VISION / MISSION STATEMENT

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
CONTENTS

- An Introduction to the Institute of Business Management 7
- Why Choose IoBM? 11
- IoBM Academic Strategies 12

College of Business Management (CBM)
- BBA (Honors) 14
- BS Joint (Honors) Economics and Finance 18
- BS Joint (Honors) Accounting and Finance 21
- BS Entrepreneurship 24
- BS Industrial Management 26
- BS (Joint) Honors Logistics and Supply Chain 28
- MBA Program 30
- Functional Area Specializations 32
  Domain Based Specializations 36
  - Specialization in Health and Hospital Management 36
  - Specialization in Media Management and Marketing 38
  - Specialization in Finance and Risk Management 40
  - Specialization in Environment and Energy Management 42
  - Specialization in Logistics and Supply Chain Management 44
  - Specialization in Industrial Management 46
  - Specialization in Entrepreneurship and SME Banking and Finance 48
- MBA Boot Camp: Orientation Program for New MBA Students 49
- MS in Business Management 50
- MS in English Applied Linguistics 51
- MPhil in Business Management 52
- PhD in Business Management 53
- PhD in Environment and Energy Management 55

College of Computer Science and Information Systems (CCSIS)
- BS Computer Science 58
- BS Actuarial Science and Risk Management 61
- BS Mathematics & Economics 63
- BS Data Science 66
- BS Mathematics and Computational Finance 69
- BS Software Engineering 72
- BS Statistics and Business Analytics 75
- MS Computer Science 78
- MS Mathematics and Scientific Computing 80
- MS Statistics and Scientific Computing 82
- PhD Computer Science 84
- PhD Statistics & Scientific Computing 84

College of Engineering and Sciences (CES)
- BE Electrical Engineering in Electronic and Telecommunication 87
- MS Engineering Management 92
- MS in Electrical Engineering 94
## CONTENTS

### College of Economics and Social Development (CESD)
- BS (Honors) Accountancy, Management and Law 98
- BS (Honors) Media Studies 100
- BS Economics, Law & International Relations (ELI) 103
- BS Economics, Media & International Relations (EMI) 106
- BS Joint (Honors) in Business & Psychology 109
- B.Ed (Honors) 4 Year 111
- B.Ed (Honors) 2.5 Year 113
- B.Ed (Honors) 1.5 Year 115
- MBA Educational Management 117
- MSc Organizational Psychology and Human Resource Management for Students with 16 Years Education 119
- MSc Organizational Psychology and Human Resource Management for Students with 14 Years Education 121
- MPhil in Organizational Psychology 123
- MS Economics 124
- MPhil Education 125
- PhD Education 126
- PhD in Economics 128

### Administrative and Academic Requirements
- Comprehensive Examination 132
- Procedure for Submitting MS, MPhil & PhD Thesis 133
- Teaching and Learning at IoBM 134
- Discipline 136
- Attendance Policy 138
- Dress Code Policy 138
- Examination Norms 139

### Admission and Finance
- Admission Department 143
- Scholarships and Financial Assistance Programs 150
- Fee Structure 151

### Organization
- Faculty 158
- Visiting Faculty at IoBM 190
- Administration 196
- Certificate Courses 200
- Academic Calendar 202
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 (AACSBI) and other international and national organizations.
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 ® Shahid Anwar Bajwa
- Mr. Muhammad Sharif
- Dr. Zafar Saied Saifee
- Ms. Ameena 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 Siddiqi, 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 eighteen 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 Tabba, 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 Edunversal 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.
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.
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 ad 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 4.0 & 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
# Course Structure

## Semester One
- Introduction to Psychology
- Principles of Micro Economics
- Business Mathematics
- Islamic Studies
- Academic English
- Principles of Management

## Semester Two
- History of Ideas
- Principles of Macro Economics
- Quantitative Techniques in Business
- Foreign Language I
- Persuasive & Analytical Writing for Business Communication
- Introduction to Financial Accounting

## Semester Three
- Entrepreneurial Society & Social Impact
- Marketing Management
- Foreign Language II
- Pakistan Studies
- Business & Professional Speech
- Intermediate Financial Accounting

## Semester Four
- Organizational Behavior
- Entrepreneurial Business Operations
- Supply Chain Management
- Computer Concepts & Applications
- Introduction to Islamic Banking & Finance
- Introduction to Business Finance

## Semester Five
- Human Resource Management
- Methods in Business Research
- Introduction to ERP
- Introduction to Data Sciences
- Islamic Financial Accounting
- Financial Management

## Semester Six
- Leadership Journey
- Major 1 (compulsory elective)
- Major II (compulsory elective)
- Major III
- Major IV
- Major V

## Semester Seven
- Pakistan Economic Policy
- Major VI
- Major VII
- Minor I (compulsory elective)
- Minor II (compulsory elective)
- Business Ethics

## Semester Eight
- 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  
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*8 = Introduction to Chinese  

**1 = Intermediate Arabic  
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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

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<thead>
<tr>
<th>Semester One</th>
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<tr>
<td>Introduction to Psychology</td>
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<td>Probability Theory &amp; Statistics</td>
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<td>Business Ethics</td>
<td>Corporate &amp; Business Law</td>
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<tr>
<td>Academic English</td>
<td>Persuasive &amp; Analytical Writing for Business Communication</td>
</tr>
<tr>
<td>Principles of Micro Economics</td>
<td>Introduction to Financial Accounting</td>
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<tr>
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<tbody>
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<td>History of Ideas</td>
<td>Computer Concepts and Application</td>
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<tr>
<td>Model &amp; Inferences</td>
<td>Macroeconomic Analysis</td>
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<tr>
<td>Foreign Language II</td>
<td>Principles of Management &amp; Organizational Behavior</td>
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<td>Pakistan Studies</td>
<td>Managerial Economics</td>
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<td>Business &amp; Professional Speech</td>
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<td>Leadership Journey</td>
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<td>Economics Elective III</td>
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<td>Economics Elective IV</td>
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<td>Economics Elective II</td>
<td>Economics Elective V</td>
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<tr>
<td>Marketing Management</td>
<td>Introduction to Islamic Banking and Finance</td>
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<thead>
<tr>
<th>Semester Seven</th>
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<tbody>
<tr>
<td>Pakistan Economic Policy</td>
<td>Finance Elective III</td>
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<tr>
<td>Financial Modeling for Decision Making</td>
<td>Finance Elective IV</td>
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<td>Finance Elective I</td>
<td>Finance Elective V</td>
</tr>
<tr>
<td>Economics Elective VI</td>
<td>Finance Elective VI</td>
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<tr>
<td>Business Research Project (Economics)</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Finance Elective II</td>
<td>Business Research Project (Finance)</td>
</tr>
</tbody>
</table>
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
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- 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
FIN535  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
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<td>Finance Elective II</td>
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</tbody>
</table>
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

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<tr>
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<td>Academic English</td>
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<tr>
<td>Business Mathematics</td>
<td>Quantitative Techniques in Business</td>
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<td>Islamic Studies</td>
<td>Principles of Management</td>
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<td>Principles of Microeconomics</td>
<td>Pakistan Studies</td>
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<tr>
<td>History of Ideas</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>Introduction to Entrepreneurship</td>
<td>Effectuation Methods and Attributes Analysis</td>
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<td>Business and Professional Speech</td>
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<td>Human Resource Management</td>
<td>Fundamentals of Finance</td>
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<td>Introduction to Psychology</td>
<td>Marketing Management</td>
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<td>Foreign Language I</td>
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<td>Fundamentals of Accounting</td>
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<td>Elective VII</td>
<td>Elective X</td>
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<td>Elective VIII</td>
<td>Elective XI</td>
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<tr>
<td>Legal Structures of Startups</td>
<td>Elective XII</td>
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<td>Business Research Methods</td>
<td>Visual Storytelling</td>
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<tr>
<td>Lean Launch Pad II: Startup Risk Mitigation</td>
<td>Capstone: Startup Acceleration &amp; Co-creation</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
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<th>Subject Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC101</td>
<td>Introduction to Psychology</td>
<td>SSC301</td>
<td>History of Ideas</td>
</tr>
<tr>
<td>INM306</td>
<td>Social and Ethical Aspects in Industrialization</td>
<td>INM103</td>
<td>Industrial Economics</td>
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<td>MTH103</td>
<td>Calculus for Business Decisions</td>
<td>STA204</td>
<td>Industrial Applications of Statistics</td>
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<td>COM107</td>
<td>Academic English</td>
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<td>Business Speech</td>
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<td>COM205</td>
<td>Persuasive &amp; Analytical Writing for Business Comm.</td>
<td>PSC301</td>
<td>Pakistan Studies</td>
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<tr>
<td>(Pre req: COM107)</td>
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<td>REL101</td>
<td>Islamic Studies</td>
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<td>LAN 10*</td>
<td>Foreign Language I</td>
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</table>

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

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

Course Structure

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

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Islamic Studies</td>
<td>Foreign Language I</td>
<td>Computer Concepts and Application</td>
</tr>
<tr>
<td>Business Mathematics</td>
<td>Probability Theory &amp; Statistics</td>
<td>Foreign Language II</td>
</tr>
<tr>
<td>Business Ethics</td>
<td>Corporate &amp; Business Law</td>
<td>Pakistan Studies</td>
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<tr>
<td>Academic English</td>
<td>Persuasive &amp; Analytical Writing for Business Communication</td>
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<tr>
<td>Business Economics</td>
<td>Essentials of Supply Chain Management</td>
<td>Logistics and Operations Management</td>
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</tbody>
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<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<tr>
<td>Introduction to ERP Systems</td>
<td>Storage and Warehouse Techniques</td>
<td>Procurement Management</td>
</tr>
<tr>
<td>Supply Chain Design</td>
<td>Supply Chain Analytics</td>
<td>Supply Chain Project Management</td>
</tr>
<tr>
<td>Transportation Techniques and Mgmt.</td>
<td>Supply Chain Elective I</td>
<td>Supply Chain Elective IV</td>
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<tr>
<td>Fundamentals of Finance</td>
<td>Supply Chain Elective II</td>
<td>Supply Chain Elective V</td>
</tr>
<tr>
<td>Fundamentals in Logistics Research</td>
<td>Supply Chain Elective III</td>
<td>Supply Chain Elective VI</td>
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<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
<th>Semester Eight</th>
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<tbody>
<tr>
<td>Pakistan Economic Policy</td>
<td>Logistics Elective III</td>
<td>Logistics Elective III</td>
</tr>
<tr>
<td>Quantitative Methods in Production &amp; Logistics</td>
<td>Logistics Elective IV</td>
<td>Logistics Elective IV</td>
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<tr>
<td>Distribution Management in Logistics &amp; Supply Chain</td>
<td>Logistics Elective V</td>
<td>Logistics Elective V</td>
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<tr>
<td>Logistics Elective I</td>
<td>Logistics Elective VI</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Business Research Project (Supply Chain)</td>
<td>Business Research Project (Logistics)</td>
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<tr>
<td>Logistics Elective II</td>
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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

**Statistics**
STA411  Quantitative Analysis for Decision Making

**Law**
LAW409  Corporate and Business Law

**Marketing**
MKT402  Marketing Management
MKT404  Methods in Business Research

**Communication**
COM402  Business Communication

**Finance**
FIN408  Theory and Practice of Financial Management

**Human Resource Management**
HRM410  Managing Human Capital

**Management**
MAN418  Management and Organizational Dynamics

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*¹

**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**
XXX691¹ Capstone Project I*
XXX692¹ Capstone Project II*

* Indicates MBA level courses

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

² 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
- MI526  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 Supply Chain 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
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:

<table>
<thead>
<tr>
<th>Domain</th>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>ACC419</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>HRM410</td>
<td>Managing Human Capital</td>
</tr>
<tr>
<td>Communication</td>
<td>COM402</td>
<td>Business Communication</td>
</tr>
<tr>
<td>Management</td>
<td>MAN418</td>
<td>Management and Organizational Dynamics</td>
</tr>
<tr>
<td>Finance</td>
<td>FIN408</td>
<td>Theory and Practice of Financial Management</td>
</tr>
<tr>
<td></td>
<td>FIN411</td>
<td>Finance for Entrepreneurial Ventures</td>
</tr>
</tbody>
</table>

### 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

### Elective Business Courses*

### 3 Health Elective and 2 Business Elective

### Capstone Project
- MHH691 Capstone Project I
- MHH692 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:
Page No. 35

Course Structure

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

<table>
<thead>
<tr>
<th>Foundation Stage</th>
<th>Semester One</th>
<th>Semester Two</th>
<th>MBA Stage</th>
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<td></td>
<td>Quantitative Analysis for Decision Making</td>
<td>Theory and Practice of Management</td>
<td>Leadership, Ethics and Change</td>
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<tr>
<td></td>
<td>Financial Accounting</td>
<td>Marketing Management</td>
<td>Strategic Management</td>
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</tr>
<tr>
<td></td>
<td>Consumer Behavior</td>
<td>Methods in Business Research</td>
<td>Digital Marketing</td>
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</tr>
<tr>
<td></td>
<td>Digital Business Communication</td>
<td>Business Economics</td>
<td>Media and Public Opinion</td>
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</tbody>
</table>

<table>
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<tr>
<th>Semester Three</th>
<th>MBA Stage</th>
<th>Semester Four</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Financial Management</td>
<td>Leadership, Ethics and Change</td>
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<tr>
<td></td>
<td>Business and Corporate Law</td>
<td>Strategic Management</td>
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<tr>
<td></td>
<td>Managing Human Capital</td>
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<td>Media and Social Change</td>
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<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
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</thead>
<tbody>
<tr>
<td>Business Analytics and Decision-Making</td>
<td>Entrepreneurship and Ecommerce</td>
</tr>
<tr>
<td>Seminar in Media Marketing</td>
<td>Integrated Marketing Communication</td>
</tr>
<tr>
<td>Elective 1</td>
<td>Role of Media in World Affairs</td>
</tr>
<tr>
<td>Capstone Project I</td>
<td>Capstone Project II</td>
</tr>
</tbody>
</table>
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 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
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

<table>
<thead>
<tr>
<th>Modules</th>
<th>Number of Hours</th>
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<tr>
<td>1 Business English</td>
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</tr>
<tr>
<td>2 Economics</td>
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</tr>
<tr>
<td>3 Personal Effective and Leadership</td>
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</tr>
<tr>
<td>4 Introduction to Management and Case Method</td>
<td>12 hrs</td>
</tr>
<tr>
<td>5 Introduction to Marketing and Case method</td>
<td>12 hrs</td>
</tr>
<tr>
<td>6 Business Finance</td>
<td>12 hrs</td>
</tr>
<tr>
<td>7 Business Accounting</td>
<td>12 hrs</td>
</tr>
<tr>
<td>8 Excel for Business Decision Making</td>
<td>18 hrs</td>
</tr>
<tr>
<td>9 Research Tools and Techniques</td>
<td>12 hrs</td>
</tr>
<tr>
<td>10 Business Mathematics and Statistics</td>
<td>12 hrs</td>
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</tbody>
</table>
MS IN BUSINESS MANAGEMENT

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.
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 one’s 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.
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
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.
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:

10. Computer and Information Research Scientists

Prospective Employers:

1. Cyber Internet Services 2. Internet Service Providers 3. Real Estate 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

Course Structure

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

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

### Political Sciences
- PSC301 Pakistan Studies

### Religious Studies
- REL101 Islamic Studies

### 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

#### Computer Sciences
- CSC103 Structured Programming Language

### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic English (3+0) [Pre req NA]</td>
<td>Introduction to Financial Accounting</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>Probability Theory and Statistics II</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>Probability Theory and Statistics</td>
<td>Calculus II</td>
<td>Model and Inferences</td>
</tr>
<tr>
<td>Calculus I</td>
<td>Principles of Macroeconomics</td>
<td>Introduction to Business Finance</td>
</tr>
<tr>
<td>Introduction to Actuarial Science</td>
<td>Foreign Language I</td>
<td>(3+0) [Pre Req. COM107]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerical Computing</td>
<td>Financial Derivatives</td>
<td>Portfolio Management</td>
</tr>
<tr>
<td>Business Law</td>
<td>Actuarial Mathematics</td>
<td>Life and Other Contingencies</td>
</tr>
<tr>
<td>Introduction to Econometrics</td>
<td>Principles of Risk Management</td>
<td>Enterprise Risk Management</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Stochastic Processes</td>
<td>Sampling Theory</td>
</tr>
<tr>
<td>Pakistan Studies</td>
<td>Financial Econometrics</td>
<td>Models in Financial Economics I</td>
</tr>
<tr>
<td>Method of Data Analysis</td>
<td>Corporate Finance</td>
<td>Methods in Business Research</td>
</tr>
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<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
<th>Semester Nine</th>
</tr>
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<tbody>
<tr>
<td>Institutional Investments</td>
<td>Decision Theory</td>
<td>Portfolio Management</td>
</tr>
<tr>
<td>Models in Financial Economics II</td>
<td>Loss Models II</td>
<td>Life and Other Contingencies</td>
</tr>
<tr>
<td>Applied Regression Analysis</td>
<td>Risk Financing Techniques</td>
<td>Enterprise Risk Management</td>
</tr>
<tr>
<td>Computational Methods in Risk Mgmt.</td>
<td>Time Series Analysis &amp; Forecasting</td>
<td>Sampling Theory</td>
</tr>
<tr>
<td>Loss Models I</td>
<td>Project</td>
<td>Models in Financial Economics I</td>
</tr>
<tr>
<td>Elective I</td>
<td>Elective II</td>
<td>Methods in Business Research</td>
</tr>
</tbody>
</table>
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 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. 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
- 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

Political Sciences (1 course, 3 credit hours)
- PSC301 Pakistan Studies

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

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

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

#### Semester One (19 Credit Hours)
- **Islamic studies** (3+0) [Pre req NA]
- **Academic English** (3+0) [Pre req NA]
- **Natural science I** (3+0) [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]

#### Semester Two (19 Credit Hours)
- **Topics in Mathematical Economics** (3+0) [Pre req ECO101 & MTH104]
- **Persuasive. & Analytical Writing for Business Communication** (3+0) [COM107]
- **Foreign Language I** (3+0) [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]

#### Semester Three (19 Credit Hours)
- **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]

#### Semester Four (18 Credit Hours)
- **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]

#### Semester Five (18 Credit Hours)
- **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]

#### Semester Six (18 Credit Hours)
- **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]

#### Semester Seven (15 Credit Hours)
- **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)

#### Semester Eight (15 Credit Hours)
- **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
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
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
CSC211  Computer Organization & Assembly Language LAB
CSC315  Design Analysis of Algorithms
CSC413  Artificial Intelligence
CSC413  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
Course Structure

Semester One (19 Credit Hours)

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]

Semester Two (19 Credit Hours)

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]

Semester Three (19 Credit Hours)

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]

Semester Four (16 Credit Hours)

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*]

Semester Five (17 Credit Hours)

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]

Semester Six (17 Credit Hours)

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]

Semester Seven (19 Credit Hours)

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]

Semester Eight (18 Credit Hours)

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]

Elective Courses

Data Science

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDS410</td>
<td>Stochastic Processes</td>
</tr>
<tr>
<td>BDS411</td>
<td>Machine Learning</td>
</tr>
<tr>
<td>BDS420</td>
<td>Business Process Analysis</td>
</tr>
<tr>
<td>BDS4111</td>
<td>Time Series Analysis &amp; Forecasting</td>
</tr>
<tr>
<td>BDS413</td>
<td>Bioinformatics</td>
</tr>
<tr>
<td>BDS415</td>
<td>Financial Data Analytics</td>
</tr>
<tr>
<td>BDS417</td>
<td>Artificial Neural Networks</td>
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<tr>
<td>BDS423</td>
<td>Privacy Preservation</td>
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<tr>
<td>BDS425</td>
<td>Text Mining</td>
</tr>
<tr>
<td>BDS429</td>
<td>Topics in Data Science</td>
</tr>
</tbody>
</table>

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<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDS410</td>
<td>Theory of Automata &amp; Formal Languages</td>
</tr>
<tr>
<td>BDS426</td>
<td>Health Informatics</td>
</tr>
<tr>
<td>BDS411</td>
<td>Game Theory</td>
</tr>
<tr>
<td>BDS412</td>
<td>Deep Learning</td>
</tr>
<tr>
<td>BDS413</td>
<td>Platform &amp; Architecture for Data Science</td>
</tr>
<tr>
<td>BDS414</td>
<td>Speech Processing</td>
</tr>
<tr>
<td>BDS421</td>
<td>Introduction to Econometrics</td>
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<tr>
<td>BDS422</td>
<td>Data Science</td>
</tr>
<tr>
<td>BDS423</td>
<td>BDS401 Stochastic Processes</td>
</tr>
<tr>
<td>BDS424</td>
<td>BDS201 Business Process Analysis</td>
</tr>
<tr>
<td>BDS425</td>
<td>BDS411 Time Series Analysis &amp; Forecasting</td>
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<td>BDS425 Text Mining</td>
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<tr>
<td>BDS431</td>
<td>BDS429 Topics in Data Science</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Communication</th>
<th>Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM107 Academic English (3+0)</td>
<td>ECO101 Principles of Microeconomics (3+0)</td>
</tr>
<tr>
<td>COM202 Business and Professional Speech (3+0)</td>
<td>ECO102 Principles of Macroeconomics (3+0)</td>
</tr>
<tr>
<td>COM205 Persuasive &amp; Analytical Writing for Business Comm.</td>
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</tr>
</tbody>
</table>
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
LAN101 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
OR any subject from pool of General Education

Internship
Internship related to Financial Mathematics

Elective Courses

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
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

### Semester One (19 Credit Hours)
- 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]

### Semester Two (19 Credit Hours)
- 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]

### Semester Three (19 Credit Hours)
- 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]

### Semester Four (18 Credit Hours)
- 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]

### Semester Five (18 Credit Hours)
- 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]

### Semester Six (18 Credit Hours)
- Numerical Analysis (3+0) [Pre req MTH305, 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]

### Semester Seven (18 Credit Hours)
- 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)

### Semester Eight (15 Credit Hours)
- 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)
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
  *4 = Introduction to German
  *8 = Introduction to Chinese
  **1 = Intermediate Arabic
  **4 = Intermediate German
  **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
### Course Structure

#### Semester One
- Intro to Info. & Comm. Technology (2+0) [Pre Req. NA]
- Programming Fundamentals (3+0) [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]

#### Semester Two
- Object Oriented Programming (3+0) [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]

#### Semester Three
- Data Structures and Algorithms (3+0) [Pre Req. CSC213]
- Pakistan Studies (3+0) [Pre Req. NA]
- Foreign Language I (3+0) [Pre Req. NA]
- Calculus and Analytical Geometry (3+0) [Pre Req. NA]

#### Semester Four
- Intro to Database Systems (3+0) [Pre Req. CSC215]
- Foreign Language II (3+0) [Pre Req. LAN 10]
- Intro to Software Engineering (3+0) [Pre Req. NA]
- Principles of Management (3+0) [Pre Req. NA]

#### Semester Five
- 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]

#### Semester Six
- Software Design and Architecture (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]

#### Semester Seven
- 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]

#### Semester Eight
- 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 Business 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
- * 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
- Natural Science 2

**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

<table>
<thead>
<tr>
<th>Semester One (18 Credit Hours)</th>
<th>Semester (18 Credit Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islamic Studies (3+0) [Pre Req. NA]</td>
<td>Persuasive and Analytical Writing for Bus. Comm. (3+0) [Pre Req. COM107]</td>
</tr>
<tr>
<td>Mathematics for Business (3+0) [Pre Req. NA]</td>
<td>Pakistan Studies (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Principles of Management (3+0) [Pre Req. NA]</td>
<td>Calculus I (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Introduction to Micro and Macroeconomics (3+0) [Pre Req. ECO102]</td>
<td>Probability Theory and Statistics II (3+0) [Pre Req. STA203]</td>
</tr>
<tr>
<td>Probability Theory and Statistics I (3+0) [Pre Req. NA]</td>
<td>Principles of Marketing (3+0)[Pre Req. NA]</td>
</tr>
<tr>
<td>Academic English (3+0) [Pre Req. NA]</td>
<td>Foreign Language I [Pre Req. NA]</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Semester Three (18 Credit Hours)</th>
<th>Semester Four (18 Credit Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Applications (2+1) [Pre Req. NA]</td>
<td>Linear Algebra (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Intermediate Micro and Macroeconomics (3+0) [Pre Req. ECOXXX]</td>
<td>Organizational Behavior (3+0) [Pre Req. MAN101]</td>
</tr>
<tr>
<td>Calculus II (3+0) [Pre Req. MTH104]</td>
<td>Intermediate Financial Accounting (3+0) [Pre Req. ACC101]</td>
</tr>
<tr>
<td>Introduction to Financial Accounting (3+0) [Pre Req. NA]</td>
<td>Marketing Management (3+0) [Pre Req. MKT301]</td>
</tr>
<tr>
<td>Model and Inferences (3+0) [Pre Req. STA205]</td>
<td>Methods of Data Analysis (2+1) [Pre Req. STA301]</td>
</tr>
<tr>
<td>Business and Professional Speech (3+0) [Pre Req. COM107]</td>
<td>Natural Science I (3+0) [Pre Req. NA]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Five (18 Credit Hours)</th>
<th>Semester Six (18 Credit Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource Management (3+0) [Pre Req. MAN302]</td>
<td>Financial Management (3+0) [Pre Req. FIN201]</td>
</tr>
<tr>
<td>Introduction to Econometrics (2+1) [Pre Req. ECO102]</td>
<td>Sampling Theory (2+1) [Pre Req. STA302]</td>
</tr>
<tr>
<td>Introduction to Business Finance (3+0) [Pre Req. NA]</td>
<td>Numerical Analysis (3+0)[Pre Req. MTH204]</td>
</tr>
<tr>
<td>Methods in Business Research (3+0) [Pre Req. MKT302]</td>
<td>Elective I (STATISTICS) (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Applied Regression Analysis (2+1) [Pre Req. STA302]</td>
<td>Pakistan Economic Policy (3+0) [Pre Req. ECO103]</td>
</tr>
<tr>
<td>Natural Science II (3+0 )[Pre Req. NA]</td>
<td>History of Ideas</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven (18 Credit Hours)</th>
<th>Semester Eight (15 Credit Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision Theory (3+0) [Pre Req. STA301]</td>
<td>Applied Multivariate Analysis (2+1)</td>
</tr>
<tr>
<td>Design of Experiment I (2+1) [Pre Req. STA305]</td>
<td>Time Series Analysis and Forecasting (2+1) [Pre Req. STA305]</td>
</tr>
<tr>
<td>Production and Operations Management (3+0) [Pre Req. NA]</td>
<td>Elective III (STATISTICS) (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Elective I (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
<td>Elective II (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Elective II (STATISTICS) (3+0) [Pre Req. NA]</td>
<td>Final Year Project II (0+3) [Pre Req. STA491]</td>
</tr>
<tr>
<td>Final Year Project I (0+3) [Pre Req. MKT404,STA305]</td>
<td></td>
</tr>
</tbody>
</table>
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
- 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
- CSC563 Software Quality Assurance
- CSC565 Software Testing Strategies
- CSC572 Data Warehousing
- CSC574 Distributed Systems
- CSC578 Communication and Information Policy
- CSC582 Pattern Recognition
- CSC584 Artificial Intelligence
- CSC586 Deep Learning
- CSC562 Object-Oriented Software Engineering
- CSC564 Software Requirement Engineering
- CSC571 Advanced Database Management Systems
- CSC573 Data Mining
- CSC575 Parallel and Distributed Algorithms
- CSC581 Neural Networks
- CSC583 Fuzzy Systems
- CSC585 Machine Learning

**Course Structure**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Methodology</td>
<td>Advanced Operating Systems</td>
</tr>
<tr>
<td>Advanced Computer Architecture</td>
<td>Theory of Programming Languages</td>
</tr>
<tr>
<td>Advanced Analysis of Algorithm</td>
<td>Elective I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective II</td>
<td>Elective IV</td>
</tr>
<tr>
<td>Elective III</td>
<td>MS Thesis-II</td>
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<tr>
<td>MS Thesis-I</td>
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</tbody>
</table>
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
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- 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
MTS621 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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
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<tbody>
<tr>
<td>Research Methodology</td>
<td>Statistical Modeling &amp; Computing</td>
</tr>
<tr>
<td>Advanced Numerical Analysis</td>
<td>Advanced Topics in Algebra</td>
</tr>
<tr>
<td>Advance Real analysis</td>
<td>Mathematics Concentration I</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics Concentration II</td>
<td>Computation Concentration II</td>
</tr>
<tr>
<td>Computation Concentration I</td>
<td>Thesis II</td>
</tr>
<tr>
<td>Thesis I</td>
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</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Methodology</td>
<td>Statistical Modeling &amp; Computing</td>
</tr>
<tr>
<td>Mathematical Statistics</td>
<td>Advanced Statistical Inference</td>
</tr>
<tr>
<td>Advanced Numerical Computing</td>
<td>Statistics Concentration I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics Concentration II</td>
<td>Computation Concentration II</td>
</tr>
<tr>
<td>Computation Concentration I</td>
<td>Thesis II</td>
</tr>
<tr>
<td>Thesis I</td>
<td></td>
</tr>
</tbody>
</table>
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)**

PCA701  Big Data Analytics and Knowledge Discovery  
PCA703  Natural Language Processing Information Retrieval  
PCA705  Advance Theory of Computation  
PCA707  Advances in Machine Learning  
PCA709  Computational Intelligence  
PCA711  Heuristic Search Theory & Methods  
PCA713  Advanced Neural Network  
PCA715  Intelligent Web Technologies  
PCA717  Parallel and Distributed Systems  
PCA719  Formal Research Methods  
PCA723  Computer Vision and Robotics  
PCA725  Temporal and Spatial Database Management System  
PCA731  Advanced Digital Signal Processing  
PCA733  Advanced Decision Support System  
PCA739  Advances in Simulation and Modeling  
PCA743  Fuzzy Topologies with Human Centric Computing  
PCA745  Advanced Algorithm Analysis  
PCA749  Seminar on Logic and Scientific Computing  
PCA751  Seminar on Emerging Computing Technologies  
PCA753  Advances in Artificial Intelligence  
PCA755  Advances in Deep Learning  
PCA921  Research Thesis (3 Units)  
PCA922  Research Thesis (6 Units)  
PCA923  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 (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) 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)

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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Physics (3+1)</td>
<td>Linear Algebra (3+0)</td>
</tr>
<tr>
<td>Functional English (3+0)</td>
<td>Islamic Studies (3+0)</td>
</tr>
<tr>
<td>Linear Circuit Analysis (3+1)</td>
<td>Communication Skills (2+0)</td>
</tr>
<tr>
<td>Fundamentals of Computing (2+1)</td>
<td>Basic Electronics (3+1)</td>
</tr>
<tr>
<td>Calculus &amp; Analytical Geometry (3+0)</td>
<td>Computer Programming &amp; Problem Solving (2+1)</td>
</tr>
<tr>
<td>Electronic Workshop Practices (0+1)</td>
<td>Electrical Network Analysis (3+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan Studies (3+0)</td>
<td>Signals &amp; Systems (3+1)</td>
</tr>
<tr>
<td>Digital Logic Design (3+1)</td>
<td>Differential Equations (3+0)</td>
</tr>
<tr>
<td>Data Structure &amp; Algorithms (3+1)</td>
<td>Technical Report Writing (3+0)</td>
</tr>
<tr>
<td>Complex Variables &amp; Transforms (3+0)</td>
<td>Electromagnetic Field Theory (3+0)</td>
</tr>
<tr>
<td>Computer Aided Engineering Designs (0+1)</td>
<td>Microcontroller &amp; Microprocessor Systems (3+1)</td>
</tr>
<tr>
<td>Electronic Devices and Circuits (3+1)</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Machines (3+1)</td>
<td>Elective I (3+0)</td>
</tr>
<tr>
<td>Numerical Analysis (3+0)</td>
<td>Engineering Economics (2+0)</td>
</tr>
<tr>
<td>Linear Control Systems (3+1)</td>
<td>Communication System (3+1)</td>
</tr>
<tr>
<td>Instrumentation and Measurements (3+1)</td>
<td>Digital Signal Processing (3+1)</td>
</tr>
<tr>
<td>Probability Methods in Engineering (3+0)</td>
<td>Power Electronics (3+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective II (3+0)</td>
<td>Elective IV (3+1)</td>
</tr>
<tr>
<td>Elective III (3+1)</td>
<td>Community Service (0 ch)</td>
</tr>
<tr>
<td>Management and Organizational Dynamics (3+0)</td>
<td>Senior Design Project II (0+3)</td>
</tr>
<tr>
<td>Senior Design Project I (0+3)</td>
<td>Small Business and Entrepreneurship (3+0)</td>
</tr>
<tr>
<td>Renewable Energy Methods (3+0)</td>
<td></td>
</tr>
</tbody>
</table>

#### Elective Courses

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

#### Course Structure

#### Stream 2: Telecommunication Engineering

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerical Analysis (3+0)</td>
<td>Elective I (3+0)</td>
</tr>
<tr>
<td>Linear Control Systems (3+1)</td>
<td>Engineering Economics (2+0)</td>
</tr>
<tr>
<td>Electrical Machine (3+1)</td>
<td>Digital Signal Processing (3+1)</td>
</tr>
<tr>
<td>Computer Communication Networks (3+1)</td>
<td>Communication System (3+1)</td>
</tr>
<tr>
<td>Probability Methods in Engineering (3+0)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective II (3+0)</td>
<td>Elective IV (3+0)</td>
</tr>
<tr>
<td>Elective III (3+1)</td>
<td>Social Advocacy and Community Service (1+0)</td>
</tr>
<tr>
<td>Management &amp; Organizational Dynamics (3+0)</td>
<td>Senior Design Project II (0+3)</td>
</tr>
<tr>
<td>Senior Design Project I (0+3)</td>
<td>Principles of Applied Mechatronics (3+1) OR</td>
</tr>
<tr>
<td>Renewable Energy Methods (3+0)</td>
<td>Project Management</td>
</tr>
</tbody>
</table>

#### Elective Courses

- **TCE415** Transmission and Switching Systems
- **TCE420** Information Theory and Coding
- **TCE424** Radar Systems
- **TCE426** Electromagnetic Compatibility
- **TCE428** Mobile and Pervasive Computing
- **TCE430** Satellite Communication
- **TCE433** Multimedia and Optical Fiber
- **TCE461** Wireless and Mobile Communications
- **CME414** Digital Image Processing
- **EPE432** IoT Based Wireless Power Transfer
- **EPE434** Introduction to Smart Grid
- **CME415** Cyber Physical Systems and Industry
- **TCE416** Digital Communications
- **TCE423** RF and Microwave Engineering
- **TCE425** Telecom Engineering
- **TCE427** Antenna Theory and Design
- **TCE429** Teletraffic Engineering
- **TCE431** Digital Filter Design
- **TCE434** Wireless Sensor Networks
- **TCE471** Optical Fiber Communication
- **ELE415** Opto-Electronics
- **EPE433** Power Quality Analysis
- **ELE435** Technology and Society
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)
MEM507 Operations Analysis & Resource Allocation (3+0)
MEM509 Simulation Modeling (3+0)
MEM511 Advanced Practices in Engineering Management (3+0)
MEM513 Industrial Costing Management (3+0)
MEM515 Lean Six Sigma & Lean Manufacturing (3+0)
MEM517 Global Business Strategy (3+0)
MEM519 Financial Statement Analysis (3+0)
MEM521 Problem Solving & Decision Making (3+0)
MEM524 Management of Organizations (3+0)
MEM506 Production System Design and Analysis (3+0)
MEM508 Operation Management (3+0)
MEM510 Production Planning and Control (3+0)
MEM512 Environmental and Safety Management (3+0)
MEM514 Technology Management (3+0)
MEM516 Marketing Management (3+0)
MEM518 Leadership, Innovation & Entrepreneurship (3+0)
MEM520 Engineering Economics (3+0)
MEM523 Supply Chain Management (3+0)
MEM525 Advanced Topics in Project Management (3+0)

**Course Structure**

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

**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 HIJRS/WOS/Scopus Indexed Journal or any conference proceedings) before forwarding MS thesis for evaluation.
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

<table>
<thead>
<tr>
<th>Stream 1</th>
<th>Stream 2</th>
<th>Stream 3</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Systems Engineering</td>
<td>Control Automation Engineering</td>
<td>Communication Systems and Networks</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE602 (Core) Power Electronics</td>
<td>ELE602 (Core) Linear Control Theory</td>
<td>ECE602 (Core) Wireless Communication</td>
<td></td>
</tr>
</tbody>
</table>

Elective Courses

<table>
<thead>
<tr>
<th>Stream 1</th>
<th>Stream 2</th>
<th>Stream 3</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPE611 Power System Analysis</td>
<td>ELE612 Detection and Estimation</td>
<td>ECE612 Information &amp; Coding Theory</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE613 Power System Reliability</td>
<td>ELE613 Adaptive Control Systems</td>
<td>ECE615 Advanced Computer Networks</td>
<td>3+0</td>
</tr>
<tr>
<td>CME602 Artificial Intelligence and Machine Learning</td>
<td>MTH601 Stochastic System Process</td>
<td>GSC601 Advanced Computer Networks</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE615 Renewable Energy Systems</td>
<td>ELE615 Optimal Control Systems</td>
<td>ECE615 Advanced Computer Networks</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE616 Embedded Power Generation</td>
<td>GSC601 Semiconductor Device Physics</td>
<td>Special topics on Communications (upon the discretion of course instructor)</td>
<td>3+0</td>
</tr>
</tbody>
</table>

Special topics on Smart Grid (upon the discretion of course instructor)
Course Structure:

**Semester One**
- Research Methodology (3+0)
- Simulation Modeling (2+1)
- Required Stream based Course (3+0)

**Semester Two**
- Independent study (3+0)
- Elective-I
- Elective-II
- Initial Seminar / Symposium

**Semester Three**
- Elective-III
- Elective-IV
- Thesis (3+0)

**Semester Four**
- Thesis (3+0)
- Final Seminar / Symposium

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

Program Summary:

Duration: Minimum 1.5 - Maximum 4 years
Total Credit hours: 30 credit hours
Course work: 24 credit hours
Thesis: 6 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 HIJRS/WOS/Scopus Indexed Journal or any conference proceedings) before forwarding MS thesis for evaluation.
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: 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)

**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

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)
### 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

### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional English I</td>
<td>Functional English II</td>
</tr>
<tr>
<td>Quantitative Methods I</td>
<td>Quantitative Methods II</td>
</tr>
<tr>
<td>Islamic Studies</td>
<td>Pakistan Studies</td>
</tr>
<tr>
<td>Fundamentals of Microeconomics</td>
<td>Fundamentals of Macroeconomics</td>
</tr>
<tr>
<td>Accounting Principles</td>
<td>Intermediary Accounting</td>
</tr>
<tr>
<td>General Science</td>
<td>Mercantile Law</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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<tbody>
<tr>
<td>Environmental Studies</td>
<td>Cost Accounting</td>
</tr>
<tr>
<td>Principle of Management</td>
<td>Principle of Marketing</td>
</tr>
<tr>
<td>Principles of Business Finance</td>
<td>Theory of Business Finance</td>
</tr>
<tr>
<td>Behavioral Studies</td>
<td>Computer Concepts and Application</td>
</tr>
<tr>
<td>Company Law and Secretarial Practices</td>
<td>Principle of Taxation</td>
</tr>
<tr>
<td>Business Communication - AML</td>
<td>Business Ethics</td>
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<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditing 1: Conceptual Foundations of Auditing Banking Law in Pakistan</td>
<td>Auditing-II: The Practice of Auditing</td>
</tr>
<tr>
<td>Management Accounting for Decision making</td>
<td>Statutory Compliance</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>Intellectual Property Laws</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>Intermediary Financial Reporting</td>
</tr>
<tr>
<td>Introduction to a Foreign Language</td>
<td>Islamic Finance: Principles and Practice</td>
</tr>
<tr>
<td></td>
<td>Advance Taxation</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
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</thead>
<tbody>
<tr>
<td>Strategic Performance Measurement and evaluation</td>
<td>Advance Audit and Assurance</td>
</tr>
<tr>
<td>Leadership Journey</td>
<td>Strategic Financial Reporting</td>
</tr>
<tr>
<td>Islamic Accounting and Reporting</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Internal Audit, Control, and governance</td>
<td>Applied Business Finance</td>
</tr>
<tr>
<td>Consumer Protection Act &amp; Electronic Crimes Law</td>
<td>Final Year Project</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>Introduction to ERP Systems</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Reading &amp; Creative Writing</td>
<td>Design Tools</td>
</tr>
<tr>
<td>History of Filmmaking</td>
<td>Introduction to Journalism</td>
</tr>
<tr>
<td>Introduction to Photography</td>
<td>Introduction to Video Production</td>
</tr>
<tr>
<td>Urdu I</td>
<td>Introduction to Performing Arts</td>
</tr>
<tr>
<td>Introduction to Creative Arts</td>
<td>Media History - From Cave-paintings to TikTok</td>
</tr>
<tr>
<td>Pakistan Studies</td>
<td>International Relations</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing for Digital Media</td>
<td>Introduction to 3D Animation &amp; Motion Graphics</td>
</tr>
<tr>
<td>Introduction to Podcast &amp; Audio Journalism</td>
<td>Introduction to Sound Design</td>
</tr>
<tr>
<td>Cinematography</td>
<td>Interface Design</td>
</tr>
<tr>
<td>Concept Art - From Art to ‘Akbarnama’</td>
<td>Introduction to Advertising &amp; PR</td>
</tr>
<tr>
<td>Editing &amp; Post Production</td>
<td>Screenplay I: Writing &amp; Adapting Stories</td>
</tr>
<tr>
<td>Urdu II</td>
<td>Digital Journalism</td>
</tr>
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</table>

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<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI/UX Design for Interactive Media</td>
<td>Methods in Media Research</td>
</tr>
<tr>
<td>News Production/ News Anchoring</td>
<td>Production of Documentary (J)</td>
</tr>
<tr>
<td>Digital Marketing Basics</td>
<td>New Media Technologies: Tools &amp; Applications (P)</td>
</tr>
<tr>
<td>Social Sciences in Media</td>
<td>Contemporary World Media (J)</td>
</tr>
<tr>
<td>Production Design (P)</td>
<td>Content Creation</td>
</tr>
<tr>
<td>Sports Journalism (J)</td>
<td>Production Management (P)</td>
</tr>
<tr>
<td>Screenplay II: Screenwriting for Short Films (P)</td>
<td>Direction (P)</td>
</tr>
<tr>
<td></td>
<td>Business Journalism (J)</td>
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<td></td>
<td>Data Visualization: Tools &amp; Applications (J)</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Semester Seven</th>
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</tr>
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<tbody>
<tr>
<td>Design Thinking</td>
<td>Discovering Film</td>
</tr>
<tr>
<td>Media Law and Ethics</td>
<td>Human Rights &amp; Gender Reporting (J)</td>
</tr>
<tr>
<td>Sub-Editing &amp; Page Design (J)</td>
<td>Content Distribution &amp; Promotion</td>
</tr>
<tr>
<td>Ad-Film Production (J)</td>
<td>Photojournalism (J)</td>
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<tr>
<td>Logic &amp; Critical Thinking</td>
<td>Advanced Post Production (P)</td>
</tr>
<tr>
<td>Creative Portfolio Management (P)</td>
<td>Filmmaking – The Art &amp; Craft: Thesis II (6C)</td>
</tr>
<tr>
<td>Entrepreneurship &amp; Small Business</td>
<td>Investigative Journalism: Thesis II (6C)</td>
</tr>
<tr>
<td>Filmmaking – The Art &amp; Craft: Thesis I (6C)</td>
<td></td>
</tr>
<tr>
<td>Investigative Journalism: Thesis I</td>
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</tr>
</tbody>
</table>

*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  
*4 = Introduction to German  
*8 = Introduction to Chinese  
**1 = Intermediate Arabic  
**4 = Intermediate German  
**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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Microeconomics</td>
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</tr>
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</tr>
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</tr>
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</tr>
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<td>Communication skills</td>
</tr>
<tr>
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<td>Calculus II</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econometrics-1</td>
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</tr>
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<tr>
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</tr>
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</tr>
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<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Monetary Theory &amp; Policy</td>
<td>Economics Elective-I</td>
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</tr>
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</tr>
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BS ECONOMICS, MEDIA & INTERNATIONAL RELATIONS (EMI)

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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.
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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
- 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
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  *1 = Introduction to Arabic
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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
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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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ACC101</td>
<td>Introduction to Financial Accounting</td>
</tr>
<tr>
<td>ACC201</td>
<td>Intermediate Financial Accounting</td>
</tr>
<tr>
<td>ECO101</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECO102</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ENT307</td>
<td>Entrepreneurial Leadership and Motivation</td>
</tr>
<tr>
<td>ENT308</td>
<td>Social Advocacy and Community Service</td>
</tr>
<tr>
<td>ENT 202</td>
<td>Entrepreneurial Business Operations</td>
</tr>
<tr>
<td>MAN101</td>
<td>Principles of Management</td>
</tr>
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<td>MAN302</td>
<td>Organizational Behavior</td>
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<td>MKT302</td>
<td>Marketing Management</td>
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<tr>
<td>MKT 405</td>
<td>Marketing Research</td>
</tr>
<tr>
<td>LAW409</td>
<td>Corporate and Business Law</td>
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## Elective Courses

### Elective Psychology (3 courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PSY501</td>
<td>Work Motivation and Attitude</td>
</tr>
<tr>
<td>PSY515</td>
<td>Projective Methods</td>
</tr>
<tr>
<td>PSY507</td>
<td>Cyber Psychology, Behavior and Social Networking</td>
</tr>
<tr>
<td>PSY508</td>
<td>Health Promotion in Corporate Setting</td>
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<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>HRM505</td>
<td>Organizational Change &amp; Development</td>
</tr>
<tr>
<td>MAN405</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>HRM514</td>
<td>Occupational Health and Safety</td>
</tr>
<tr>
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<td>Employees Engagement &amp; Wellbeing</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic English(W/R)</td>
<td>Principles of Macroeconomics</td>
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</tr>
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</tr>
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</tr>
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<tr>
<td>Elective III</td>
<td>Internship (Non Credit)</td>
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</table>

Semester Seven

- Positive Psychology
- Elective I
- Elective II
- Elective III

Semester Eight

- Elective I
- Elective II
- Elective III
- Internship (Non Credit)
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

**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

**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
### 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

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

*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 / B.Sc. / 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

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

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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
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<tbody>
<tr>
<td>Foundations and History of Education</td>
<td>Critical Thinking and Reading</td>
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<td>Curriculum Development</td>
<td>Educational Counselling</td>
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<td>Evaluation &amp; Assessment</td>
<td>Inclusive Education</td>
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<tr>
<td>Innovations and Technology in Education</td>
<td>Teacher Education</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Specialization – I *</td>
<td>School Management</td>
</tr>
<tr>
<td>Area of Specialization – II *</td>
<td>Edupreneurship</td>
</tr>
<tr>
<td>Area of Specialization – III *</td>
<td>Teaching Practicum (6 credit hours)</td>
</tr>
<tr>
<td>Research Methods in Education</td>
<td>Research Project (6 credit hours)</td>
</tr>
</tbody>
</table>

* 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

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

* indicates an elective course
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)

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

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

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

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

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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
</table>
| Advanced Research Methodology  
Advanced Applied Econometric  
Advance Microeconomics | New Dimensions in Economics and Public Policy  
Elective I | Research Thesis  
Elective II |
### Course Structure (MS Without Economics background)

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microeconomics (Deficiency Course)</td>
<td>Mathematics for Economists (Deficiency Course)</td>
<td>New Dimensions in Economics and Public Policy</td>
</tr>
<tr>
<td>Macroeconomics (Deficiency Course)</td>
<td>Advanced Research Methodology</td>
<td>Advance Microeconomics</td>
</tr>
<tr>
<td>Econometrics &amp; Research Methods (Deficiency Course)</td>
<td>Advanced Applied Econometric</td>
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<tr>
<td>Semester Four</td>
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<tr>
<td>Elective I</td>
<td></td>
<td></td>
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<tr>
<td>Elective II</td>
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### Course Structure (BS with Economics background)

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<thead>
<tr>
<th>Semester One</th>
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<th>Semester Three</th>
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</thead>
<tbody>
<tr>
<td>Microeconomics</td>
<td>Development Economics I</td>
<td>Applied Econometrics</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>Theory and Practice of Economic Policy</td>
<td>Qualitative Research Methods</td>
</tr>
<tr>
<td>Econometrics &amp; Research Methods</td>
<td>Mathematics for Economists</td>
<td>International Trade &amp; Globalization</td>
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<tr>
<td>Semester Four</td>
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<tr>
<td>Independent Study I</td>
<td>Advanced Research Methodology</td>
<td>New Dimensions in Economics and Public Policy</td>
</tr>
<tr>
<td>Independent Study II</td>
<td>Advanced Applied Econometric</td>
<td>Elective I</td>
</tr>
<tr>
<td></td>
<td>Advance Microeconomics</td>
<td>Elective II</td>
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<tr>
<td>Semester Seven</td>
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<tr>
<td>Research Thesis</td>
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</tbody>
</table>

### Course Structure (BS without Economics background)

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
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</thead>
<tbody>
<tr>
<td>Deficiency Course I</td>
<td>Deficiency Course IV</td>
<td>Econometrics &amp; Research Methods</td>
</tr>
<tr>
<td>Deficiency Course II</td>
<td>Microeconomics</td>
<td>Development Economics I</td>
</tr>
<tr>
<td>Deficiency Course III</td>
<td>Macroeconomics</td>
<td>Theory and Practice of Economic Policy</td>
</tr>
<tr>
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<tr>
<td>Semester Four</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics for Economists</td>
<td>International Trade &amp; Globalization</td>
<td>Advanced Research Methodology</td>
</tr>
<tr>
<td>Applied Econometrics</td>
<td>Independent Study I</td>
<td>Advanced Applied Econometric</td>
</tr>
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<td>Advance Microeconomics</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Semester Seven</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective II</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Eight

- Research Thesis
ADMINISTRATIVE AND ACADEMIC REQUIREMENTS
COMPREHENSIVE EXAMINATION

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 student 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
- BSAR’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 BSAR Office
- (Reference section to be excluded from thesis)
- After Plagiarism check, candidates will submit four copies of final thesis to the BASR
- BSAR 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 BSAR for recommendations (if any)
- Final copy of the thesis to be submitted to BSAR 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 BSAR 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
- BSAR’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
- BSAR 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 BSAR for recommendations (if any)
- Final copy of the thesis to be submitted to BSAR 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 BSAR 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:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Marks</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>96-100</td>
<td>4.00</td>
</tr>
<tr>
<td>A</td>
<td>91-95</td>
<td>3.89</td>
</tr>
<tr>
<td>A-</td>
<td>87-90</td>
<td>3.78</td>
</tr>
<tr>
<td>B+</td>
<td>84-86</td>
<td>3.67</td>
</tr>
<tr>
<td>B</td>
<td>79-83</td>
<td>3.33</td>
</tr>
<tr>
<td>B-</td>
<td>74-78</td>
<td>3.00</td>
</tr>
<tr>
<td>C+</td>
<td>68-73</td>
<td>2.75</td>
</tr>
<tr>
<td>C</td>
<td>65-67</td>
<td>2.67</td>
</tr>
<tr>
<td>C-</td>
<td>62-64</td>
<td>2.50</td>
</tr>
<tr>
<td>D</td>
<td>60-61</td>
<td>1.75</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60</td>
<td>0.00</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th>Approved Absences:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Semester:</td>
<td></td>
</tr>
<tr>
<td>Weekdays</td>
<td>4 days</td>
</tr>
<tr>
<td>Weekend</td>
<td>2 days</td>
</tr>
<tr>
<td>Summer Semester:</td>
<td></td>
</tr>
<tr>
<td>Weekdays (Crash)</td>
<td>3 days</td>
</tr>
<tr>
<td>Weekend</td>
<td>2 days</td>
</tr>
</tbody>
</table>

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.
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 haircut 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
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 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*
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 at least 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:

- 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
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 at least 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:
- 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, Islamiat, 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 at least 3 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 at least 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**

<table>
<thead>
<tr>
<th>Program</th>
<th>Credit Hours</th>
<th>Minimum Years</th>
<th>Maximum Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Undergraduate Programs</td>
<td>108</td>
<td>3.5</td>
<td>5</td>
</tr>
<tr>
<td>Graduate Programs</td>
<td>72</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Postgraduate / MS / MPhil</td>
<td>36</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>Postgraduate PhD</td>
<td>36</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>All Postgraduate Programs</td>
<td>108</td>
<td>3.5</td>
<td>5</td>
</tr>
</tbody>
</table>

In special cases IoBM has the right to grant additional extension which will be decided on case to case basis.

**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
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:

<table>
<thead>
<tr>
<th>Post Graduate Programs</th>
<th>Registration Fee (1-2 Courses)</th>
<th>Tuition Fee Per Course</th>
<th>Thesis, External Examiner, Viva Voce, Exam, Supervisors and Foreign Examiner Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS / MPhil Programs</td>
<td>3,500.00</td>
<td>12,650.00</td>
<td>65,300.00</td>
</tr>
<tr>
<td>PhD Programs</td>
<td>5,000.00</td>
<td>13,750.00</td>
<td>330,000.00</td>
</tr>
</tbody>
</table>

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:-

<table>
<thead>
<tr>
<th>%age of Tuition Fee</th>
<th>Timeline for Semester System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full (100%) Fee Refund</td>
<td>up to 7th day of commencement of classes</td>
</tr>
<tr>
<td>Half (50%) Fee Refund</td>
<td>From 8th-14th day of commencement of classes</td>
</tr>
<tr>
<td>No Fee (%) Refund</td>
<td>From 15th day of commencement of classes</td>
</tr>
</tbody>
</table>
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)**

**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 Arsalan 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. Mehwish 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 (Alim-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 region-alism.

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 underprivileged. 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 MENS 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 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 M$/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 / Examplus 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 he has 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 Ekhlaque 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 academician, 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 QUAIID (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 Srilanka 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. Université de LaRochelle 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) 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 UPQM. 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 APIITMalaysia 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 IEEEAccess, 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 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 PAKIET 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, AEF) 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 development, 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 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.
### VISITING FACULTY AT INSTITUTE OF BUSINESS MANAGEMENT (IoBM)

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<tr>
<th>Name</th>
<th>Degree/Graduate School</th>
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<tbody>
<tr>
<td>Aaqib Ali</td>
<td>MBA, CIMA, UK</td>
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<tr>
<td>Abdul Hameed Khan</td>
<td>MBA</td>
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<td>Abdul Khaliq Aboya</td>
<td>PhD, UK</td>
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<td>Abdul Sami</td>
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<td>Abu Ahmed</td>
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<td>Ahmer Aleem</td>
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<td>Ali Ammar</td>
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<tr>
<td>Arif Ashraf Ali</td>
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<td>ASAD HASAN</td>
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<td>Asma Tayyab</td>
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<td>Atif Ahmed Farooqui</td>
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<td>Dr. Afzal Iqbal</td>
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<td>Dr. Amir Iqbal</td>
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<td>Dr. Abdur Rasheed</td>
<td>PhD (Stats) KU</td>
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<td>Dr. Asghar Ali</td>
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<td>Dr. Shahid Iqbal</td>
<td>PhD-Clinical Psychology, KU</td>
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<td>Dr. Aamer Hussain Siddiqui</td>
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<td>Dr. Humeira Jwed</td>
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<td>Dr. Irfan Muhammad</td>
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<td>Dr. Muhammad Amir Ansari</td>
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<td>Dr. Noman Saeed</td>
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<td>Dr. Shahida Mohiuddin</td>
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<td>Faraz Ahmed Shaikh</td>
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<td>Kashif Shamim</td>
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<td>CPBM, LUMS, MBA, Hamdard University</td>
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<td>Osama Bin Ajaz</td>
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<td>Ambrogio Spreaifico</td>
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<td>Aisha Wali</td>
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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  
ACMA

Dr. Samra Javed  
Advisor to Office of the President &  
Head of EMEC & ORIC  
PhD

Kausar Saeed  
Associate Professor & HoD  
Internship, Placement & International Office  
MS

Dr. Muhammad Arif  
Head of QEC & Assistant Professor  
PhD

Muhammad Muzhar Uddin Ahmed  
Senior Manager  
Maintenance and Security  
MS

Syed Ali Hasan  
Senior Manager & Head of Marketing & Communications  
MS

Dr. Amber Raza  
Head of Academics Department  
PhD

Syed Irshad Karim  
HoD SAC & Housekeeping  
BA (Honors)

Riaz Akbar Contractor  
Manager Sports & Student Affairs  
B.Com

Imdad Ali Mugheri  
Manager & HoD Admissions  
MBA, LLB

Nadeem Ahmed Khan  
Manager, Internal Audit  
MBA, CIMA Finalist (England)  
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Asim Farooq  
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MSc

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Manager, Maintenance  
BE, Electrical Engineering

Shaikh Muhammad Sharif Nasir  
Librarian  
MLIS

Malik Barolia  
Manager Salary & Compensation  
MBA, ACMA-II
Syed Kamran Ahmed Bilgrami  
Manager Alumni &  
Head of Corporate Trainings  
MSC Marketing, UK

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Assistant Manager  
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Assistant Manager, & Acting Head, Purchase  
MBA

Farah Habib  
Assistant Manager, ORIC/OGS  
BE, MBA

Masood Hassan  
Editor, PBR  
MBA
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<td>Muhammad Omar Ifikhar</td>
<td>Assistant Manager, Public Relations</td>
<td>MBA</td>
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<tr>
<td>Syed Khalid Mehmood</td>
<td>Assistant Manager, IT</td>
<td>MS, MBA</td>
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<tr>
<td>Hafiz Humayun Baig</td>
<td>Assistant Registrar (at level of Assistant Manager)</td>
<td>MA</td>
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<td>Abid Ali</td>
<td>Assistant Manager, Accounts &amp; Taxation</td>
<td>CA (Intermediate)</td>
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<td>Mehmood Ahmad</td>
<td>Senior Accountant</td>
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<td>Abdul Sajid Khan</td>
<td>Oracle Database Administrator</td>
<td>MCS, MBA</td>
</tr>
<tr>
<td>Rashid Aqeel</td>
<td>Senior Officer, Internal Audit</td>
<td>CA Finalist</td>
</tr>
<tr>
<td>Muhammad Nazim Khan</td>
<td>Senior Maintenance Officer</td>
<td>MBA</td>
</tr>
<tr>
<td>Muhammad Kamran</td>
<td>Senior Admission Officer II</td>
<td>MCS</td>
</tr>
<tr>
<td>Ameer Ali</td>
<td>Assistant Librarian</td>
<td>MLS</td>
</tr>
<tr>
<td>Muhammad Asim</td>
<td>Senior Officer, Marketing &amp; Comm. MBA</td>
<td>MBA</td>
</tr>
<tr>
<td>Midhat Nadeem</td>
<td>Senior Officer, ORIC MBA</td>
<td>MBA</td>
</tr>
<tr>
<td>Syed Irfan Hussain</td>
<td>Senior HVAC Officer BA, DAE Mechanical</td>
<td>MBA</td>
</tr>
<tr>
<td>Hafiz Ahsan Ul Haq</td>
<td>Senior Officer, House Keeping</td>
<td>MBA</td>
</tr>
<tr>
<td>Noman Ahmed</td>
<td>Corporate Affairs Officer MBA</td>
<td>MBA</td>
</tr>
<tr>
<td>Zohaib Ian</td>
<td>HR Officer</td>
<td>MBA</td>
</tr>
<tr>
<td>Faiza Hasan Rizvi</td>
<td>Coordinator II, EMEC Projects MBA</td>
<td>MBA</td>
</tr>
<tr>
<td>Farida Nawaz Ali Khawaja</td>
<td>Officer, Student Exchange MBA</td>
<td>MBA</td>
</tr>
<tr>
<td>Nida Iqbal</td>
<td>Library Officer</td>
<td>MLIS</td>
</tr>
<tr>
<td>Syed Noman Reyz</td>
<td>Network Support Officer BA</td>
<td>BA</td>
</tr>
<tr>
<td>Amir Ali Khan</td>
<td>Admission Officer II BA</td>
<td>BA</td>
</tr>
<tr>
<td>Muhammad Faisal Nisar</td>
<td>IT Officer</td>
<td>MBA</td>
</tr>
<tr>
<td>Asad Hussain</td>
<td>Outreach Officer B.Com</td>
<td>MBA</td>
</tr>
<tr>
<td>Syed Muhammad Zeeshan</td>
<td>Accounts Officer MA</td>
<td></td>
</tr>
<tr>
<td>Sheroonia Zameer</td>
<td>Admission Officer MBA</td>
<td></td>
</tr>
<tr>
<td>Amna Khalil</td>
<td>HR Officer</td>
<td>B.Com</td>
</tr>
<tr>
<td>Hussain Ali</td>
<td>Media Coordinator BS</td>
<td></td>
</tr>
<tr>
<td>Tariq Majeed</td>
<td>Graphic Designer BS</td>
<td></td>
</tr>
<tr>
<td>Aamir Khan</td>
<td>Officer, Salary &amp; Compensations B.Com</td>
<td></td>
</tr>
<tr>
<td>Syed Muhammad Ayaz</td>
<td>Administrative Officer II MA</td>
<td></td>
</tr>
<tr>
<td>Zehra Alam Siddiqui</td>
<td>Officer, H&amp;HM MBA</td>
<td></td>
</tr>
<tr>
<td>Mubashir Ali</td>
<td>Officer, H&amp;HRM D-Pharm</td>
<td></td>
</tr>
<tr>
<td>Faiza Irfan</td>
<td>Capstone Officer, Marketing MBA</td>
<td></td>
</tr>
<tr>
<td>Afshan Gul Khan</td>
<td>Capstone Officer, Marketing MBA</td>
<td></td>
</tr>
<tr>
<td>Dania Shoaib Khan</td>
<td>Editorial Officer, Marketing BS (CS)</td>
<td></td>
</tr>
<tr>
<td>Syed Shahrukh Hasan</td>
<td>Video Grapher, Media Studies BS (Media Studies)</td>
<td></td>
</tr>
<tr>
<td>Shahzeb Khan</td>
<td>Library Officer BU</td>
<td></td>
</tr>
<tr>
<td>Sana Shakil</td>
<td>Senior Secretary cum Teaching Associate MSc</td>
<td></td>
</tr>
<tr>
<td>Arsalan Khan</td>
<td>Registrar’s Officer B.Com</td>
<td></td>
</tr>
<tr>
<td>Asim Ahmed Khan Yousfi</td>
<td>Assistant Registration Officer &amp; Catalog Composer</td>
<td>Diploma in Graphic Designing</td>
</tr>
</tbody>
</table>

Catalog 2021-2022 l www.iobm.edu.pk
CERTIFICATE COURSES

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**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration of Courses and Fee Payment (On board students)</td>
<td>Monday, August 16, 2021 Onwards</td>
</tr>
<tr>
<td>Orientation for newly admitted students</td>
<td>Saturday, September 04, 2021</td>
</tr>
<tr>
<td>Commencement of Semester</td>
<td>Saturday, September 11, 2021</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Saturday, October 23, 2021</td>
</tr>
<tr>
<td>Eid-e-Milad-un-Nabi (SAW)*</td>
<td>Wednesday, October 20, 2021</td>
</tr>
<tr>
<td>Iqbal Day</td>
<td>Tuesday, November 09, 2021</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Saturday, November 20, 2021</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Monday, December 13 to Sunday, December 19, 2021</td>
</tr>
<tr>
<td>Quaid-e-Azam’s Birthday</td>
<td>Saturday, December 25, 2021</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Monday, December 20, 2021 to Monday, January 03, 2022</td>
</tr>
<tr>
<td>Semester Ends</td>
<td>Tuesday, January 04, 2022</td>
</tr>
</tbody>
</table>

**Exam Schedule for Regular and Executive Students**

<table>
<thead>
<tr>
<th>Week</th>
<th>Exams</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>1st Hourly</td>
<td>11/10/2021 to 17/10/2021</td>
</tr>
<tr>
<td>11th</td>
<td>2nd Hourly</td>
<td>15/11/2021 to 21/11/2021</td>
</tr>
<tr>
<td>16th</td>
<td>Final</td>
<td>20/12/2021 to 03/01/2022</td>
</tr>
</tbody>
</table>

* 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

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
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</thead>
<tbody>
<tr>
<td>Registration of Courses and Fee Payment</td>
<td>Monday, December 13, 2021 Onwards</td>
</tr>
<tr>
<td>(On board students)</td>
<td></td>
</tr>
<tr>
<td>Commencement of Semester</td>
<td>Saturday, January 15, 2022</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Thursday, March 03, 2022</td>
</tr>
<tr>
<td>Pakistan Day</td>
<td>Wednesday, March 23, 2022</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Saturday, April 09, 2022</td>
</tr>
<tr>
<td>Labor Day</td>
<td>Sunday, May 01, 2022</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Saturday, April 23, 2022 to Tuesday, April 26, 2022</td>
</tr>
<tr>
<td>Eid-ul-Fitr*</td>
<td>Monday, May 02, 2022</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Saturday, April 30, 2022 to Sunday, May 15, 2022</td>
</tr>
<tr>
<td>Semester Ends</td>
<td>Monday, May 16, 2022</td>
</tr>
</tbody>
</table>

## Exam Schedule for Regular and Executive Students

<table>
<thead>
<tr>
<th>Week</th>
<th>Exams</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>1st Hourly</td>
<td>19/2/2022 to 24/2/2022</td>
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<tr>
<td>11th</td>
<td>2nd Hourly</td>
<td>26/3/2022 to 31/3/2022</td>
</tr>
<tr>
<td>16th</td>
<td>Final</td>
<td>30/4/2022 to 15/5/2022</td>
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</tbody>
</table>

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### SUMMER 2022

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Registration of Courses and Fee Payment</td>
<td>Saturday, April 23, 2022 Onwards</td>
</tr>
<tr>
<td>(On board students)</td>
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</tr>
<tr>
<td>Commencement of Semester</td>
<td>Monday, May 16, 2022</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Saturday, July 02, 2022</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Saturday, August 06, 2022</td>
</tr>
<tr>
<td>Eid-ul-Fitr*</td>
<td>Monday, May 02, 2022</td>
</tr>
<tr>
<td>Eid-ul-Azha*</td>
<td>Saturday, July 09, 2022</td>
</tr>
<tr>
<td>Independence Day</td>
<td>Sunday, August 14, 2022</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Monday, August 22, 2022 to Friday, August 26, 2022</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Saturday, August 27, 2022 &amp; Sunday, August 28, 2022</td>
</tr>
<tr>
<td></td>
<td>Saturday, September 03, 2022 &amp; Sunday, September 04, 2022</td>
</tr>
<tr>
<td>Semester Ends</td>
<td>Friday, September 09, 2022</td>
</tr>
</tbody>
</table>

### Exam Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Exams</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>1st Hourly</td>
<td>25/6/2022 and 26/06/2022</td>
</tr>
<tr>
<td>11th</td>
<td>2nd Hourly</td>
<td>30/07/2022 and 31/07/2022</td>
</tr>
<tr>
<td>15th</td>
<td>Final</td>
<td>27/08/2022 to 5/09/2022</td>
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### SUMMER CRASH 2022

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Registration of Courses and Fee Payment</td>
<td>Saturday, April 23, 2022 Onwards</td>
</tr>
<tr>
<td>(On board students)</td>
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</tr>
<tr>
<td>Commencement of Regular Classes</td>
<td>Monday, June 06, 2022</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Saturday, July 02, 2022</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Saturday, August 06, 2022</td>
</tr>
<tr>
<td>Eid-ul-Azha*</td>
<td>Saturday, July 09, 2022</td>
</tr>
<tr>
<td>Independence Day</td>
<td>Sunday, August 14, 2022</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Saturday, August 13, 2022 to Sunday, August 21, 2022</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Monday, August 15, 2022 to Thursday, August 18, 2022</td>
</tr>
<tr>
<td>Semester Ends</td>
<td>Friday, August 19, 2022</td>
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### Exam Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Exams</th>
<th>Dates</th>
</tr>
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<tbody>
<tr>
<td>6th</td>
<td>Mid-Term</td>
<td>11/7/2022 to 14/7/2022</td>
</tr>
<tr>
<td>11th</td>
<td>Final</td>
<td>15/8/2022 to 18/8/2022</td>
</tr>
</tbody>
</table>

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