** is an MBA in Finance from Greenwich University, Karachi. He is working with IoBM as Senior Lecturer. He has working experience of 20 years mainly in the banking sector, where he trained Saudi bankers in the area of small and medium enterprise financing. He has four years of teaching experience as a visiting member of faculty.



**Muhammad Asim Khan** received his MBA from the Karachi University Business School, M.Com. from the University of Karachi and is currently pursuing an MPhil leading to a PhD program. He is working with IoBM as Senior Lecturer. He has served with Siemens Pakistan, Shaheen Air International and Aga Khan Education Service Pakistan in commercial, corporate planning and education management capacities for more than fourteen years. He has also been associated with several prestigious institutions as a visiting faculty member. His areas of interest include management accounting practices and diversifying learning strategies.



**Muhammad Muzaffar Ali** received his MCom, MEd and BEd from the University of Karachi and is currently pursuing an MPhil leading to PhD program. He is working with IoBM as Senior Lecturer. He worked with several corporate sector companies in shipping and manufacturing and automobile sector in accounting and finance capacities for seven years. He has also served Aga Khan Education Service, Pakistan and Fatimiyah Education Network as Head of Department for more than eighteen years. He also served in the Ministry of Education of the Maldives where he was a convener of accounting and finance department in Male City. He has also been associated with several universities as a visiting faculty member for more than twelve years. His research interests include capital markets, analysis and forecasts related to corporate accounting and financial markets.



**Nayeem Ansari** holds an MPhil in Management Sciences from KASBIT. He is currently pursuing his PhD in Management Sciences from KASBIT. He is working with IoBM as Senior Lecturer. He has over 18 years of work experience both in the corporate sector and academia. In the corporate sector he has served as CFO and Company Secretary. He has also been associated with several prestigious institutions as a visiting faculty member. Besides teaching Accounting, Financing and research courses, he has been actively involved in the research projects of BBA & MBA students. He has presented papers in various international conferences and also published papers in numerous International journals. He is also a peer reviewer of the Cost Management Accountant business journal.



**Khawaja Masood Raza** holds a Masters in Islamic Banking & Finance and MPhil in Islamic Banking & Finance from University of Karachi. He is currently pursuing PhD in Islamic Banking & Finance from University of Karachi. He is working with IoBM as Senior Lecturer. He has worked with start-ups and multi-billion rupees organizations locally and internationally, with an industry exposure of over 28 years in banking, textile, information technology and consultancy. While associated with the industry, he has been teaching courses in Accounting, Finance, Islamic Banking, Islamic Finance and Taxation for over twenty years at various universities and institutes as a visiting faculty member. His area of expertise include Accounting & Financial Management, Business Planning & Analysis, Business Process Reengineering and Islamic Banking & Finance. His research interests are Accounting, Finance and Islamic Banking & Finance.



**Najeha A. Bela** holds an MBA and BBA in finance from the University of Karachi, and has been teaching accounting and finance core and elective courses at IoBM for eight years. She is currently pursuing an MPhil in Business Management from CBM. She is working at IoBM as a Lecturer. Her research interests are in behavioral finance and stock returns. She has been involved in curriculum review and course coordination of accounting and finance courses and has been involved in creating linkages between IoBM, ACCA and CFA associations.



**Shakira Fareed** She did her MBA (Finance and Risk Management) from IoBM and MA (Economics) from Karachi University. She is currently enrolled in a PhD (Business Management) program at IoBM having specialization in Finance. She is working with IoBM as a Lecturer. She has worked as a student counselor and secondary teacher at Groom Well School. She has been a coordinator of capstone projects besides working on capstone database development and management. She has one and a half years of research experience.



**Aisha Naz** holds BBA and MBA majoring in finance from the Institute of Business Management. She is currently pursuing PhD in Business Management from IoBM and is in the process of completion of course work. She is working with IoBM as a Lecturer. Her goal is to become a PhD in Business Management and contribute to academia through research and spreading of valuable information of finance and business management topics, such as corporate finance, asset pricing, stock returns, financial management techniques, capital structures, and customer equity. Her research paper on The Empirics Effect of Foreign Aid and Growth in Pakistan, was published in the Journal of Independent Studies and Research-Management, Social Sciences and Economics, AERC International Conference 2018 16(2), 49-64. She has also presented several conference papers in International and National conferences. Ms. Aisha Naz is also CFA Level I candidate.



## Communication & Languages



**Dr. Mehvish Saleem** has completed her PhD in the field of English and American Studies from the University of Graz, Austria and holds a Master's degree in English Linguistics from the University of Karachi. She is currently working with IoBM as Associate Professor and HoD. She has been teaching since 2005. Her professional experience includes teaching varied English language and communication courses in diverse higher education contexts. She was a committee member of the IATEFL ReSIG and worked as the Joint Events Coordinator. Her key academic and professional achievements include receiving a PhD fellowship from the HEC, Pakistan, working as an editor, ELT Graz Working Paper at the University of Graz, Austria, working as a support teacher trainer for EDLINKS-USAID and studying as a visiting postgraduate student at the University of Warwick, UK. Her research interests include psychology of language learning and teaching, Complex Systems Theory and teaching English in 'difficult circumstances'.



**Dr. Aliya Sikandar** holds a PhD in Education from the Institute of Business Management, MA TESOL from the Institute of Education, University of London, UK, and a Master's degree in English Literature from the University of Karachi. Dr. Sikandar's PhD concerns Critical Discourse analysis of research consultations in higher education. She is working with IoBM as Associate Professor and also has an RSA certificate in Teaching of English (COTE) from the University of Cambridge. She has worked for the Aga Khan University for almost 24 years before joining IoBM full time in September, 2013. Currently, she is engaged in teaching Business Communication courses. Her areas of interest are Business Writing and Speech, Critical Discourse Analysis, Scholarly Writing and Spoken Discourse.



**Dr. Muhammad Asif Khan** has a PhD in Education from IoBM, an MPhil from Iqra University, MBA from IoBM and an MA in English Literature and Linguistics from the University of Karachi. He is working with IoBM as Assistant Professor. He has a rich experience of teaching English and communication related subjects to various categories of students ranging from intermediate and A-Levels to BBA and MBA. His areas of interest include TESL, Business Communication and Interpersonal Skills. He is also a contributor to the Pakistan Business Review (PBR), where his interviews with prominent personalities of the corporate world are published.



**Pir Muhammad** holds a Master's degree in Arabic and Islamic Studies from the University of Karachi, and also a Master's degree in English Literature and Applied Linguistics from the National University of Modern Languages (NUML). He completed his Dars-e-Nizami (Aalim-e-Deen) course of eight years and a year's specialization course in Islamic Jurisprudence from Jamia Darul Uloom Karachi. He is currently enrolled in MPhil in Islamic Studies from University of Karachi. He is also a student of PGD in Islamic Banking and Finance at CIE Karachi. He is working as Lecturer at IoBM. He has been teaching at IoBM since 2012.



**Bushra Irshad** She earned her Master's in Linguistics at the University of Karachi and is currently pursuing her Mphil at the University of Karachi in ELT and Applied Linguistics. Her area of research includes, metacognition, writing as a process and learner autonomy. She is working as Lecturer with IoBM.



**Mahrukh Zahid** is currently pursuing her Mphil in ELT & Applied Linguistics from the University of Karachi. She earned MA in English Linguistics from the University of Karachi. She joined the Teacher Development Center where she spent a year developing her teaching and research skills. She is working with IoBM as a Lecturer. Her fields of interest include teacher-research, teacher autonomy and learner autonomy.

## Environment and Energy Management

**Dr. Shahid Amjad** has a PhD from School of Ocean Sciences, University of Wales, UK. His MS is from the University of Oslo Norway in Benthic Ecology. He has completed courses in Management of R&D Institutes from University of New South Wales, Australia. He is a Professor and Head of the Department at IoBM. He has been associated with the National Institute of Oceanography as Director General and with various top universities of Pakistan as Acting Vice-Chancellor and Professor. He has also been associated as a visiting faculty with NED and the University of Karachi since 2005.



**Dr. Jamshaid Iqbal** holds a PhD in Environmental Sciences from National University of Sciences and Technology (NUST), Islamabad. He is working with IoBM as Assistant Professor Department of Environment and Energy Management. Dr. Jamshaid has more than 12 years of professional experience including teaching, research and industry. Solid Waste Management, Environment and energy management, Environmental Impact Assessment, Occupational Health and Safety are the key areas of his research interest. Dr. Iqbal has been associated with various national and international organizations including World Bank (WB), International Finance Corporation (IFC), Asian Development Bank (ADB), United States Agency for International Development (USAID), Rambol-UK, China Three Gorges Development Company (TGDC), RSW-Canada, Energy Market Group (EMG)-USA, Pakistan Water and Power Development Authority (WAPDA), Punjab Power Development Board (PPDB), Kot Addu Power Company (KAPCO), Pakhtunkhwa Energy Development Organization (PEDO), International Islamic University (IIU), Islamabad and National University of Sciences and Technology (NUST), Islamabad.



## Entrepreneurship

**Dr. Munir Hussain** holds a PhD degree in European Studies. He is expert of corporate governance structures of SME's in European Union. Previously he has done MBA (International Business) from University of Wales Institute Cardiff, United Kingdom, Postgraduate Diploma in Business Administration from London School of Commerce, United Kingdom. He is working with IoBM as Assistant Professor and HoD, Entrepreneurship. He is the author of an international book published by world's 15th best publisher SPRINGER and authored many international and national research article of world repute. He has been awarded the travel by Higher Education Commission of Pakistan for three of his international conferences in 2012, 2015 and 2017 (presented in Islamabad, Istanbul, and Abu Dhabi). He also has an experience of dealing with HEC, NBEAC and other national educational regulatory bodies. Furthermore; national and international accreditations and memberships including United Nations Academic Impact, Microsoft Dynamics, SAP University Alliance etc. He is teaching courses of entrepreneurship since 2013. In addition, he has been involved in supervising entrepreneurial ventures of students, startup incubation and writing entrepreneurial business plans. His research areas are entrepreneurship in Pakistan, corporate structures of startup businesses and SMEs, Geo-economics and business-related regionalism.



**Dr. Omar Javaid** received his PhD in Socially Sustainable Entrepreneurship from IoBM in 2018. He has a BE in Industrial & Manufacturing Engineering from NED University and Executive MBA from IoBM with majors in Marketing and MS in Management Sciences from PAF-KIET. He is working as Assistant Professor with IoBM. He has 14 years of work experience of working in the corporate, non-profit and education sectors. His core competence is mentoring new startups and ventures. During the previous five years he has helped hundreds of students in their entrepreneurial ambitions. He has also been helping students to setup micro businesses for poor unemployed folk, and has successfully initiated around 450 such projects during his academic career to date. He has published various research articles and editorials in various journals, magazines and newspapers. He is a reader of Islamic Economics & Finance, Micro-finance & Entrepreneurship, Social Entrepreneurship, Political Theory, and Philosophy of Economics and Business Management. Apart from teaching at IoBM, he is also responsible for the mentoring IoBM students so as to enable to setup the entrepreneurial ventures and facilitate them in developing of an entrepreneurial ecosystem within the Institute.





**Dr. Mohammad Ali Shamim** has a PhD in Civil Engineering from the University of Paris, France and an MBA from INSEAD, Fontainebleau, France. He is working with IoBM as Adjunct Faculty. He has over 45 years' experience of working in different organizations, to name a few, the Islamic Development Bank, Jeddah, the IFC and the World Bank. His geographical work exposure spans North America, Europe, Africa and Asia. In addition, he has taught in a business school. His last assignment was as the Managing Director & Chief Executive of a cement plant project.



**Rehan Muzammil Butt** holds an MBA from University of Wales, UK in management in developing countries and the Japanese management system. He is working as a Senior Lecturer with IoBM. He has over 15 years of business experience in marketing and distribution of FMCG, B to B tender business, raw material supplies to the fan industry, several CSR projects, research paper presentations in international conferences. His special interests are Business Ethics, Islamic Marketing and Islamic Supply Chain. He has over 15 years of experience of working in several reputable universities.



**Samiya Hameed** has done an MPhil in HR and an MS in Design Marketing & Merchandising from Iqra University. She is also pursuing LLB. She is working with IoBM as Senior Lecturer. Previously, she has been a faculty member and project supervisor in different universities including Iqra University. She has attended different international conferences of management sciences and has also done research work and presented a paper at the IU International Conference 2016. Ms. Samiya is also an entrepreneur and runs her fashion accessories brand (Swank by Samiya) and Beautypreneur venture by the name of "Face Value -The Salon Institute". She is also engaged with multiple NGOs in women entrepreneurship programs and street students education for the under privileged. She won the Women Excellence Award in 2016.



**Noman Mahmood** has done his MBA from PAF-KIET and is currently pursuing a PhD in Business Management from IoBM. He is working as Senior Lecturer at IoBM. He played an instrumental role in the diversification of IoBM by developing entirely new BS Entrepreneurship and BS Social Entrepreneurship degree programs. Over a number of years, he has facilitated numerous socially deprived people, mentored aspiring and existing entrepreneurs by helping them setup their own small businesses or by helping them enhance their already existing business setups through strategic and tactical counselling. He currently teaches Small Business, Guerrilla Marketing, Design Thinking, Entrepreneurial Leadership and Social Advocacy. Previously he was involved in the Marketing Department of IoBM as a Research Fellow. His research interests include Entrepreneurial Strategies, Social Entrepreneurship and Innovation, Community Operations, Language Strategies, Work-Life balance, Creativity and Design Thinking.



**Sardar Muhammad Nawaz** did MBA from PAK KIET. He is working as a Lecturer with IoBM. His areas of expertise are delivering motivational talk, business startup strategies business plans, public dealing, developing SOPs, business reporting strategies, legal advisory to entrepreneurs. He started his career by founding an NGO with the motive of providing free education to the underprivileged community. He was responsible for marketing strategies and fund raising campaigns. He has working experience in corporate industry i.e. Banking, Outsourcing Businesses or BPO Services.



**Bazla Mukhtar** holds a BS degree in Zoology from the University of Karachi and MBA degree in marketing from the Institute of Business Management. She is currently pursuing PhD in Business Management from IoBM. She is working as a Lecturer with IoBM. She has been serving in the academics for the past two years, teaching core courses of business and entrepreneurship and her goal is to contribute to the academia through research and spreading of valuable information with respect to business management topics, such as entrepreneurial mindset, factors impacting entrepreneurial intention, community entrepreneurship and psychological and biological underpinnings of the entrepreneurial mindset. In addition to this, she also has a part-time venture since 2014 by the name of Sharp Digital Solutions which provides professional writing services to clients across the globe.



**Marium Mateen Khan** did her MBA and BBA (Honors) both in Marketing from Karachi Institute of Economics and Technology (PAF-KIET). She has been a scholarship holder since her first semester throughout her BBA and MBA. She received Summa Cum Laude honor in both programs. She is currently enrolled in the PhD (Business Management) program at IoBM having specialization in Marketing. She is working as a Lecturer at IoBM. She started working in academia as a Subject Coordinator and teacher at APSAC (Army Public School and College). Marium has taught Marketing courses as a visiting faculty at PAF KIET to BBA, BS and MBA level students. She has also supervised BBA Final Year Projects (Research Theses) at PAF KIET. She has 8 years of research experience. She has freelance working experience of academic writing, creative writing and graphic designing. Seeing the gaps and issues in the current academic environment made her pursue a career in academia.



**Kazim Usman** holds a Master's degree in Economics from University of Karachi. He is currently pursuing MPhil in Applied Economics from Applied Economics Research Centre (AERC) and his research interest is economics of happiness, axiology of economics and Islamic economics. He has been working as a Lecturer with IoBM, teaching core courses of Economics and social entrepreneurship. His goal is to serve in interdisciplinary research in philosophy of economics and its sociological repercussion especially in developing countries.



## Health and Hospital Management

**Dr. Asima Faisal** is PhD in Business Management, MPhil and MBA from IoBM. She has done her MBBS from Jinnah Sindh Medical University (former SMC). She is working as an Associate Professor and Head of Department in Health and Hospital Management Program. She has more than 20 years of experience in the healthcare industry serving diverse roles in the areas of Health Management in Pakistan. Dr. Asima Faisal served as Director Media and Marketing and afterwards Director Programs for the Institute of Health Management (IHM) at Dow University of Health Sciences (DUHS). She was associated with Sind Education Foundation where she arranged health Camps and health Trainings of Teachers (TOTs) all over Sind for more than 900 schools for underprivileged. Dr. Asima Faisal has been actively involved in CSR activities like free Health camps, flood relief, disaster management, and conducting TV Talk shows on various medical and health management issues of the society. She served as a member of the subject committee for pharmaceutical representatives training and assessment from the National Testing Service (NTS). Being a Certified Master Trainer, she has been conducting Continuing Medical Education program (CME) for health care professionals, all over Pakistan from the renowned platform of a multinational pharmaceutical industry. Added to her credentials, on the academic front, Dr. Asima Faisal has presented her research work at various national and international conferences and forums in Italy, USA, India, Japan, France, and Australia. She has authored and co-authored more than 20 published research papers in the field of Health Management in HEC recognized peer reviewed journals. She represented Pakistan as a Counselor for the inward mission sponsored by British High Commission to universities in United Kingdom for pursuing avenues of internationalization of higher education between the two countries. As a medical doctor, she was also affiliated with South City Hospital in sharing her expertise in clinical and administrative areas.



**Dr. Ather Akhlaq** did PhD in Health Informatics and Management from The University of Edinburgh, UK. He did his MPhil in Management and also received a Master's degree in Computer Sciences from IoBM. He is working as Associate Professor and Director of the Graduate Studies. He has been involved in many funded international projects and has published in many high impact factor journals. At IoBM, he teaches to PhD, MPhil and MBA students. His research interests include health management, health information technology (HIT), mixed methods and qualitative research, and digital business.



**Dr. Abdur Rahman Aleemi** holds a PhD in Business Management from IoBM, an M.Phil. from IQRA University and MBA from Virtual University of Pakistan. He is working as Assistant Professor and Research Consultant to the MHM Research Cell (MRC) His main research interests fall in the areas of Health Economics, Financial Economics, Corporate Finance, Equity Pricing, Islamic Banking & Finance, Banking Regulations, Supervision and Stability. He is also a lead researcher in the areas of banks' Charter Value, Market Power, Franchise Value, and Market Discipline. He possesses more than ten years of diverse experience of industry and academia at different positions for various projects and responsibilities. He has published several research papers in HEC recognized peer reviewed journals and has also presented his research work in several national and international conferences. Last but not the least, he is also leading Capstone Projects.



## Management and HRM



**Dr. Shagufta Ghauri** holds a doctorate in Business Management from IoBM. She is working as Head of the Department Management & HR, Assistant Professor and Faculty advisor SHRS with IoBM. She holds a vast teaching experience across major universities of Karachi and has been associated with IoBM for the past 15 years teaching Management & HR courses and has also been involved with curriculum development and training manuals. Dr. Shagufta is an honorary member to the Pakistan Education Foundation and has several research publications and conference presentations to her credit, such as organizing the Zenith Leadership & Development Conference on an annual basis since the last eleven years alongside her coveted society SHRS.



**Javaid Ahmed** has a MBA with Distinction from Lancaster University Management School where his empirical research was awarded 1st prize by the now CMI and a BSc Engineering from the University of London, Kings College. He is a (IFC) Certified Board Director, FCMI-Fellow of the Chartered Management Institute, FCIM-Fellow of the Chartered Institute of Marketing (UK), Member of MENSAs and a UK Chartered Engineer. He is Advisor to the President on Strategy / Sr. Fellow Strategy & Innovation and has been Head of the Departments of Marketing and Management & HRM from 2003 to 2015. He brings to academia over 28 years of a successful top management career with the global pharmaceutical industry, including over a decade in Switzerland, Malaysia and the Philippines. He is the recipient of the 2013 Faculty Excellence Award bestowed jointly by IoBM and the International Association of University Presidents and has served on the Jury of the Prime Ministers' Corporate Awards of Excellence. By invitation he was admitted to the Academic Union Oxford. In 2020 he earned the Harvard University Premium Certificate of Teaching in Higher Education. Javaid is case research active in competitive strategy and market innovation, has supervised MPhil research and taught the pre-doctoral course on Strategy and Governance. He has written two research based dissertations, published twenty two papers and cases, delivered over 900 successful man-days of industry engagement sessions and in 2018 was lead consultant in a 10 year strategic plan exercise of a major conglomerate. In 2019 he orchestrated the 5-year Strategic Plan of IoBM. Javaid says he is a facilitator, not a teacher, nor an entertainer. A firm believer in collaborative learning, his sessions engage participants in active reflection leading to practical knowledge and skills.



**Dr. Fazal Anwer Khalidi** has done MSc Marketing from Salford University, UK; MBA from IBA; and MBBS from Dow Medical College. He was awarded a Chevening Scholarship by the British Council to pursue a Master's program at Salford University. He is working as Assistant Professor with IoBM. He has 24 years of consultancy and senior management experience with multinational pharmaceutical companies. He has also been associated with leading business schools of Karachi as an adjunct member of faculty. He has also attended an executive development program at the Thunderbird School of Global Management, Arizona, USA.



**Dr. Mirza Dilshad Baig** has a doctorate in Management Sciences. He is working as Assistant Professor with IoBM. He has a rich experience of over two decades in Human Resources and Organizational Development for both multinational and local organizations. He has served as Head of Human Resources and OD in most of the organizations. Besides having had successful corporate exposure and before joining IoBM as a permanent faculty, he has taught Human Resources Management, Strategic Management, Leadership Ethics and Change, Managing Human Capital, HR Audits & Procedure, Learning, Talent Management, Compensation Management, Organizational Structure; Change, Strategic HR Planning, HR Technology and its Impacts, Global HR Business as a visiting member of faculty in various educational institutions. He is also a corporate trainer and has provided consulting services to renowned organizations in Pakistan in the field of Strategic HR Management and Organizational Development.

**Dr. Muhammad Arif** holds a PhD in Management Sciences and an MBA in HRM from SZABIST Karachi. He did his Master in a Maritime affairs from Bahria University. He has done number of Management and Leadership courses at national and international level. He is working as Assistant Professor and Director QEC at IoBM. He was commissioned in the Executive Branch of Pakistan Navy in 1988. He has served in the special arm of PN i.e Submarine Service till the level of executive officer. He has held various command and staff appointments and has served as Base Commander PNS ABDOZE, Director Submarine Training center, Captain Training of all Karachi based Educational/Training organizations overseeing the working of Bahria University and all schools/cadet colleges of Sindh under the management of Pakistan Navy. He has also served as Commandant/Project Director of Cadet College Sanghar. He has a versatile and enriched teaching/management experience. He has served as a senior faculty member at the Pakistan Naval Academy as well as directing staff at Pakistan Navy Staff College Lahore, teaching Management/Leadership as well as supervising the research works of senior national and international military officers. As Director Submarine Training Center, Dr. Arif was awarded Tumgha-e-Imtiaz Military TI (M) by the President of Pakistan in recognition of his unique efforts of single-handedly managing and leading the team that indigenously produced three submarine training simulators using local resources and talent for the training of submarine crew; thereby saving a huge amount for the national exchequer.



**Dr. Bilqees Ghani** has done both her PhD and MPhil in Business Management from IoBM. She is working as an Assistant Professor with IoBM. She has around four years' experience of corporate and teaching. She has published her research in both national and international journals, and has also presented a paper in an international conference. Her research draws on the performance appraisal process with exchange perspective, justice/fairness, social interaction, employee intentions & behaviors.



**Shiraz Ahmed** holds an MS in Management Sciences from SZABIST. He has received training from master trainers from the UK, Africa and Pakistan. He has been trained by foreign teachers of the British Council for their Global Leadership Development Program. He is working as an Assistant Professor with IoBM. He is also a British Council Trained Management Trainer and a Certified HR Professional. He has spoken at and facilitated sessions for local and foreign dignitaries including a British Foreign Minister, British High Commissioner and a Global CEO and Regional Directors. Managers for junior and senior positions including heads of department and directors have attended his workshops. Employers of Nokia, Siemens, RBS, Shell, Wal-Mart, Emirates Airline, ICI, Haier, Engro, Coca Cola, AC-Nelson, B Braun, Bayer, Mobilink, Byco, Descon engineering, Toyota Indus Motors and other companies have benefited from his workshops. He has been visiting member of faculty in leading business schools of the country.



**Zafar Mehdi** is pursuing his PhD at IoBM. He is working as Assistant Professor with IoBM. He has worked in several business institutions before joining IoBM. He has also worked in multinational companies, carrying out the responsibilities as Administrative Manager and Director on 'Japan –Turkey-Mitsubishi joint venture' in UAE. Locally, he has worked as an Administrative Officer in Inter Cable Communication (Business Partner, Paktel)-Karachi. Mr. Mehdi worked as term paper and assignment supervisor as well as online tutor for the students of the London School of Economics and Political Science, University of Leeds, University of Nottingham and London Metropolitan University. He was rewarded by ICMAP for four 'Roll of Honour' producing the best results at national and international levels. His special areas of the research and publications/range from political economy, training and development to human and organizational development, globalization and labor governance. He has contributed 120 research-based articles on "business economy and international relations" to daily Dawn, the News International, daily Jang Newspaper and Management Accountant Journal, daily Jung and Family Magazine.





**Dr. Muhammad Azeem Qureshi** obtained his PhD degree in Business Management and was awarded the Certificate of Merit for his distinguished performance during his PhD (3.93 CGPA). He was awarded MS degree in Management Sciences with a Gold Medal for securing 4.00 CGPA and Summa Cum Laude Award for outstanding academic performance. He earned MBA degree in the field of Human Resource Management from the Institute of Business and Technology, Karachi. He obtained professional certification in Oracle 8, Develop 2000 and Database Administration along with the Certification in Database Management System. He is working as an Assistant Professor with IoBM. He has expertise in Statistical Package for the Social Sciences (SPSS), AMOS and Smart PLS. He is an experienced researcher. His research area encompasses Business Management, Organizational Behavior and specifically, Leadership, Ethics and Layoff survivor sickness. He has published several research papers in HEC recognized peer-reviewed journals. He has also presented his research work in several national and international conferences. He has been supervising MS/MPhil-level research for several years. He has been teaching courses like Advanced Research Methods, Survey of Current Literature in Business Management, Seminar in HRM and Leadership Ethics and Change. Prior to joining IoBM, he has been Research Associate and Lecturer at the Institute of Business and Technology, Karachi.



**Dr. Afaq Ahmed Kazi** holds a PhD in Public Administration for University of Karachi and MBA from University of Sindh. He got his professional trainings from IIP International Quality Centre UK. ASI / Exemplus Consultants UK, New HR Competency Training -by Global Learning Program Warner Lambert USA, Total Productivity Management - Wavin Overseas Holland, "Making the Merger Work" - Certified Trainer by Pritchett Associates USA, Change Management and Business Process Restructuring by Catalyst Consulting Group USA. He is working as an Associate Professor with IoBM. He is a senior Human Resources and Industrial Relations professional with over 27 years of professional experience. He has served the industry in HR at C-level positions at leading multinational companies in Pakistan and abroad. As a researcher, academician and trainer, he has been associated with a number of universities in Pakistan including IBA Karachi and CBM besides providing consultancy services to the Industry. Based on his experiences at companies like Parke Davis, Pfizer and Dadex, Dr. Kazi has developed a research based model specific to the HR environment in Pakistan 'HR Model for Improved Productivity'. As a Consultant, he has helped a number of businesses implement this model as a business improvement tool. Dr. Kazi is also a specialist in labor management relations, collective bargaining, contract labor and its legal implications besides Human Resources.



**Dr. Sania Usmani** holds a PhD degree (2016) in Business Management from Iqra University. She has completed her MBA in finance and Supply Chain Management. She has also completed Certification in Entrepreneurship from IBA, Certification in Neuromarketing from University of Copenhagen and Certification of Readiness (CoRe) from Harvard University. She is working as an Assistant Professor with IoBM. She has a teaching experience of 10 years. She has worked with Total Atlas, Royal bank of Scotland and Dawlance Ltd. She has an expertise in SPSS, Amos and Smart PLS software packages for statistical analysis. She has taken various HEC trainings in collaboration with ProQuest. She has an experience on curriculum development. She has attended various international conferences in Australia, Spain, Malaysia, South Korea and Turkey. She has won best paper award in the Australian (2013) and South Korean (2019) Conference. She has supervised M-Phil and MBA students in research. She has published several research papers in HEC recognized journals. She has been teaching Principles of Management, Human Resource Management, Strategic Management, Organizational Theory and Design, International Business, Organizational Behavior, Cross Cultural Management, Management and Organizational Dynamics, Microeconomics, Entrepreneurship and research. Her research interest areas are Organizational Behavior, Job satisfaction, Contemporary issues in Management etc.



**Dr. Junaid Ansari** He has completed his Ph.D. (Business Management) in 2020 and MBA (Advertising & Media Management) in 2013 from the Institute of Business Management. Moreover, he holds the Bachelor's Degree in Computer Science & IT from NED University, Karachi. He is working as Assistant Professor at IoBM. Prior to joining IoBM, Dr. Ansari had served the IT sector for 11 years as an Entrepreneur and Head of Software Division in a private company. He has contributed his expertise in developing the software for key organizations of Pakistan that include State Bank of Pakistan, Securities & Exchange Commission of Pakistan, Finance Department of Sindh Government, Sindh Revenue Board, ARY, Geo, Abbott, and several other organizations. As an IT professional, he has achieved several awards including P@SHA ICT Awards. As a researcher his several papers have been published in HEC recognized journals. During his PhD, he has developed an instrument using the mixed methods research design.



**Juveria Baig** has done BSc (Hons) from the Textile Institute of Pakistan, MBA from Hamdard University and a Master's in Human Resource Management from the University of New South Wales, Sydney, Australia. She is working as Senior Lecturer with IoBM. She is a researcher, trainer consultant and above all a lifelong learner. She has more than 10 years of experience in the areas of Business Development, Project Management, training, Coaching and Mentoring and Performance Management. She has worked in Pakistan and Australia in various positions, namely SGS Pakistan (Pvt) Ltd, United States Agency for International Development (USAID), Aga Khan University and University of New South Wales, Australia. She has provided management & OD consultancy in various sectors including Pharmaceuticals, Banking, Healthcare, Engineering Services, Development Sector, Shipping, Logistics etc. She is also serving as a coach and mentor at HerCareer.pk. She is seriously committed to a career in research, consultancy, learning & development and teaching. Her research focus remains in the areas of Knowledge Management and Workforce Development.



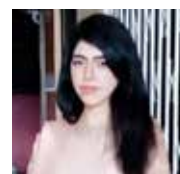
**Saba Gulzar** holds an MS in Human Resource Management from PAF-KIET Karachi. She is working with IoBM as a Senior Lecturer. She has had eight years of teaching, research and consultancy experience in different organizations in Karachi and also has experience of multiple managerial positions in academics. Her area of interest include academics, training, coaching, leadership, business education, research, and organizational development. Her main focus is research work and development of innovative tools to increase the efficiency of Human Resource professionals in different industries.



**Syeda Tayyaba Fasih** is pursuing a PhD in Business Management at IoBM. She completed her MSC in HRM and Organization psychology from IoBM and BBA (HRM) from Bahria University. She is working with IoBM as a Lecturer. In research, she had integrated ontological research with business analytics. Her research interest are talent management, human capital, employer branding and HRM. She has several research publications and conference presentations to her credit.



**Farah Habib** holds her Master Degree in Business Administration from IoBM. Also, she holds her Bachelor's degree in Bio-Medical Engineering from NED University of Engineering Technology in 2013. She is working as Lecturer and Assistant Manager ORIC / OGS and Secretary BASR. Her work experience is related to Higher Education, Academics and Management. She has previously worked as Asst. Editor of Pakistan Journal of Medicine and Dentistry (PJMD), in Zia Uddin University (X-Category Journal) and Research Assistant in Patel Hospital. Her areas of research interest are Organization Behaviour, Entrepreneurship, and Leadership.



**Bushra Javed** holds an MPhil in Business Administration from the Air University, Islamabad. Prior to this, she did her MBA (Finance) from University of Education. She is currently pursuing a PhD in Business Management from IoBM. She is working as a Lecturer with IoBM. Her research interests are in Data Driven capabilities, Data driven culture, and Industry 4.0. She has over four years of experience in the academia. She has freelance working experience of academic writing and creative writing. She has several research publications and conference presentations to her credit. She holds distinction in MBA and has been a scholarship holder since her first semester throughout her MBA.



**Aisha Yusuf** is a PhD scholar in the field of Business Management at IoBM. She completed her Masters of Philosophy from IoBM, with majors in the area of Corporate Governance. Previous to this, she received a bachelor's degree in business administration from University of Karachi. She is working as a Lecturer with IoBM. She has also served as a Graduate Research Assistant and Visiting Faculty at IoBM prior to joining the institute as a permanent faculty. Additionally, her field placement has been with The City School in Karachi, as a Middle School English teacher for three years. She has worked on numerous research studies and has gained valuable academic research writing experience, with many publications and national & international conference presentations to her credit. She is interested in educational improvements, human resource in organizations, financial performance, and varied business areas.



## Marketing



**Mohammad Ekhlague Ahmed** holds a Master's degree in Business Administration from the IBA, Karachi. Currently he is pursuing his MPhil in Business Management from IoBM. He is working with IoBM as Assistant Professor, Head of the Department and Lead Capstone Course Projects. He has over 30 years of working experience in the corporate sector at various senior management positions in both multinational and local companies. He worked for Philips, Osram, Dadabhoy Cement and Rajby industries before joining IoBM as a permanent member of faculty. Besides basic marketing courses like Marketing Management, Principles of Marketing, Sales Management, he has also been teaching Strategic Marketing Planning, Marketing Strategies and Value Innovation, Distribution and Channel Management. He is also a corporate trainer in the field of Marketing & Management. He has been instrumental in bridging the gap between academia and the corporate world by implementing experiential learning programs at IoBM.



**Kausar Saeed** holds MS degree in Management Sciences and is currently pursuing her PhD in the area of Management Sciences. She is working with IoBM as an Associate Professor, Marketing and Senior Manager & Head of Internship & Placement Department and has over 28 years of diversified experience of the corporate, academic, entrepreneurial and developmental sectors. She has served with various organizations in different positions which include Aga Khan Foundation, Interflow Communications and Gtz-a German NGO. She teaches various courses of marketing, management and business research. She is an experienced academican, researcher and consultant in the field of marketing and management. She has presented research papers at national and international conferences and has several published papers to her credits.



**Dr. Syed Amir Saeed** did his PhD in Marketing from IM Sciences, Peshawar. He has an MPhil in Marketing and an MBA from the University of Peshawar. He is working as an Associate Professor, Marketing at IoBM. Subsequently, he joined Gulf Ship Chandlers Dubai, where he was responsible for managing marketing activities and supplies to United Arab Shipping Corporations. He has executed multiple research projects in collaboration with Gallup Pakistan. Clients for those projects include the World Bank and British Council. He has also provided advertising consultancy services to different national and multinational brands.



**Dr. Irfan Hameed** is an Approved Ph.D. Supervisor by Higher Education Commission (HEC) and 03 candidates have completed their Ph.D. dissertations under his supervision. In 2013 he was selected by the HEC of Pakistan for two months of full-fledged professional training regarding teaching under the "Faculty Professional Development Program" and awarded him "Master Trainer Certificate". After that, he conducted faculty training for various institutions of Pakistan. He is currently serving as an Associate Professor of Marketing at IoBM. Earlier, he worked as Registrar and Chairperson, Department of Marketing in Faculty of Business Administration, Iqra University, Karachi, Pakistan. He also remained Head of Graduate Studies and Knowledge Unit Leader of Business and has actively participated in academic societies and committees and hosted 03 Convocations of the university in the capacity of Registrar. He has also worked as Conference Secretary and Conference Editor of International conferences organized by Iqra University in 2016-17-18 and chaired technical sessions in various research conferences. He has published more than 40 research papers and a few more are under review process. Indexing agencies of journals include WoS/ISI/JCR (Clarivate Analytics), Scopus, HEC recognized "X" category, HEC recognized "Y" category.



**Saadiyeh Said** has an MBA from IBA, Karachi. She is working with IoBM as an Assistant Professor. She has over 30 years of academic, marketing and market research experience, having worked in organizations such as Johnson and Johnson and as Executive Director for Aftab Associates. She has also worked as a marketing consultant for Feroze sons Laboratories, Pakistan Ltd and Shazeb Industries. In addition, she has been actively involved in marketing management training programs for various organizations and has undertaken several market research projects at a national level.

**Dr. Muhammad Adnan Bashir** has done his PhD in Marketing from IoBM and an MPhil & MBA from Iqra University, Karachi. He holds BSc (Hons) & MSc degrees in Microbiology from the University of Karachi. He is working as Assistant Professor with IoBM. He has over six years of work experience in both multinational and national pharmaceutical companies. He has worked for GlaxoSmithKline, Atco Laboratories and Novartis Pharma Pakistan. His research areas include Branding and Customer Engagement through Online Social Media.



**Dr. Amber Raza**, holds a PhD in Business Management and MBA in HRM from IoBM. She did her MPhil in HRM from PAF-KIET. She is working as an Assistant Professor & HoD Academics with IoBM. She has worked with AKESP in the field of Education Research in Pakistan, and was part of the team that developed evaluating and monitoring instruments for the project QUAID (Quality Advancement through Institutional Development). She has 10 years of teaching experience at university level; and has supported 100 plus students in their research projects which were based on diverse topics with focus on Management and Marketing.



**Fareen Razzak** has done her MBA from IBA and is currently pursuing her MPhil at IoBM. She is working as an Assistant Professor with IoBM. She teaches Consumer Behavior, Brand Management and Marketing Management. She has had corporate experience related to Brand Management in Colgate Palmolive and Candy Land. She is also the founding partner in an entrepreneurial venture called Rashk Fashions, a designer brand which sold premium designer wear in various high end multi designer stores in Dubai, Toronto, Bangladesh and Chicago with branches in Karachi including Brand Just Pret, The Designers, Shabis and Labels.



**Syed Muhammad Fahim** is a PhD scholar at IoBM. He has done his MS in Management Sciences from Institute of Business and Technology (IBT). He has an extensive experience in the field of research and marketing. With more than 25 research papers at his credit, he has developed specialized skills in partial least square structural Equation Modeling (SEM). He received customized training on PLS SEM in Malaysia. His forte is structural equation modeling via Smart PLS. He has attended and conducted workshops on Smart PLS at various national and International forums.



**Dr. Aysha Karamat Baig** obtained her PhD from Swinburne University. She is currently an Assistant Professor at IoBM. Her doctoral study was on consumer boycott behaviour where she specifically investigated the factors that drive Muslim consumers' participation in global macro-boycott campaigns. During her PhD, Aysha has developed a strong passion for understanding boycott behaviour, and the factors related to cross-cultural consumer psychology that influence boycott behaviour. Her research interests include Consumer Boycotts, Neuro-Marketing, Culture and Consumer Psychology. Her teaching areas include Marketing Management, Consumer Behaviour, Digital Marketing and Neuro-Marketing. Her articles have been published in peer reviewed journals.



**Mukhtar Ahmed** is currently enrolled in MPhil program at IoBM and has done his MBA in Marketing from Institute of Management Sciences, Lahore. He is working as a Senior Lecturer with IoBM. He is a well-rounded professional hailing from pharmaceutical sales & marketing; with a diverse experience of over 30 years in the corporate circuit. He has been fortunate enough to have spent his career in multinational organizations; where he had ample opportunities to learn & evolve from a budding sales professional to a visionary corporate thinker. He spent a major part of his career in Schering AG, a German Pharmaceutical specializing in Gynecology & Dermatology, and then joined Bayer Pharmaceuticals, one of the largest global names in the industry. As a Business Unit Head, in addition to Pakistan business, he was also responsible for Bayer Pharma business of Sri Lanka from 2012 – 2015.



**Fariha Raza** she did MBA from IBA, Karachi (1994), MS in Management Sciences from SZABIST, Karachi (2015), and is currently pursuing PhD in Management Sciences from SZABIST, Karachi. She is working as a Senior Lecturer with IoBM. She has 13 years of corporate experience and 6.5 years of full time teaching experience at HEIs. She has worked with Hilal Confectionery Pvt. Ltd from May 1998 till April 2006, where her last title was General Manager Business Administration. She has served as Deputy General Manager Marketing, Dewan Farooque Motors Limited from May 2006 till November 2011. She has served as Lecturer at SZABIST, Karachi, from June 2013 till January 2017, and as Assistant Professor and Assistant Director Accreditation, MS Department, DHA Suffa University, from January 2017 till January 2020. Before starting her career as a fulltime faculty, she has been associated with IBA, SZABIST and IoBM as visiting faculty also from Fall 2011 till Spring 2013.





**Shah Muhammad Saleem** received his MBA from Institute of Business Administration (IBA), M.Sc Applied Physics from University of Karachi and currently pursuing M.Phil leading to PhD program. He is currently serving as Senior Lecturer in Marketing department. Has 30 years of corporate experience in Business Excellence, Demand Management, Marketing and Sales Management. He has served at Abbott Laboratories (Pakistan) Ltd. In different capacities i.e. as Head of Business Excellence & Demand Management, Marketing Manager, National Sales Manager, International Marketing Manager for Sri Lanka & Bangladesh and Group Product Manager. Prior to Abbott, has served in Knoll Pharmaceuticals, Boots Pharmaceuticals, Otsuka Pharmaceuticals and State Petroleum Refining & Petrochemical Corporation. He had also been associated with IBA, PAF KIET, Bahria University s as a visiting faculty member for more than four years. His areas of interest include Brand management, Sales Management, Demand Management and Business Excellence and diversifying learning strategies.



**Muhammad Tabish** holds an MBA in Marketing and Finance from MA Jinnah University. He is currently pursuing his PhD in Business Management Sciences from IoBM . He is working as a Lecturer at IoBM. He has five years of academic and alternative professional experience. His research area includes Consumer Behavior and Brand Management.



**Marium Mateen Khan** is currently enrolled in a PhD in Business Management at IoBM and is specializing in Marketing. She did her MBA and BBA (Honors) in Marketing from PAF-KIET. She has been a scholarship holder since her first semester throughout her BBA and MBA. She graduated in both programs with Summa Cum Laude honor. She is currently working as a Lecturer at IoBM. She has taught Marketing courses as a visiting faculty to BBA, BS and MBA level students. She has also supervised BBA final year projects (Research Theses). Marium has also worked at Askari Bank Ltd. and Metaphor consultancy. She also has freelance working experience of academic writing, creative writing and graphic designing. Seeing the gaps and issues in the current academic environment made her pursue a career in academia. She has a number of international and national research publications in Scopus, X category and Y category research journals to her credits. Her research areas include Consumer Animosity, Design Thinking, Consumer Behavior, Neuromarketing, Branding, Small Enterprises and Microfinancing.



**Maryam Masud** received her MBA from IoBM, with a Gold medal. Throughout her journey at IoBM she was the recipient of a Merit Scholarship. She received Summa Cum Laude award in BBA from PU. She has been working as Lecturer, Marketing and Officer, Case Study Cell. She has a vast experience as entrepreneur since 2011. She has been heading two ventures; an event organizing company and a graphic designing firm. She presented her case study at the conference organized by LUMS, AMRC in 2017, where universities from around the globe participated. Her areas of interest include Marketing, Innovation, Value creation, and Business Management. She became academician by choice working to develop a case study cell at IoBM.



**Asma Rehman**, is currently enrolled in a PhD in Business Management at IoBM and is specializing in Marketing. She did her MBA (Marketing) and BS(H) from IoBM. She has been working as a Lecturer with IoBM. She has been teaching in IoBM as a Visiting faculty for the last two years. Prior to working in Higher Education, she has worked in the capacity of Marketing Manager for a private firm. She is also the founding member and Marketing Consultant in an entrepreneurial venture called Murtafiyah, a Training & Consultancy Firm.



## College of Computer Science and Information Systems (CCSIS)

### Advisor

**Dr. Ahmer S. Karim** has a PhD and a Master's degree from Arizona State University, USA, preceded by MIS and Bachelor of Science in Finance from the University of Arizona, USA. He is the Advisor, College of Computer Science and Information Systems (CCSIS). He has over nine years of teaching experience at the University of San Diego, USA. He has published in Decision Sciences, Information and Management and other academic conference proceedings. Dr. Karim has also published several academic books on Information Systems.



### Associate Dean

**Dr. Muhammad Mansoor Alam** has done PostDoc from Malaysia in "Machine Learning Approaches for Efficient Prediction and Decision Making". He has done PhD in Computer Engineering, PhD in Electrical and Electronics Engineering, MS in System Engineering and M.Sc. Computer Science from France, United Kingdom and Malaysia. Universite de La Rochelle awarded him Très Honorable (with distinction) PhD due to his research impact during his PhD. He is a Professor of Computer Science. He is working as an Associate Dean in CCSIS and HoD Mathematics, Statistics and Computer Science Departments. He is enjoying 20 years of research and teaching experience in Canada, England, France, Malaysia, Saudi Arabia and Bahrain and authored 200+ research articles which are published in well reputed journals of high impact factor, Springer Link book chapters, Scopus indexed journals and IEEE conferences. He has the honor to work as an online laureate (facilitator) for MSIS program run by Colorado State University, USA and Saudi Electronic University, KSA. He has also established research collaboration with Universiti Kuala Lumpur (UniKL) and Universiti Malaysia Pahang (UMP). Currently, Dr. Alam is also working as an adjunct professor in UniKL and supervising 12 PhD students and 4 Post-Doctoral Scholars.



### Actuarial Science and Risk Management

**Dr. S. M. Aqil Burney** holds an MSc (Statistics), MPhil (Risk Theory and Insurance -Statistics) from University of Karachi (UoK) and PhD (Mathematics) from Strathclyde University with specialization in Statistics, Glasgow-UK along with many courses in Population Studies of UN and Computing. He is currently working as Senior Professor at College of Computer Science and Information Systems and heading AS & RM Department and member BASR-IoBM. He has taught for more than 48 years at UoK and other institutions and universities extensively delivered lectures at other institutions and universities of Pakistan and abroad and attached with IoBM since 2013. He also holds extensive experience of academic management and organization as Provost, Registrar, Project Director Development of Computer Science and Institute of Information technology and founding Director of Main Communication Network of University of Karachi. Dr. Aqil Burney was Meritorious Professor at Department of Computer Science University of Karachi and was the Head of Department thrice in the period 1994 -2013, prior to joining at IoBM. He has published more than 240 research papers and 7 books nationally and internationally in ICT, Mathematics, Statistics and Computer Science and actuarial science and initiated the data science discipline at CCSIS-IoBM. He has supervised 20 PhDs and 15 MS/M.Phils in mathematics/Computer Science/Statistics and data science as approved HEC Supervisor. Dr. Aqil Burney has around 1500 + citations on his research work and frequently delivers invited lectures on ICT/CS/ASRM and Data Science and Computational Intelligence & Finance, Machine Learning and Fuzzy Logic and Information Systems. Dr. Aqil Burney is Chairman(elect) National ICT Committee for Standard PSQCA- Ministry of Science & technology Govt. of Pakistan(2013- Cont.) and member National Computing Education Accreditation Council (NCEAC)(2013-2017), member CIEC, Govt of Sindh (2004- 2013), Member IEEE(USA), Member ACM(USA) and was Fellow Royal Statistical Society UK for 30 years or so. He was the editor of Pakistan Journal of Engineering and Technology of IoBM upto Nov.2017; and was the editor of Open Journal of Information Systems (OJIS) ([www.ronpub.com/ojis](http://www.ronpub.com/ojis)) Germany and presently reviewer of Asian Journal of Probability and Statistics and IEEE CS conferences at UoK. He was a Member of Editorial board of University of Sindh Journal of Information and Communication Technology (USJICT) & Journal of Computing and Related Technologies of SMI University Karachi and reviewer of of human centric computing with work on renewable energy and technology using Machine learning and soft computing and statistical actuarial science and risk management .



## Mathematics and Statistics



**Dr. Abdul Hanan Sheikh** holds PhD degree in Applied Mathematics from Delft University of Technology, The Netherlands. He has also graduated from SALU and QAU. He is working as an Associate Professor in Mathematics and Head of Department, Mathematics & Statistics. He started his career as Lecturer at NED UET in Karachi. Here, he was involved in teaching and course designing. Dr. Hanan's research interests include numerical linear algebra and numerical analysis. He has authored more than 25 research articles, in collaboration with Berlin University of Technology, Germany and Pennsylvania State University, USA. He, also presented at conferences in many countries including USA, Belgium, Denmark, France, Netherlands, Pakistan. He is supervising dozens of PhD and MS thesis. He has taught both foundation and advanced courses in Mathematics including Calculus, Differential Equation, Linear Algebra, Numerical Methods and Analysis, Scientific Computing, Multigrid Methods at various universities. His thesis contributed remarkably to long standing seismic imaging problem, which attracted companies like Shell and Schlumberger. He earned research grant from TU Delft in 2015. He has been pioneer member of SIAM students chapter Delft, member of Royal Dutch Mathematical Society, Pakistan Mathematical Society and International Association of Engineers.



**Dr. Khurram Iqbal** obtained his PhD degree in Aerospace Mechanics and Engineering from the Dalian University of Technology (DUT), China in 2016, MS degree in Materials and Surface Engineering from the National University of Sciences & Technology, and MSc & BSc (Hons) degree in Mathematics from the University of Karachi. He is working as an Assistant Professor with IoBM. His extensive academic and research experience is on materials processing, mathematical modelling, thin films and silicon carbide-based composites for high temperature and energy applications. He has successfully accomplished a number of research projects and published his research papers in some national and international academic journals.



**Laiq Muhammad Khan** holds MSc in Statistics from University of Karachi and MS (Statistics and Scientific Computing) from Institute Business Management, Karachi. He is working as Assistant Professor, Senior Fellow, Statistics. He has over 46 years' teaching experience. His research interests are in the field of Modeling, Design of experiments and statistical Inference. During MS (SSC) he worked on developing Statistical model for Aggregate Losses in Insurance. He has published research work in multiple national Journals and in Proceedings of conferences. He is currently guiding MS (SSC) candidates. He has taught at Fast, Institute of Computer Science for the period 1995- 2001. He has been associated with IoBM as faculty since August, 2000.



**Sohail Ahmed Khan** holds an MS in Finance (specialization: Financial Mathematics) from Germany and MSc in Applied Mathematics from the University of Karachi. He is working as Assistant Professor with IoBM. He has worked for five years at P3 Communication GmbH and LogicaCMG GmbH & Co. KG in Germany. He has also served as cooperative lecturer at the department of Computer Science at the University of Karachi. His research interests includes Computational Finance, Application of Methods from Financial Mathematics in Insurance, Interest Rate Modeling.



**Mushtaq Ahmad Khan Barakzai** holds MS in Actuarial Science from Heriot Watt University, UK, a Master's degree in Statistics from University of Peshawar. He is a PhD scholar and working as an Assistant Professor at IoBM. He is also a member of the Society of Actuaries, USA and Institute and Faculty of Actuaries, UK. He has a mix of professional and teaching experience. He has worked at the prominent organizations of the country such as Ministry of Finance, Securities & Exchange Commission of Pakistan and State Bank of Pakistan in the capacity of Senior Actuary, Assistant Director Insurance and Statistical Officer respectively. Before joining IoBM, he was working as Actuary at Ministry of Finance. In addition to his professional work, he has taught courses of Actuarial Science & Risk Management at University of Karachi and University of the Punjab. He has a great interest in carrying out research in the field of Actuarial Mathematics and Risk Management.

**Steve James** holds an MS in Financial Mathematics from Technical University Kaiserslautern, Germany. He is working as an Assistant Professor with IoBM. He has more than five years of teaching experience at PAF KIET. He has also worked at Daimler (Germany).



**Dr. Fatima Riaz** holds a PhD degree in Applied Mathematics in the field of fluid dynamics which she received from the University of Karachi in 2016. She is working as an Assistant Professor with IoBM. She has 12+ international publications to her credit. She had made presentations in national and international conferences and workshops. She has almost three years of teaching experience at university level.



**Dr. Sumaira Khan** holds PhD in Applied Mathematics from University of Karachi. She also holds on MSc and a BSc (Hons) in Applied Mathematics from the University of Karachi. She is working as an Assistant Professor with IoBM. She is a professional educator with over ten years of teaching experience. She has taught at NUST-PNEC, Iqra University and FAST-NUCES prior to joining IoBM in 2012. She also conducted workshops on Military Operations Research, Operations Research and its applications in defense, etc. Her areas of interest are Operations Research, ODE's and PDE's, and Numerical Methods.



**Rizwan Ahmed** has done his MSc in Statistics and MPA (Finance) from the University of Karachi. He has also done his MAS (Applied Economics) from Applied Economics Research Center, University of Karachi and completed MS (Economics) degree from IoBM. He is currently doing PhD in Economics from IoBM. He is working as an Assistant Professor with IoBM. He has five research publications in his credit out of which three in Pakistan Business Review ('X' category Journal) published by IoBM. His areas of interest are Quantitative Analysis for Business and Management, Statistical Inference, Macroeconomics, Mathematical Economics and Business Finance.



**Hina Samreen** holds an MSc in Applied Mathematics and Master in Applied Economics from the University of Karachi. She is working as an Assistant Professor with IoBM. She has been actively involved in research related work and assisted Pakistan Institute of Education and Research in the development and preparation of various policy papers in labor management and allied subjects.



**Dr. Shakeel Ahmed** has completed his Doctorate Degree in Statistics from Quaid-i-Azam University Islamabad. He won Vice Chancellor's Gold Medal in his M.Phil. degree from Quaid-i-Azam University Islamabad. He is working as an Assistant Professor with IoBM. Previously, he has worked as Biostatistician at Wah Medical College Wah Cantt, Pakistan prior to joining the IoBM. He is also editorial board member of BMC Public Health in Biostatistics section. He has working and research supervision experience at University of Lahore Sargodha Campus for a period of one year. Till completion of Ph.D degree he published about 14 Publications in reputed journals including topics on parameter estimation under different sampling designs. Specifically, he has interest in model-based parameter estimation using machine learning algorithms and Bayesian prediction theory. With theoretical and methodological development, his research is also focused on application of developed model to analyze data in Health Sciences, Demography and Epidemiology.



**Dr. Zahid Ahmed** has done his PhD in Mathematics from Quaid i Azam University Islamabad. He is an HEC approved PhD supervisor. He is working as an Assistant Professor at IoBM. His areas of research interest are Computational Mathematics, Numerical Analysis, Numerical Methods and Fluid Dynamics. He has more than 4 years teaching experience at different universities like Quaid-i-Azam University, Riphah International University and Air University Islamabad. He has also been engaged in teaching mathematics in various institutes in UAE.





**Wajahat Ali** has an MSc from the University of Karachi. He is working as a Senior Lecturer with IoBM. He has been involved in research and teaching in Mathematics and Statistics. He has almost twenty five years of teaching experience at various institutes. His areas of interest are Design of Experiment, Quantitative Analysis for Business & Management, Statistical Inference, Advanced Quantitative Methods, College Algebra and Calculus for Business Decisions. He is enrolled in MS (Statistics & Scientific Computing) from IoBM. He is also a faculty advisor of Mathematics Society at IoBM and has organized the Mathematics Colloquium, annual national and international conferences in the Collaboration with International Organizations and also organized Foreign Faculty Guest Speaker sessions for twelve years.



**Attra Ali** has an MSc in Mathematics from the Federal Urdu University. She is working as a Lecturer at IoBM. She received three gold medals, for departmental position, being the highest achiever in the university. A BSc (Hons) in Mathematics from the Federal Urdu University, she joined IoBM, after teaching for two years at NUST, Karachi campus. In addition, she has done an educational development course at PNS BAHADUR and attended workshops related to teaching and education.



**Muhammad Arshad** has been a scholar at Florida State University, USA where he was awarded MS degree in Applied and Computational Mathematics. Before going to US, he has done double Masters; first one from University of Karachi and second from LUMS, Lahore. He is an Assistant Professor-in-Practice at IoBM. He has a vast experience of teaching Mathematics in different universities like Baharia University Karachi, DHA Suffa University Karachi and IoBM His research interests are Set Theory, Discrete Mathematics and Logic.



**Muhammad Bilal** holds M.Phil in Mathematics and is also pursuing PhD in Mathematics at University of Karachi. He is working as a Lecturer at IoBM. Before joining IoBM, he was associated with Baharia Education Foundation as Curriculum Advisor for Mathematics. He has been teaching mathematics courses for a while in universities including UoK and IoBM. His research interests are mathematical inequalities and real analysis.

## Computer Science

**Dr. Tariq Rahim Soomro**, See Profile on Page No. 151.



**Muhammad Asghar Khan** has a Master's degree in Network and e-business centered computing from the University of Reading (UK), an MBA and Master in HRM from the Australian Catholic University (Aus), an MS in Computer Software Engineering from NUST and BS Computer Engineering from Sir Syed University. He is working as an Assistant Professor with IoBM. He has had seven years of teaching and industrial experience at various national and international organizations. His areas of interest are Cyber Security; Open Source ERP and IS Audit. He is a member of many professional bodies such as Pakistan Engineering Counsel, Australian Endeavour Network, ISACA and Australian Human Resources Institute.



**Khalid Bin Muhammad** is currently doing PhD in Computer Science, did MS in Computer Science from IoBM, also did Masters in Computer Science from the University of Karachi and an MBA in MIS / Finance from MA Jinnah University with first-class first position. He also holds a Bachelor of Engineering degree from NED and is a lifetime member of Pakistan Engineering Council. He is working as an Assistant Professor at IoBM. He is also a member of IEEE, IEEE Executive Committee, IEEE Computer Society and Rapid Miner Community. Currently working on Natural Language Processing and its applications in Urdu Language. Research interests include but not limited to Data Warehouse, Data Mining, Big Data, Business Intelligence, Data Science, Artificial Intelligence, Image-recognition, Internet of Things, Fuzzy Logic, Human Centric Computing and Machine Learning. He has proficiency in Programming Languages specially Object Oriented Programming (Java and C++), Computer Graphics, Engineering Drawing, Computer Aided Designing, Multimedia Technologies, Relational Database Management System and Customer Relationship Management. He has a mix of over 22 years of experience working in Teaching, Mentoring, Education Management (IoBM) and Industry (Dawlance / Pakistan Petroleum Limited). He possess practical I.T Knowledge, exceptional interpersonal and communication skills, work ethics and sincere dedication towards his objectives. He takes pride in initiating projects and work diligently towards making them successful endeavors.



**Syed Farhan Mazhar** received his M.Eng degree in Software Engineering and Intelligent System from the University of Alberta, Edmonton Canada. He also holds an MSc in Applied Physics with specialization in electronics from University of Karachi. He has also completed his MPhil course work from Department of ISPA, University of Karachi. Currently, he is pursuing his PhD in Canada. He is working as an Assistant Professor at IoBM is a professional educator in the educational and professional services industry including national and international organizations; some of these being: NED University, Concordia University College, Canada, Capital Health, Edmonton, Canada His areas of interest are Software Engineering, Semantic Web, Data Mining, ERP, Database Management System and Project Management.



**Najmus Saher Shah** has an MS (Computer Science) from IoBM. She is also a 2nd position holder in her BSc (Hons) in Economics from the University of Karachi. She is working as a Senior Lecturer at IoBM. Her research interests include areas such as Data Mining, Forecasting, Artificial Intelligence, and Database Management System.



**Muhammad Waqar Khan** has earned Master in the area of Telecommunication Engineering, a Postgraduate Diploma in Computer and Information Sciences, Master in Computer Science and a Bachelor in Electrical Engineering. Currently, he is a PhD scholar in the area of Machine Learning. He is working with IoBM as a Senior Lecturer. He has been associated with academics for over twenty two years and has worked as a consultant. He has been an active member of various academic, regulatory, and professional bodies. He has played a key role in both national and multinational industries such as Pakistan Telecommunication Company Limited, Wateen Telecom Pvt Ltd, Pakistan Electronic Media Regulatory Authority, Com 4rewqstar (ISA) Ltd. He has also served in Pakistan Navy Engineering College, NUST, Aligarh Institute of Technology, Sir Syed University of Engineering and Technology, Bahria College and Sir Adamjee Institute of Technology. He is also a permanent member of Pakistan Engineering Council (PEC). He has executed and supervised various projects of industrial standards in the Sindh, Punjab and Balouchistan regions.



**Asim Iftikhar** is pursuing PhD (Information Technology) from Universiti Kuala Lumpur, Malaysia. He also holds MS and MCS degrees in Computer Science. He is working as a Senior Lecturer with IoBM. He has fourteen years of teaching experience at university level and has conducted several professional training programs for faculty, students and corporate level. He has published nine research papers in conference proceedings, local and leading international journals. His specialization areas include Software Engineering, Digital Communications, Artificial Intelligence, Web Development and Computer Graphics.



**Sobia Younus** holds an MSC in pure Mathematics and BSC Honors in Mathematics from the University of Karachi. She is currently enrolled in an MS program leading to a PhD in Mathematics from KU. She is working as a Senior Lecturer with IoBM. She has two international publications in the International Journal of Applied Mathematics and Mechanics, India to her credit. She has also taught at NUST as a visiting faculty member.



**Syed Mubashir Ali** has completed his BS in Computer Engineering from FAST-NUCES Karachi, MS in Information Technology from SZABIST Dubai, and Ph.D. in Computer Science from IoBM. He is currently working as Assistant Professor in the Department of Computer Science and MIS at IoBM as well as Post Doctoral researcher at UniKL Malaysia. He is on the reviewer board of various reputed journals such as IEEE Access and IJPQM. His research interest is in the areas of Supply Chain Management, Multiple Criteria Decision Making, Machine Learning, Gamification, and Blockchain.





**Rabab Naqvi** holds a Master in Computer Science from University of Karachi. She is currently working as a Senior Lecturer with IoBM. She is well-informed with current practices in the field of Computer Science by attending workshops, seminars and symposiums. She has an inspiring track record of attending both national and international conferences and publishing articles in reputable journals. Her major research areas include DBMS, Data Mining, e-Learning, and impact of Social Media in academics.



**Saadia Karim** is currently pursuing her PhD in Computer Science at IoBM, holds an MS in Computer Science from Muhammad Ali Jinnah University and Bachelor (Hons) degree in Computer Science from Sir Syed University of Engineering & Technology. She is working as a Lecturer at IoBM. She has served at IoBM as an IT personnel and also an adjunct faculty member, where she taught ERP and SAP to the Master's students. In addition to academic experience, she has seven years of experience as a Software Programmer and Team Lead in IT. Her areas of interests are Artificial Intelligence, Machine Learning, Big Data, and Fuzzy Set Theory. She has published research work in national and International Journals.



**Imran** is pursuing a Ph.D. (Information Technology) from University Kuala Lumpur, Malaysia. He also holds MS and MCS degrees in Computer Science from Muhammad Ali Jinnah University (MAJU). He is currently working as Senior Lecturer with IoBM. He has published five research papers in local and international leading journals. His research interests are in the areas of Internet of Things (IoT), Cyber Security, Artificial Intelligence, Blockchain, and Information Technology Standards. He has proficiency in Programming Languages, Software Engineering, Game Development, and Relational Database Management Systems.

## Logistics and Supply Chain Management



**Dr. Mahmood Ali** holds PhD from University of Greenwich, UK. He is working as an Associate Professor and HoD at IoBM. Before undertaking his PhD, he worked for several corporate organizations in different managerial roles. He is an active researcher and has published in international journals and participated in conferences. His research interest includes Supply Chain Management, Enterprise Systems, Logistics, Decision Support Systems, User Resistance and Information Technology.



**Syed Adeel Shah** holds an MPhil in Supply Chain Management from Iqra University. He also holds an MBA and BSC (Hons) in Textile Sciences from the Textile Institute of Pakistan. He is working as a Senior Lecturer at IoBM. He has a wide experience in Textile Supply Chain, teaching, training, research and SCM. He provides consultancy, students/ parental counseling and education. His career spans over fifteen years and he has worked in leadership positions at various organizations. He was Country General Manager at Karl Rieker GmbH & Co. KG (Bodelshausen / Germany) and Country Head Supply Chain Management in Wünsche Group (Germany). His experience in SCM and Textile Studies is over twelve years, during which he has served in Karachi's most prominent institutes, including, AIFD and KUBS.



**Sajid Nazir** has completed his Master in Supply Chain Management from Coventry University, United Kingdom. He attended the Coventry University Global Leadership Program and holds a Diploma in Global Leadership from UK as well. As part of Global leadership program, he has been to different countries for presentations and leadership trainings. He has completed his Bachelor in Business Administration from Iqra University. He is working as a Lecturer at IoBM. Before Joining IoBM, Sajid worked in different corporate sectors at national as well as international levels such as Banking, Aviation, Pharmaceutical and other service industries as a supply chain professional. He also has done research analysis on the impact of China Pakistan Economic Corridor (CPEC) on transit routes from China to overseas markets.

**Rizwan Ellahi** is an ACCA member also holds MBA in Logistics and Supply Chain Management from IoBM and BSC in Applied Accounting from the University of Oxford Brookes. He is working as a Lecturer / Program Coordinator, Logistics and Supply Chain Department at IoBM. He has rich experience from top multinationals such as ICI Pakistan, Toyota, Deloitte and Standard Chartered Bank. Because of his passion for the education he is now associated fulltime with academia, Moreover, he is actively involved in research and has publications in top international journals indexed by Scopus and Clarivate.



## College of Engineering and Sciences (CES)

### Electrical Engineering and Engineering Management



**Dr. Seema Ansari** holds a PhD in Telecommunication Engineering, University of Malaga, Spain. She did her MS-CS/Telecommunication from University of Missouri Kansas City, USA and BE in Electronics from NED-UET Karachi, Pakistan. She is working as an Associate Professor and Associate Dean at IoBM. She has 35+ years of experience in teaching and management at renowned public engineering universities like DUET and NED-UET and private sector. She was the Director of Asia Pacific Institute of Information Technology, Karachi Campus, a joint venture of APIIT Malaysia and affiliated with Staffordshire University, the United Kingdom. She got them HEC recognition in foreign University collaboration in Pakistan. Her research includes 65+ publications in International and national Journals, Conferences and Book Chapters. She is associated with “The Oceanic Engineering Research Institute” of University of Malaga (UMA) Spain and the research group, ETSI Telecommunication, UMA, Spain. She is technical research paper reviewer for IEEE Access, Springer/WPC, GCWOC. Her research area is Underwater Communications, Analysis of MAC strategies for Underwater Acoustic Wireless Sensor Networks, Internet of Things (IoT) and Internet of Underwater Things (IoUT). Her ORCID is: 0000-0002-0108-7481.



**Dr. Muhammad Imran Majid** has a PhD in Electronics from the University of Surrey, UK, MSc in Space Engineering from Umea University, Sweden and BSc in Electrical Engineering from UET Lahore. He is working as an Associate Professor with IoBM. He is a Commonwealth Academic Fellow 2017 and has been a Commonwealth PhD scholar from 2006-2010. He has about ten years experience in industrial consultancy, teaching and mentoring young professionals in the high technology sector. He has worked for Telenor, SSBV, Surrey Satellite, MVCE, Space Flight Laboratory, OCE, BeneFACT and various consultancies during the course of his career. He was awarded the Commonwealth Scholarship towards his PhD in Frequency Planning for Clustered Cellular Multiple Access Channel at the prestigious Centre for Communication Systems Research (now 5G Innovation Centre), University of Surrey, UK. After his PhD, he consulted and later worked at the University of Toronto Canada as Optics Team Lead for two of Canada's most advanced remote sensing satellites, NEMO-AM and NEMO-HD. He is also currently involved with the Ontario Centre of Excellence as Technical Reviewer and Consultant for BeneFACT Consulting Group. Most recently Dr. Majid was appointed Honorary Research Fellow, School of Engineering, University of Warwick, UK.



**Dr. Zeeshan Shahid** has a PhD and MSc in Electrical and Electronics Engineering from the International Islamic University, Malaysia. He obtained BE from the Usman Institute of Technology. He is working as an Assistant Professor. He has published several articles in prestigious international scientific journals and conference proceedings. He has a vast experience in industrial and academic fields. His research focuses on power engineering, specialized in grid-tied inverters, multi-level inverters, DC-DC converters, Integration of Renewable Energy Sources with utility grids and power quality improvement.



**Dr. Syed Fayaz Ahmad** holds a PhD in Engineering Management from Gomal University and an MS in Telecommunication Engineering Management from University of Engineering and Technology Peshawar. In addition, he holds BS-Telecommunication Engineering from Baluchistan University of Information Technology, Engineering and Management Sciences Quetta. He is working as an Assistant Professor with IoBM. He has vast experience in research and conducted many researches in Public and Private Sector organizations of Pakistan. Furthermore, he has also designed a theoretical framework for the regulation of Telecommunication Industry. Also, he has designed a framework for the convergence of Information and Communication Technology in Pakistan.



**Dr. Zeeshan Asim** has a PhD (2019) degree in Technology Management from Universiti Malaysia Pahang. He also did his Masters (2009) from Coventry University, England. He obtained his BS (Electronic Engineering) from Sir Syed University of Engineering and Technology in 2007. He is working as an Assistant Professor with IoBM. He has published several articles in high quality international scientific journals. Dr. Zeeshan Asim has about four years of industrial experience and six years Academic Experience in mentoring young Engineering professionals across various Universities and public sector R&D firms. He has worked for National Productivity Organizations, Asian Science Consortium, Jaguar- DHL joint venture Project in Coventry, UK and served as Senior Lecturer with Sir Syed University of Engineering and Technology, Karachi during the course of his career.

**Rashid Qutub** has an MSc in Production Management from Technical University Hamburg Harburg, Germany and BE Mechanical Engineering from NED Engineering University. He is working as a Senior Lecturer with IoBM. He got the opportunity to work with German Aluminium manufacturing company, Hydro Aluminium in Hamburg and has worked indepth to investigate and correlate the microstructure & mechanical properties of Aluminium Alloy. He has worked in the production planning, material planning and in the mechanical design department of Siemens Engineering and KSB Pumps. He has expertise in mechanical designing of various standard and customized Electrical Motors and Diesel Generators. He has worked with ERP such as SAP/R3 and Comet in these organizations. He has also worked in an automobile industry and has been associated with Dawood Yamaha Ltd and Agri Autos Ltd in their Production departments. He is fond of learning foreign languages and is fluent in German language.



**Osama Mahfooz** is pursuing PhD in Telecommunication Engineering from the University of Malaga, Spain, holds an MBA degree in Telecommunication Management from IoBM and BE degree in Electronics from the PAF-Karachi Institute of Economics & Technology. He is working as a Senior Lecturer at IoBM. He has completed a CCNA Exploration certification from Aptech. He has published several articles in prestigious international and national scientific journals, conference proceedings and book chapters.



**Abdullah Aziz** holds a Master's degree and a gold medalist in Mechanical Engineering and a Gold Medalist from NUST. He did his Bachelor of Engineering (Mechanical) from NED University of Engineering & Technology. He is working as a Lecturer with IoBM. He began his career at Karachi Shipyard & Engineering Works as Assistant Superintendent (ASp) and took charge as acting Manager (QHSE) before he began pursuing his career in academia. He is NEBOSH ICG1 & GC3 certified, ISO 22000 Associate, ISO 9001 Lead Auditor, OHSAS 18001 Auditor, and Six Sigma Green Belt.



**Rabia Hassan** holds a Master's degree in Engineering Management from IoBM. She obtained her Bachelor of Engineering (Electronics) degree from PAF-Karachi Institute of Economics & Technology. She is working with IoBM as a Lecturer & Research Associate. She has been associated with the automotive industry of Pakistan for five years where her major area was product planning and development. Her areas of research are Climate Change assessments, Waste Management, Pollution Control and Management and Environmental issues.



**Tahniyat Aslam** is a PhD scholar at NED University of Engineering and Technology, Karachi, Pakistan. She holds M.E Degree in "Telecommunication Engineering" from NED University of Engineering and Technology and B.S in "Telecommunication Engineering" from Sir Syed University of Engineering and Technology, Karachi, Pakistan. She is working with IoBM as a Lecturer. She taught as a Visiting faculty in NED University of Engineering and Technology and currently working as a Lecturer in Electrical Engineering Department of Institute of Business Management (IoBM). Her research interest includes antenna and microwave systems network security, Internet of Things (IoT) and its applications.



**Fatima Maqbool** received her MS Degree in Engineering Management from Institute of Business Management, Karachi Pakistan. She did B.E in Electronics from Pakistan Air Force Karachi Institute of Economics & Technology. She has been awarded "Best Achiever Award" from PAFKIET and awarded merit certificate, based on her academic excellence from IoBM. Currently she is a lecturer at IoBM. Her research area includes Power Electronics, Signal Processing and Business Process Reengineering (BPR). Her area of expertise are Project Management, Power Electronics and Drives, Industrial Control Electronics, Automation and Robotics, Embedded Systems and Designs; Navigation, Guidance and Control.





## Industrial Engineering & Management



**Dr. Shahzeb Malik** holds PhD in Information Systems from Manchester Business School (MBS), University of Manchester, UK. He is working with IoBM as an Assistant Professor and Head of the Department. He has recently established Risk and Innovation Research Centre at IoBM, a multidisciplinary research Centre and a knowledge hub aimed at helping organizations to have better understanding of various business risks. He is a proficient researcher and technical expert with several years of experience in working on various academic and commercial projects. He has been associated with the area of Risk Management (with special interest in Cyber Security Risk) for several years. Most recently, he worked at University of Cambridge (Judge Business School) UK, as a postdoctoral researcher in Cyber Risk track where he conducted research to cover cyber threat landscape, participated in writing technical reports, and worked closely with business clients. Prior to this role, he worked as Technical and Research Manager at International Institute of Risk and Safety Management (IIRSM), UK, where he was involved in various academic/commercial research projects, providing Management and IT consulting services to clients, and representing the Institute at UK and International level. He has also been associated with University of Manchester as a Project Manager and postdoctoral researcher to lead a Knowledge Transfer Partnership (KTP) project which is a government funded programme to encourage collaboration between businesses and universities in the UK. During this project, he conducted a review of existing risk management practices within various commercial organisations in the UK.



**Dr. Mohammad Irshad Khan** holds a PhD degree in Chemical Engineering and a Postgraduate Diploma from University of Bradford, UK. He is working as Professor with IoBM. He has over 30 years experience of industry and management and is a registered consultant of the Islamic Development Bank, Jeddah and SMEDA, Pakistan. He is a professional member of Institute of Industrial Engineers, USA.



**Mukhtar Ahmed** has MS (Mechanical Engineering) from the University of Southern California, Los Angeles, USA and BE (Mechanical Engineering) from NED. He is working with IoBM as an Associate Professor. He has teaching experience of more than twenty three years and started his teaching career with NED where his last appointment was as Associate Professor. He also went to Zimbabwe, Harare Polytechnic as Lecturer. He has four years working experience with Roti Corporation of Pakistan as Deputy Manager.



**Fahad Bin Abdullah** holds an MSC from University of South Bank-London. He has specialized in Mechanical Engineering Management, Robotics and Simulations, Advanced Materials and Advance Human Machine Designing. He Holds a BE Mechanical Engineering Degree from NED University. He is working as Senior Lecturer with IoBM. His expertise is in the project coordination and maintenance engineering mainly related to the field of mechanical engineering & management.



**Falak Shad Memon** holds an MBA (Finance) degree from IoBM and a degree in BE (Industrial & Manufacturing) from NEDUET. She is currently enrolled in PhD (Energy and Environment management) program. She is working with IoBM as a Senior Lecturer. She has presented her research articles in couple of international conferences, and has published her research work in HEC recognized research journals. Her research interest focuses on environmental issues, climate change supply chain management and quality management. She also contributes in research journals as reviewer. She has six years of industrial experience in leading automotive industries as a head of production and purchase department. She is a certified ISO lead auditor by IRCA (UK) and possesses expertise on SAP in PP, MM and CO module.



**Mehreen Kausar** completed her Master's degree in Industrial Management and Bachelor's degree in Industrial and Manufacturing Engineering from NED University. She is working with IoBM as a Lecturer. Before joining IoBM, she was working with a renowned MNC where her key areas were quality control, inventory control, project management and supply chain dynamics. Her research interest includes industry 4.0, renewable energy and sustainability. She has read papers at a number of national and international conferences and has published research articles in international journals as well.

## College of Economics and Social Development (CESD)

### The Dean

**Dr. Shahida Wizarat** has earned her PhD in Economics from the University of East Anglia, Norwich, England and an MA in Economics from Vanderbilt University, USA. She is working as Dean of College of Economics & Social Development and Head of the Department, Economics. She is an independent economist and has been involved in research, teaching and administration. Her areas of interest are industrial economics focusing on industrial productivity, its determinants; concentration and profitability; development economic issues; economic policies; debt and its management. She is the author of forty-five research papers and articles published in journals of international repute in Pakistan and abroad. She has organized, attended and read papers at several international and national conferences. She has served as the Editor of the Pakistan Journal of Applied Economics and Director of the Applied Economics Research Center, University of Karachi. She has also served as Director Research and Chief Editor Pakistan Business Review. She was on the Board of Directors of the Karachi Stock Exchange and advisory boards and research councils of several organizations and universities.



### Commercial and Professional Studies

**Rabia Sabri** is a qualified Chartered Management Accountant (FCMA) and MBA in Accounting and Finance. Currently, she is pursuing MS Finance from Bahria University and Chartered Financial Analyst level (CFA) from CFAI. She is working as Senior Lecturer and HoD with IoBM. She has more than fifteen years of teaching and corporate experience. She has taught Accounting, Finance, Corporate Reporting Economics courses in various universities in Karachi and served in two universities of Saudi Arabia, also taught ACCA and PIPFA courses. Her area of research is financial reporting and analysis of equity and fixed income securities.



**Muhammad AsadUllah** holds an MPhil in Business Management from IoBM to be followed by a PhD in Finance. Initially, he joined EMEC- IoBM as a facilitator for training projects. He is currently working as a Lecturer with IoBM. He has also worked as a visiting faculty in various business schools. His research interest includes Panel Data Analysis of secondary data from different sectors. He has presented various papers in national and international Conferences. One of his research papers has been published and few are in the process of evaluation. During his three years' professional experience, he managed adjustments of advances from all regional zones of Pakistan at TeleCard Ltd. and performed operational duties at MCB Bank Ltd.



**Muhammad Rashid Jamil** did his MBA from IBA, Karachi. He is working as a Senior Lecturer with IoBM. He has almost thirty years of experience in international aviation financial management. He was permanently posted as Finance Manager at Manila, the Philippines. He has traveled widely on official assignments in Europe, America and Asia. In addition to his educational qualifications, he holds a Diploma in Cargo Proration from Geneva, Switzerland. Apart from aviation finance he has experience in financial analysis of different projects in public and private sectors. He has been teaching several courses in airline finance and accounting and also taught courses at IoBM as visiting faculty.



**Fatima Junejo** holds an LLB from the University of London and is a registered Advocate. She is currently an LLM candidate, and is also pursuing another degree in Economics and Finance, from the London School of Economics (UoL). In addition, she has completed the Chinese language course from Karachi University. She has been awarded a "Top Scorer award" (LSE/UoL-2020), and was also the recipient of a Chinese scholarship award (CIUK-2019). Currently, she is working as a Lecturer at IoBM. Previously, she has worked as an Associate at a leading law firm, and also carries a vast and varied experience as a tutor for law courses as well as language courses. As a human rights activist, her research interests include Islamic feminism and gender equality. A well-rounded person, she is not only a passionate You-Tuber but is also active in sports.





**Mavara Siddiqui** has completed her Masters of Philosophy in Business Management from IoBM. Prior to this she received a degree of MBA from University of Karachi and a Masters degree in Economics from Federal University. She is working as a Lecturer and a PhD scholar in the field of Business Management at IoBM. She has also served as a Graduate Research Assistant at IoBM prior to joining the institute as a permanent faculty. She also got the opportunity to teach at few private and government universities as a visiting faculty. Additionally, she also has a vast industry experience of working as a Marketer in corporate sector. She has worked on numerous research studies and has gained valuable academic research writing experience, with many research papers and national & international conference presentations to her credit. She is interested in educational improvements, economical development, research and econometrics, consumer behaviour, and varied business areas.

## Economics

**Dr. Shahida Wizarat** is a Professor and Head of the Department, Economics.  
(See Profile on Page No. 183.)



**Mirza Aqeel Baig** has an MPhil in Economics from IoBM, an MAS in Applied Economics from AERC, University of Karachi and Master in International Relations. He is a PhD Scholar at IoBM. He is working as an Assistant Professor with IoBM. He has had over eighteen years of teaching experience at various business institutions, mainly IoBM. His research interests are in the areas of International, Monetary and Macro Economics. He has presented many papers in diversified areas of economics at national and international conferences. His research papers have been published in reputed refereed journals both national and international. He has been part of different research projects at IoBM conducted in collaboration with FPCCI, TDAP, IUCN and WWF, etc. He has also contributed to the Sindh Economic Survey. He authors articles for magazines and newspapers on current, economic, and social issues.



**Muhammad Ajaz Rasheed** received an MPhil in Economics from IoBM, an MAS (Applied Economics) from the Applied Economics Research center (University of Karachi) and MSc (Statistics) from the University of Karachi. He is a PhD Scholar at IoBM. He is working as an Assistant Professor with IoBM. He has 30 years of professional, including teaching experience in the area of Statistics and Economics. He has taught at the University of Karachi, the University of Baluchistan and Defence School of Business Education. He has worked with Social Policy and Development Center as a senior researcher. His research primarily focuses on Macro-Economic Modeling and social sector development. He has published research papers in national and international journals and has contributed to many research projects of national interest. The area of his contribution has been as follows: Sindh Economic Survey, review of Pakistan's large scale manufacturing sector 2010, comprehensive development strategy for Baluchistan and many other researches. He has been a member of FPCCI's standing committee on research and development from July 2005 to June 2007.



**Dr. Shujaat Abbas** holds a PhD in Economics with specialization in International trade and development issues from the University of Karachi and a Master degree in Business Management with specialization in Finance from the Federal Urdu University of Arts, Sciences, and Technology, Pakistan. He is working as an Assistant Professor with IoBM. He has worked for the University of Karachi as an adjunct member faculty for one and a half years before joining the institute as a full-time faculty member in 2016. His research interest include international trade and finance, open-economy macroeconomics, and international political economics. He has published various research articles for national and international journals. His research interest include international economic issues of developing and least developed economies.



**Dr. Kashif Imran** obtained a PhD in Economics from the University of Malaya, Kuala Lumpur, Malaysia. He is currently working as an Assistant Professor with IoBM. He is also doing research At IoBM. His areas of interest are development economics focusing on international remittances, household development and poverty and financial economics. Thirteen of his articles have been published in journals of international repute in Pakistan and abroad. He has attended a number of international research conferences. He is member of review board committee of various research journals.



**Dr. Muhammad Usman** holds a PhD from University of Malaya, Kuala Lumpur, Malaysia. He has secured his MAS (Master of Applied Sciences) from Applied Economics Research Center (AERC), University of Karachi. He is working as an Assistant Professor at IoBM. He has a wide experience in teaching, research and conducting projects. His several research projects are completed under the Ministry of Higher Education Malaysia and University of Malaya. His areas of interest are social and behavioral sciences including not for profit organization, faith-based organizations, Islamic Economics and finance, Islamic Social finance, and, especially the institution of waqf. He has published various of his research articles and book chapters in the nationally and internationally recognized refereed journals and presented his research findings at various international conferences. At present, he is associated with the College of Economics and Social Development (CESD), Institute of Business Management (IoBM) as an Assistant Professor in the Department of Economics.



**Dr. Hira Mujahid** has completed PhD in 2019 and the title of her dissertation is “The Impact of Quality of Institutions on Macroeconomic Volatility in Open Economies”. She is working as an Assistant Professor with IoBM. She mainly teaches Principles of Microeconomics and Macroeconomics, Managerial Economics, Micro and Macroeconomics and Seminar in Economic Policy. She is also supervising MPhil thesis and looking to supervise more on Governance and Macroeconomic issues. Her research articles are published in many national (PJAE, AEFR) and international journals (GLER, EER), some others are in the pipeline. In addition, she writes in newspapers on current issues. In fact, she has participated and presented papers in several International conferences. Previously, she has served at National Centre of Maritime Policy and Research, Bahria University, Karachi Campus as a Research Associate where she organized numerous seminars and international conferences. She was a sub editor of Maritime News Digest. Other than that she had been associated with multiple organizations like KASBIT, Manzil Pakistan and Maritime Training Institute.



**Ch. Sohail Ahmed** holds an MSc (Statistics) from KU, MPA from IBA, and an MAS (Economics) from the Applied Economics Research Center, Karachi. He also holds PGD (Computer Science) from the University of Karachi. He is working as a Senior Lecturer at IoBM. His research primarily focuses on International Trade and Econometrics. He is pursuing MPhil Degree in the area of International Trade. He has served for 18 years at various public and private institutions.



**Muhammad Zubair** holds an MS in Economics from IoBM and Master's degree in Economics & Finance from the University of Karachi. He has also obtained postgraduate diploma in Economics & Finance and BA (Hons) in economics and statistics from University of Karachi. He is working as a Senior Lecturer with IoBM. He has four years experience of broadcasting with Radio Pakistan in the capacity of business anchor and reporter, covering economic policy and stock market, etc. He has regularly contributed articles on economic issues to the Express Tribune newspaper over a period of two years. He is also engaged in research and has presented his research work at various conferences nationally and internationally.



**Sadia Mansoor** holds an MS Economics (Equivalent to MPhil). She did her MAS Economics in 2011 from the Applied Economics Research Center, University of Karachi. She received an MSc degree in Economics, from Quaid-e-Azam University, Islamabad. She is currently working as a Senior Lecturer at IoBM. Her areas of research are development economics and public policy. She worked as a visiting faculty in different universities before joining IoBM as a full time faculty member. She has attended a number of international conferences and has various publications to her credit. She is also a co-supervisor of MS thesis at IoBM. She has been associated with the Institute as visiting faculty in the past.



**Irfan Lal** is currently enrolled in an MPhil Program at IoBM. He received an MAS from the Applied Economics Research Centre, University of Karachi and an MA in Economics from the University of Karachi. He is working as a Senior Lecturer at IoBM.





**Zia Ullah** holds a Master's degree in Applied Sciences (MAS Economics) from the Applied Economics Research Center (AERC), University of Karachi and an MSc degree in Economics from Quaid-e-Azam University, Islamabad. He is working as a Senior Lecturer at IoBM. His research areas include International Economics and Macroeconomics. His research papers have been published in PBR and various national journals. He has also contributed in various projects of International Union for Conservation of Nature (IUCN) and World Wide Fund for nature (WWF).



**Yousuf Aboya** has an M.Phil in Economics from the Institute of Business Management (IoBM) and M.A in Economics from the University of Karachi. He is a Ph.D. scholar at IoBM. He is working as a Senior Lecturer at IoBM. He has eight years of teaching experience at various business institutions. His research interests are in Monetary Economics, Macroeconomics & International Trade. He has some research publications in reputable journals to his credit. He has also presented papers in various conferences.

## Education



**Dr. Sarwat Nauman** holds a PhD in Education and her areas of expertise are experiential learning, academic writing and critical thinking. She has done MA in English Literature from the University of Karachi. She is currently working as an Assistant Professor and HoD with IoBM and has a diverse teaching experience of fifteen years. She has been associated with various schools, colleges and universities and taught courses related to academic writing, business communication as well as education and research. She also holds the position of Associate Editor for the Journal of Education and Educational Development published biannually by the Department of Education, IoBM. She has many research articles published in high ranking international and Pakistani journals to her credit and is continuously working on various research projects and also received appreciation. Her research projects have been presented at national and international level.



**Prof. Dr. Nasreen Hussain** holds a PhD in Education from Hamdard University. He is an Adjunct Faculty and the Head of the Department at IoBM. She is also the Editor-in-Chief of the Journal of Education and Educational Development published by the Institute. She brings to academia over thirty five years of diverse teaching, administrative, research, and consultancy experience. She has edited books as well as written articles and book chapters. Dr. Hussain is the external moderator for the University of Cambridge and has received British Council, Hornby Trust, USIS, USAID, Aga Khan University, and Aga Khan Development awards for recognition of her distinguished academic career and research projects at national as well as international levels in diversified areas. Her forte is qualitative research methods with a special focus on field research. Her specialization includes teacher education, strategic planning / educational planning, leadership development, and organizational learning.



**Dr. Zehra Habib** holds a PhD in Education from George Mason University (USA) and a Master in TESOL from the American University (USA). She also holds a Master in English Literature from the University of Karachi. She is working as an Associate Professor at IoBM. Dr. Habib has over two decades of teaching and research experience and has presented her research at various international forums, including George Washington University, USA, Washington State University, USA, International Education Conference Doha, Qatar and most recently at the International Conference on the Future of Women, 2018 at Kuala Lumpur, Malaysia. Additionally, she is a certified examiner of International English Language Testing System, the certificate being granted by the University of Cambridge, ESOL Examinations. Focusing particularly on qualitative methods of inquiry, her research interests are in gender studies, peace education, social justice, colonial and post-colonial education, professional teacher growth and curriculum development. She is a member of TESOL International (Teachers of English to Speakers of Other Languages), IATEFL (International Association of Teachers of English as a Foreign Language) and AERA (American Education Research Association).

**Dr. Samra Javed** has done her Master's in English from Government College, Lahore and holds an MPhil in Social Sciences (with specialization in English Language Teaching). She has received her PhD in Education from IoBM, being the first researcher in Pakistan on Experiential Learning. In addition, she has completed In Service Certification in English Language Teaching (International TESOL certification), Cambridge University, UK conducted by SPELT with merit in Teacher's Language and Methodology. She is working as an Assistant Professor, Head of ORIC, Head of Entrepreneurship & Management Excellence Center (EMEC) and Advisor to the Office of the President at IoBM. She is a trainer in English Language, Interpersonal Skills & Communication Skills at IoBM and IELTS' Master Trainer with the British Council. She has been a trainer in the English Language Proficiency Program of USAID, Proposal Writing of Citizen's Voice project-USAID and has conducted numerous training programs in Communication and Interpersonal Skills for clients including Aga Khan University, EFU Life, 10Pearls, Pakistan Oil Refinery, PharmEvo Private Limited and others. She has also been contributing in research on various aspects of teaching and learning. Dr. Samra has worked as a consultant in Proposal Writing, Project Management and Research, Head of Programs and Networking at INJAZ and Head of the Office of Research Innovation & Commercialization (ORIC).



**Dr. Kamal Ahmed Soomro** holds a PhD in Education with a specialization in Instructional Design and Technology from West Virginia University, USA. He was awarded PhD scholarship for doctoral studies in the United States by USAID under Training for Pakistan Project. He is working as an Assistant Professor. His research interests include investigations on the digital divide in educational settings and effective use of ICT to enhance teaching-learning process. He has fifteen years of teaching experience at diversified levels. Dr. Soomro has published several articles in high-ranking international journals. He has presented his research in Harvard University, AERA, and national conferences. American Psychological Association (APA) has included the FICTA scale, a quantitative instrument developed by him, in the APA PsycNet record. His scale has already been translated into Turkish language and has been used in Russian, Indonesian, Malaysian, and Pakistani contexts by other researchers. He is an HEC Approved PhD Supervisor and also an Associate Editor of the Journal of Education and Educational Development (JoEED) which is an HEC recognized Y-category journal. He is on the editorial/review board of several other research journals in the field of education. Dr. Soomro had also been associated with the Chicago School of Professional Psychology USA as an SME/Consultant for their online doctoral program in Educational Psychology and Technology.



**Amna Shahid** holds an MBA in Educational Management and is pursuing her PhD in Education at IoBM. She did her Bachelor in Professional Psychology at the Institute of Professional Psychology, Bahria University. She is working as a Lecturer at IoBM. Her areas of research interest are early childhood education and educational psychology. Her experience covers teaching children of three to graduate level students. Apart from being an educationist, she is also an entrepreneur and enjoys venturing into different creative tasks.



## Center for Policy and Area Studies

**Urfi Khalid** holds an MA in Physical and Political Geography from the University of Punjab. She is working as an Assistant Professor with IoBM. Prior to her current assignment, she was associated with IoBM as visiting member of faculty since 1997. She was teaching at various levels in international institutions in the Middle East before joining IoBM. Her research focus is on gender issues in the economic development of Pakistan. A research paper article by her was published in Pakistan Business Review, April 2011. She presented her paper on Gender Issues of Pakistan Textile Industry at the seminar on "EU Trade Concessions to the Textile Industry of Pakistan" held at IoBM. She has attended various conferences and seminars held at Karachi University and IoBM.



**Syed Hasan Habib** holds a Master's degree in Science. He is working as an Assistant Professor with IoBM. He worked for four years in the chemical process industry before joining Central Superior Services in 1983. He joined Foreign Services in 1986. He attended the Chinese Language Course at the Beijing University of Language and Culture (1989-91). During the 30 years of his diplomatic career, he worked in different capacities at Pakistan's foreign missions in China, Iran, the Netherlands, Morocco, Switzerland, Chengdu (China) and North Korea. He has also been Pakistan's representative at several international organizations and conferences. He remains deeply involved in Chinese and North Korean affairs. He is part of several local and international bodies in social and international affairs.



## Business Psychology



**Dr. Nadia Ayub** received Post-Doctoral Fellowship from the School of Psychology, University of Queensland, Australia, and earned a PhD in Psychology from the University of Karachi, Pakistan. She is an HEC approved PhD supervisor and has supervised a number of MPhil & PhD thesis at IoBM. She is working as Professor and Associate Dean, Psychology Department at IoBM. Her research focuses on identity issues in adolescents, organizational issues, family and marriages, cross-cultural psychology, educational psychology, and psychometrics. She has published more than 30 journal articles, presented research papers at Harvard University in 2012 & 2013 and around the world, served on the editorial boards of International Journal of Psychological Studies, Journal of Pakistan Psychological Association, Universal Research Journal, and Pakistan Business Review. She has worked on research project on Community Health Sciences at the Aga Khan University and Hospital. She is a member of HEC National Curriculum Revision Committee of Psychology. She is a recipient of Group Study Exchange Program Fellowship 2011 for Pennsylvania, USA, hosted by the Rotary Foundation International. She received International Education Faculty Achievement Award from the International Association of University Presidents for 2014 and HEC Best University Teacher Award for 2011. She has visited Caucasus University, Tbilisi, Georgia in 2014 on Leadership Development for Higher Education Reform (LEADHER) project funded by the International Association of University Presidents.



**Dr. Syed Shameem Ejaz** received a PhD in Psychology from the University of Karachi. He is working as an Assistant Professor at IoBM. He has been practicing psychology for more than 18 years as psychotherapist, researcher, and educator in and outside Pakistan. He was the only member of QRCA-USA from Pakistan in 90s. He has authored on research writing and diversity. He is a professional software designer which defines his personal research interest well, i.e., artificial intelligence and emotional machines. He has designed several psychological and analytical softwares. He likes to write about person-environment integration, issues, and reform.



**Tehzeeb Sakina Amir** holds a PhD in Psychology from the University of Karachi. She did her MPhil in Psychology from University of Karachi. She secured first class first position in MA in Organizational Psychology. She is working as an Assistant Professor at IoBM. She has almost twelve years of teaching experience in Higher Education University/Institute. Her research focuses on Organizational Dynamics, Consumer Psychology, Psychometrics, and Human Factors at work place. She has published five papers and two others are under review. She is on the editorial board of Pakistan Business Review and Journal of Education & Social Sciences.



**Emaan Rangoonwala** completed her Master in Professional & School Counseling Psychology with highest Honours from University of Houston and Bachelors in Psychology with Honours from Southern Methodist University, both from Texas (USA). She is working as a Lecturer with IoBM. She received special training in CBT through Beck Institute (New York), as well as received some training in developmental therapy from AKUH. She has previously worked as visiting faculty and thesis adviser at SZABIST, and as a counselor in Karachi and Texas with a combined work experience of nearly five years. She has also been a part of several non-profit organizations such as Amaanah Refugee Services and SINA as a counselor, consultant, and community worker.

## Islamic Studies / Philosophy Unit

**Asad Shahzad** holds an MS degree in Economic Philosophy from IoBM. He earned his MA in English literature from the University of Karachi. He received intensive training from SPELT under Cambridge University. He is a PhD Scholar and currently working as an Assistant Professor with IoBM. He has taught at several educational institutes before joining IoBM. He has also written articles for newspapers. He has presented papers at national and international conferences. His paper “Iqbal’s Idealist Critique of Hawking’s Materialist Concept of Time” was published in Iqbal Review, April 2008 issue. His papers have also been published in PBR, Business Review, and Journal of Education and Educational Development. He was awarded the best paper award (including all categories) in the area of General Management in the International Research Conference on Contemporary Management Practices 2013 held by Lahore University of Management Sciences (LUMS). Currently, he is involved in research in the area of global social/economic justice.



## Media Studies

**Ejaz Wasay** holds an MBA from IBA. He is working as an Associate Professor and Head of the Department at IoBM. Prior to that, he had been teaching at IoBM as a visiting member of Faculty since 2005 and has industry experience of over 37 years in the fields of Marketing, Corporate Communications and Advertising. He has worked with leading MNCs and local companies, including Unilever, Gillette, Philips, Orient McCann-Erickson and UBL. He has worked overseas with Gillette in Brazil, and in the UAE where he was Marketing Manager Gillette Middle-East from 1992-1994. He has led two major research projects during his tenure at IoBM: a Consumer Perception Study for Indus Motor Company and a Media Responsibility & Independence Index research for USAID. He was a regular contributor of article on Marketing-related topics to publications such as MAP’s Marketing Review and Aurora – a publication of the Herald Group. He was on the Council of the Marketing Association of Pakistan (MAP) for over 15 years, and was its President in 2005. He has also been a Jury Member of PAS Awards since its inception in 2011, and is currently on the Effie Pakistan Awards Steering Committee.



**Taqi Shaheen** Taqi Shaheen has a BFA [Equivalent to Masters (MA)] from National College of Arts. He is working as an Associate Professor of Practice at IoBM. He is a film-maker, educator and media artist whose work crosses mediums and defies genre distinctions to fashion witty and curious observations of contemporary South Asian cultures and mediascapes. Since 2004, he has been working closely with creative practitioners to produce collaborative works using artistic practices, pedagogic alternatives, and creative investigations to address the experiences of learning and the dilemmas of education in the developing world. His recent publication includes Subjective Atlas of Pakistan (Oxford University Press, 2020). He has presented his research in the US, Europe, and the Middle East at various academic conferences including International Symposium of Electronic Arts. As a director and curator, his previous works include a documentary series on artists as educators, Lessons on Lessons (TMN, 2016), The Petman Girls (TMN, 2012), Whose Pakistan is it anyway? (TMN, 2010), Morris Mata (2009), Kundun (ILO/BBC/PTV, 2004), and Congregation of the Distressed (2005).



**Nabhan Shah Karim** did his MA in Filmmaking from Kingston University London, UK and Bachelor in Film and Television from Indiana University Bloomington, USA. He is working as an Assistant Professor of Practice and Head of Media Production Department at the level of Manager. In the US, he interned for CNN’s AC360 and went on to be a producer on a sports broadcast show on the Big Ten Network. After his return to Pakistan, Nabhan was an Assistant Producer at Stimulus Productions working on TV Commercials for big name brands and later on, started his own production company specializing in Digital Videos.



**Muhammad Faraz** holds a Master in Mass Communication. He is working as a Senior Lecturer at IoBM. He is a professional screenwriter, story writer and a poet, has an experience of about three years in teaching screenwriting and twelve years of writing & research for various media groups i.e. CNBC, JAAG Broadcasting System, Total Media Network, etc.





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Abdul Khaliq Aboya PhD, UK	Commander (R) Khaliddurrani MBA, USA	Fahad Mushtaq Shaikh MBA, IoBM
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# ADMINISTRATION

## ADMINISTRATION



The administrative staff of IoBM is highly skilled and qualified to perform multifarious tasks, vital for the smooth running of the Institute. The administration implements the policies formulated by the Governing Board and the Academic Council. It is responsible for organizing academic programs, ensuring student progress, providing adequate support facilities to the faculty and students, and liaison with business and industry to arrange internships, ensure career development and placement of students on the completion of their degree. It is also responsible for the organization and supervision of examinations.

### Members of the Administration



**Mr. Talib S. Karim**, President, Institute of Business Management, holds a Bachelor's degree in Systems Engineering and a Master's degree in Economics with specialization in International Trade, both from the University of Arizona, USA. He has worked for a financial institution for ten years before joining the Institute full-time in 1997. He has also taught Economics at the University of Arizona, USA and IoBM. He also attended the Oxford Advanced Management & Leadership Program at Oxford University. He is an Executive Council member of the Management Association of Pakistan and the President of Marketing Association of Pakistan and represents the Institute in various Associations nationally and internationally.



**Sabina Mohsin**

Executive Director

Administration, Admissions and Finance

BBA, University of Arizona, USA

MS, US International University, Nairobi, Kenya



**Dr. Mohammad Ali Shamim**

Advisor to President

PhD (Civil Engineering), France

MBA (INSEAD), France



**Muhammad Waziruddin Jahangir**

Advisor to President for

Corporate Affairs

BCom, (Sindh University)

CA Finalist, (ICAP)



**Muhammad Misbahuddin**

Advisor to ED-Admin

HR, Purchase & General Administration

MBA, LLB



**Aslam Kurban Ali**  
Senior Manager & HoD, Finance  
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Advisor to Office of the President &  
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Associate Professor & HoD  
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MS



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Head of QEC & Assistant Professor  
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**Syed Ali Hasan**  
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<b>Syed Muhammad Ayaz</b> Administrative Officer II MA	<b>Tariq Majeed</b> Graphic Designer BS	<b>Hussain Ali</b> Media Coordinator BS
<b>Sheroonia Zameer</b> Admission Officer MBA	<b>Amna Khalil</b> HR Officer B.Com	<b>Aamir Khan</b> Officer, Salary & Compensations B.Com
<b>Salman Ahmed</b> Officer, QEC MBA	<b>Zehra Alam Siddiqui</b> Officer, H&HM MBA	<b>Tooba Farrukh</b> Officer, H&HRM D-Pharm
<b>Faiza Irfan</b> Capstone Officer, Marketing MBA	<b>Afshan Gul Khan</b> Capstone Officer, Marketing MBA	<b>Dania Shoaib Khan</b> Editorial Officer, Marketing BS (CS)
<b>Syed Shahrukh Hasan</b> Video Grapher, Media Studies BS (Media Studies)	<b>Zohaib Ali</b> Analyst Programmer / Officer BS (CS)	<b>Shahzeb Khan</b> Library Officer BLIS
<b>Sana Shakil</b> Senior Secretary cum Teaching Associate MSc	<b>Arsalan Khan</b> Registrar's Officer B.Com	<b>Asim Ahmed Khan Yousfi</b> Assistant Registration Officer & Catalog Composer Diploma in Graphic Designing

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## CERTIFICATE COURSES

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External students are allowed to register for 15-week Certificate Courses of their areas of interest. The following are some of the Certificate Courses being offered during 2020-2021:

### **Accounting**

Accounting Information Systems  
Advanced Financial Accounting

### **Advertising and Communication Management**

Principles of Marketing  
Principles of Advertising  
Advertising Research  
Client Management

### **Finance and Banking**

Analysis of Financial Statements  
Corporate Finance  
Money and Capital Markets  
Treasury and Fund Management

### **Health Services Administration**

Strategic Management of Health Services  
Pharmaceutical Marketing and Quality Assurance

### **Human Resource Management**

Strategic Human Resource Management  
Salary and Compensation  
Leadership Studies

### **Management Information Systems**

Oracle/Developer 2000  
Software Engineering  
Data Communication and Networking  
Programming in C++

### **Marketing**

Advertising  
Personal Selling  
Brand Management  
Media Planning

### **Sales Management**

Effective Territory Design  
Basic Selling Skills  
Distribution and Channel Management  
Merchandising



# ACADEMIC CALENDAR

## FALL 2021

Registration of Courses and Fee Payment (On board students)	Monday, August 16, 2021 Onwards
Orientation for newly admitted students	Saturday, September 04, 2021
Commencement of Semester	Saturday, September 11, 2021
Last day to drop courses without penalty	Saturday, October 23, 2021
Eid-e-Milad-un-Nabi (SAW)*	Wednesday, October 20, 2021
Iqbal Day	Tuesday, November 09, 2021
Last day to drop courses with penalty	Saturday, November 20, 2021
Revision and Presentation Week	Monday, December 13 to Sunday, December 19, 2021
Quaid-e-Azam's Birthday	Saturday, December 25, 2021
Final Exam	Monday, December 20, 2021 to Monday, January 03, 2022
Semester Ends	Tuesday, January 04, 2022

## Exam Schedule for Regular and Executive Students

Week	Exams	Dates
6th	1st Hourly	11/10/2021 to 17/10/2021
11th	2nd Hourly	15/11/2021 to 21/11/2021
16th	Final	20/12/2021 to 03/01/2022

\* Subject to the appearance of moon.

### Note:

All dates are subject to change. Students will be informed of the changes well in advance.  
For details of examination please visit the website.

## SPRING 2022

Registration of Courses and Fee Payment (On board students)	Monday, December 13, 2021 Onwards
Commencement of Semester	Saturday, January 15, 2022
Last day to drop courses without penalty	Thursday, March 03, 2022
Pakistan Day	Wednesday, March 23, 2022
Last day to drop courses with penalty	Saturday, April 09, 2022
Labor Day	Sunday, May 01, 2022
Revision and Presentation Week	Saturday, April 23, 2022 to Tuesday, April 26, 2022
Eid-ul-Fitr*	Monday, May 02, 2022
Final Exam	Saturday, April 30, 2022 to Sunday, May 15, 2022
Semester Ends	Monday, May 16, 2022

### Exam Schedule for Regular and Executive Students

Week	Exams	Dates
6th	1st Hourly	19/2/2022 to 24/2/2022
11th	2nd Hourly	26/3/2022 to 31/3/2022
16th	Final	30/4/2022 to 15/5/2022

\* Subject to the appearance of moon.

**Note:**

All dates are subject to change. Students will be informed of the changes well in advance.  
For details of examination please visit the website.



## SUMMER 2022

Registration of Courses and Fee Payment (On board students)	Saturday, April 23, 2022 Onwards
Commencement of Semester	Monday, May 16, 2022
Last day to drop courses without penalty	Saturday, July 02, 2022
Last day to drop courses with penalty	Saturday, August 06, 2022
Eid-ul-Fitr*	Monday, May 02, 2022
Eid-ul-Azha*	Saturday, July 09, 2022
Independence Day	Sunday, August 14, 2022
Revision and Presentation Week	Monday, August 22, 2022 to Friday, August 26, 2022
Final Exam	Saturday, August 27, 2022 & Sunday, August 28, 2022 Saturday, September 03, 2022 & Sunday, September 04, 2022
Semester Ends	Friday, September 09, 2022

## Exam Schedule

Week	Exams	Dates
6th	1st Hourly	25/6/2022 and 26/06/2022
11th	2nd Hourly	30/07/2022 and 31/07/2022
15th	Final	27/08/2022 to 5/09/2022

## SUMMER CRASH 2022

Registration of Courses and Fee Payment (On board students)	Saturday, April 23, 2022 Onwards
Commencement of Regular Classes	Monday, June 06, 2022
Last day to drop courses without penalty	Saturday, July 02, 2022
Last day to drop courses with penalty	Saturday, August 06, 2022
Eid-ul-Azha*	Saturday, July 09, 2022
Independence Day	Sunday, August 14, 2022
Revision and Presentation Week	Saturday, August 13, 2022 to Sunday, August 21, 2022
Final Exam	Monday, August 15, 2022 to Thursday, August 18, 2022
Semester Ends	Friday, August 19, 2022

## Exam Schedule

Week	Exams	Dates
6th	Mid-Term	11/7/2022 to 14/7/2022
11th	Final	15/8/2022 to 18/8/2022

\* Subject to the appearance of moon.

**Note:** All dates are subject to change. Students will be informed of the changes well in advance.  
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