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
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- BS Joint (Honors) Accounting and Finance  
- BS Entrepreneurship  
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**College of Computer Science and Information Systems (CCSIS)**
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- BS Actuarial Science and Risk Management  
- BS Mathematics & Economics  
- BS Data Science  
- BS Mathematics and Computational Finance  
- BS Software Engineering  
- BS Statistics and Business Analytics  
- MS Computer Science  
- MS Mathematics and Scientific Computing  
- MS Statistics and Scientific Computing  
- PhD Computer Science  
- PhD Statistics & Scientific Computing  

**College of Engineering and Sciences (CES)**
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AN INTRODUCTION TO THE
INSTITUTE OF BUSINESS MANAGEMENT

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

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

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

IoBM: 1994 - 2022

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 JannMohammad 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. Justice ® Shahid Anwar Bajwa
- Mr. Muhammad Ali Tabba
- Mr. Muhammad Sharif
- Dr. Zafar Saied Saifee
- Mr. Masood Hashmi
- Mr. Sikander Sultan
- Ms. Ameena Saifyid
- Dr. Waqar Masood Khan
- Dr. Noshad Shaikh
- Prof. Dr. Tariq Rahim Soomro
- 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 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 (CESD) 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 CCSIS 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) and Centre of Information Technology (CIT) 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 Khuho, Speaker Sindh Assembly attended the twelfth convocation of the Institute, held on December 05, 2009. The keynote speaker was Mr. Shaharyar Muhammad Khan, former Foreign Secretary and former Chairman of the Pakistan Cricket Board. As many as 927 graduates were awarded degrees. The thirteenth convocation was held on December 4, 2010. The chief guest on the occasion was Dr. Abdul Hafeez Shaikh, Minister for Finance, Revenue, Economic Affairs & Statistics and the keynote speaker was Dr. Javaid R. Laghari, Federal Minister / Chairperson of the Higher Education Commission of Pakistan.

The fourteenth convocation was held on December 10, 2011. Over 983 degrees were awarded to students. The chief guest on the occasion was Dr. Shamsh Kassim-Lakha, Founding President and Trustee of AKU and the keynote speaker was Mr. Javed Jabbar, Chairman and Chief Executive, JJ Media (Pvt.) Ltd. The fifteenth convocation was held on December 08, 2012. Over 825 degrees were awarded to students. The keynote speaker was Mr. Shahid Aziz Siddiqui, Chairman and CEO, State Life Insurance Corporation of Pakistan. The sixteenth convocation was held on December 07, 2013. Over 850 degrees were awarded to students on the occasion. The Chief guest was Mr. Nisar Ahmed Khuho, 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 Khuho, Senior Minister for Education, Govt. of Sindh, the keynote speaker was Mr. Muhammad Aliuddin Ansari, President & Chief Executive Officer of Engro Corporation. The eighteenth convocation was held on December 12, 2015. Over 900 degrees were awarded to students. The chief guest was Mr. Muhammad Mian Soomro, Former President of Pakistan and the keynote speaker was Mr. Kamal A. Chinoy, Chief Executive of Pakistan Cables Limited at the event. The nineteenth convocation was held on December 10, 2016. Over 950 degrees were awarded to students. The guest of honor was Mr. Jam Mehtab Hussain Dahar, Minister for Education & Literacy, Government of Sindh, and the keynote speaker was Mr. Sirajuddin Aziz, President Habib Metropolitan Bank Ltd. Dr. Mukhtar Ahmed, Chairman Higher Education Commission (HEC) also attended the convocation. The twentieth convocation was held on December 09, 2017. Over 1000 degrees were awarded to students. The chief guest was Mr. Muhammad Zubair, Governor of Sindh and keynote speaker was Mr. Khalid Nawaz Awan, Chairman of TCS at this Convocation.

The twenty-first Convocation was held on December 08, 2018. Over 1000 degrees were awarded to students. The keynote speaker was Mr. Kimihide Ando, Senior Vice President and CEO, Mitsubishi Corporation. The twenty-second Convocation was held on December 07, 2019. Over 1000 degrees were awarded to students. The keynote speaker was Mr. Shazad Dada, CEO/Executive Director, Standard Chartered Bank, Pakistan. The twenty-third convocation was held on January 30, 2021. This Convocation was hybrid where only PhD, MS/MPhil Graduates and Gold Medalists were invited, over 1450 degrees were awarded to students. Mr. Imran Ismail, Governor Sindh, delivered his recorded speech. The Keynote Speaker was Mr. Muhammad Ali Tabba, CEO, Lucky Cement. The twenty-fourth convocation was held on December 11, 2021. Over 1250 degrees were awarded to students on the occasion. The chief guest was Mr. Imran Ismail, Governor of Sindh, the Guest of Honour was Mr. Muhammad Azfar Ahsan, Minister of State and Chairman of Board of Investment and the Keynote Speaker was Mr. Amir Paracha, Chairman, Unilever Pakistan Limited at this Convocation.

**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.

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

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

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

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

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

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

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

Shahjehan S. Karim
Founder President
Institute of Business Management
IoBM’s Academic Strategies

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

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

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

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

The Institute of Business Management has a purpose-built twenty acre campus, located in the serene and secure surroundings of Korangi Creek, Karachi. The College of Business Management building, covering an area of 85,000 sq. ft., is equipped with state-of-the-art teaching equipment to enable the Institute to keep pace with the dynamics of the global market. All classrooms are equipped with internet and intranet facilities. IoBM is a Wi-Fi campus. The campus buildings are centrally air-conditioned and have all been self-financed with no outside assistance or donation. A separate centrally air-conditioned modern Administration and Entrepreneurship & Management Excellence Center building, with a covered area of 26,900 sq.ft., was completed in 2001. Another centrally air-conditioned building with a covered area of 31,655 sq.ft., houses the College of Computer Science and Information Systems and has been operational since 2002. The Convocation Center was completed in November, 2002, and the Students Activity Center building in September, 2003 which has a second floor housing 10 faculty residential suites for visiting scholars and was completed in January, 2006. The library building has been operational since January, 2005. A separate building houses the department of Industrial Engineering & Management. A new 150,000 sq. ft. SSK Center of Excellence has recently been added to the existing buildings on campus. The Institute provides students with subsidized transportation to and from the campus through conveniently located pick and drop points all over Karachi. Girls are provided this facility to and from their homes. The campus also has ample car parking facilities.

Computing Facilities

One of the strengths of the IoBM program is the incorporation of information technology as a key component of the curriculum. The academic programs offered by the Institute require students to obtain hands on experience in computers and develop a high level of expertise in this field. The Information Systems Department (ISD) of the College of Computer Science and Information Systems provides administrative, networking and technical support to faculty and students. The College of Computer Science and Information Systems building includes a number of computer laboratories with around four hundred & twenty workstations. It is fully equipped with satellite/ radio-linked e-mail, Wi-Fi facilities and internet facilities for all students, faculty and staff.

Library

The IoBM library, an ideal setting for learning and research, serves as a repository for a rich array of both traditional and electronic information services. A distinctive strength is its rich spectrum of resources, including a large number of books, journals, periodicals, reference material, audio-visual material, government documents and reports catering to the scholarly needs of students, faculty and researchers. Its pleasant and conducive-to-learning environment accommodates 350 students and 48,851 books. All library books are searchable using OPAC (Online Public Access Catalog) and the newly developed software Library Information and Management System (LIMS), available at the front desk. Students are provided with internet workstations and rooms for group study. Of the many recent initiatives by IoBM are its access to a large number of e-resources through the HEC Digital library and online journals through JSTOR e-database. The library also provides access to print and online journals through subscription to a number of business, marketing, management and HRM journals. In addition to the main library, the Learning Resource Center in the Academic block caters to the scholarly requirements of M Phil and PhD programs. The library is engaged in numerous projects to expand access to its physical and digital collections. Skill development sessions are conducted for students and faculty from time to time. The library projects in the pipeline include development of a portal of web links, just a click away, on the desktops of faculty and students.
CONVOCATION

In December 2021, IoBM held its twenty-fourth convocation. The Chief Guest was Mr. Imran Ismail, Governor of Sindh, the Guest of Honour was Mr. Muhammad Azfar Ahsan, Minister of State and Chairman of Board of Investment and the Keynote Speaker was Mr. Amir Paracha, Chairman, Unilever Pakistan Limited at this Convocation.

IoBM awarded 1251 Degrees, 16 gold medals and 36 merit certificates as per the following:

<table>
<thead>
<tr>
<th>Program</th>
<th>Total Graduates</th>
<th>Program</th>
<th>Total Graduates</th>
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<tbody>
<tr>
<td>BBA (Honors)</td>
<td>368</td>
<td>MBA (Finance and Risk Management)</td>
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<tr>
<td>BE (Electrical)</td>
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<td>MBA (Health and Hospital Management)</td>
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<td>BS (Actuarial Science and Risk Management)</td>
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<td>MBA (Industrial Management)</td>
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<td>BS (Computer Science)</td>
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<td>MBA (Logistics and Supply Chain Management)</td>
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<td>MBA (Media Management and Marketing)</td>
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<td>MBA (Regular)</td>
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<td>BS (Entrepreneurship)</td>
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<td>MBA (Telecommunication Management)</td>
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<td>BS (Honors) Accountancy, Management and Law</td>
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<td>MBA (Weekend)</td>
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<td>BS (Honors) Accounting and Finance</td>
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<td>MSC (Organizational Psychology and HRM)</td>
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<tr>
<td>BS (Honors) Economics and Finance</td>
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<td>MS (Computer Science)</td>
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<td>BS (Honors) Media Studies</td>
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<td>BS (Honors) Social Entrepreneurship and Leadership</td>
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<td>MS (Engineering Management)</td>
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<td>BS (Industrial Engineering and Management)</td>
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<td>MS (Mathematics and Scientific Computing)</td>
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<td>BS (Joint Honors) Business and Psychology</td>
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<td>MS (Statistics and Scientific Computing)</td>
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<td>BS (Logistics and Supply Chain Management)</td>
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<td>MPhil (Business Management)</td>
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<td>MBA (Environment and Energy Management)</td>
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<td>PhD (Economics)</td>
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<td>MBA (Evening)</td>
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<td>PhD (Education)</td>
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# Gold Medalists

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<th>Name</th>
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<th>Institution</th>
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<tbody>
<tr>
<td>Shahjehan Syed Karim</td>
<td>Gold Medal</td>
<td>Westbury Group of Companies</td>
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<tr>
<td>Kajal Lal Chand</td>
<td>BBA (Honors)</td>
<td>Ifrah Arif</td>
<td>BBA (Honors)</td>
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<tr>
<td>Ghulam Faruque</td>
<td>Gold Medal</td>
<td>Shan Foods</td>
<td>Gold Medal</td>
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<td>Syeda Eleen Bukhari</td>
<td>BBA (Honors)</td>
<td>Samrah Khan</td>
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<td>Tariq Saeed</td>
<td>Gold Medal</td>
<td>Janmohammad Dawood</td>
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<tr>
<td>Ishma Ghazanfar</td>
<td>BBA (Honors)</td>
<td>Syeda Komal Muzaffar</td>
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<tr>
<td>1Link (Private) Ltd.</td>
<td>Gold Medal</td>
<td>Halima Fatima Memorial</td>
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<tr>
<td>Merle Regina Das</td>
<td>BS (Computer Science)</td>
<td>Imtiaz Ali</td>
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<td>Future Agritech</td>
<td>Gold Medal</td>
<td>Orient McCann</td>
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<td>Maheen Munawwar</td>
<td>BS (Accounting &amp; Finance)</td>
<td>Fazeela Hanif</td>
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<td>S. H. Hashmi Memorial</td>
<td>Gold Medal</td>
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<td>Nausheen Samad</td>
<td>BS (Social Entrep. &amp; Leadership)</td>
<td>Ramisha Mahmood Riaz Afridi</td>
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<td>Ayesha Noor</td>
<td>MBA (Regular)</td>
<td>Sundas Farooq Khan</td>
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<td>Usman Muhammad Nooruddin</td>
<td>MBA (Evening)</td>
<td>Rooma Kaleem</td>
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GLOBAL LINKAGES

International Office

The Institute of Business Management (IoBM) has an International Office that works under the supervision of the President of IoBM. The Department is successfully managing the execution of international relations on bilateral and multilateral terms with many universities in Europe, Asia USA and Australia.

Eduniversal Ranking

Eduniversal, based in Paris, France, is a worldwide academic institution ranking organization which ranks the 4,000 best academic institutions from around the world. The expertise of IoBM is distinguished in the 2021 Eduniversal Best Masters’ Ranking in the context of following programs:

Top 200 Best Master’s Programs:

- MBA full time - Ranked 18th in Central Asia
- MBA Human Resource Management - Ranked 8th in Central Asia
- MBA Advertising and Media Management – Ranked 2nd in Corporate Communication in Central Asia
- MBA Executive – Ranked 9th in Executive MBA in Central Asia
- MS Economics – Ranked 5th in Economics in Central Asia
- MBA Finance – Ranked 7th in Corporate Finance in Central Asia
- MBA Environment and Energy Management – Ranked 1st in Energy and Natural Resources in Central Asia
- MBA Industrial Management – Ranked 4th in Industrial and Operations Management in Central Asia
- MPhil in Business Management – Ranked 6th in General Management in Central Asia
- MS Computer Science – Ranked 17th in Information Systems Management in Central Asia
- MS Mathematics & Scientific Computing – Ranked 3rd in Data analytics in Central Asia

Top 100 Best Master’s Programs:

- MBA Supply Chain Management – Ranked 88 in the world
- MBA Health and Hospital Management – Ranked 66 in the world
- MBA Finance and Risk Management – Ranked 100 in the world
- MSc in Business Management – Ranked 37 in the world
- MBA Weekend – Ranked 58 in the world

Bilateral Agreements

IoBM has bilateral agreements under a formally signed Memorandum of Understanding (MoU) with the following universities which provide exchange of students, faculty and staff and promote joint research and consultancy.
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<td>Cambodia</td>
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<td>Germany</td>
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<td>Indonesia</td>
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<td>Indonesia</td>
<td>IPMI International Business School</td>
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<td>Italy</td>
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<td>Lithuania</td>
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<td>Malaysia</td>
<td>University of Kuala Lumpur</td>
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<td>Universiti Putra Malaysia</td>
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<td>Malaysia</td>
<td>Universiti Malaysia Sarawak (UNIMAS)</td>
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<td>Malaysia</td>
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<td>Mexico</td>
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<td>Morocco</td>
<td>Groupe ISCAE</td>
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<td>North Cyprus</td>
<td>Girne American University</td>
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<td>Russia</td>
<td>Institute of Business Studies RANEPA</td>
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<td>Russia</td>
<td>Emas Eurasian Management &amp; Administration School</td>
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<td>Dongseo University</td>
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<td>Spain</td>
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<td>Srilanka</td>
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<td>Srilanka</td>
<td>University of Peradeniya</td>
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<td>Switzerland</td>
<td>International University in Geneva (IUG)</td>
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<td>Taiwan</td>
<td>I-SHOU University</td>
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<td>Abdullah Gul University (AGU)</td>
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<td>Ukraine</td>
<td>International Institute of Business IIB</td>
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<td>United Arab Emirates</td>
<td>Al Dar University College</td>
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<td>Vietnam</td>
<td>Institute of Policy &amp; Mgmt. IPAM (Uni. of Social Sciences &amp; Humanities - Hanoi)</td>
</tr>
<tr>
<td>Vietnam</td>
<td>VNU University of Science</td>
</tr>
</tbody>
</table>
Student and Faculty Exchange Program

IoBM students regularly go to the following universities on student exchange programs:

- Yasar University, Turkey
- Girne American University, North Cyprus
- Dongseo University, South Korea
- Istanbul Aydin University, Turkey
- Beijing Jiaotong University, China
- Guilin University of Technology, China
- University of Kuala Lumpur, Malaysia
- Sanya University, China
- University of Florence, Italy
- Izmir University of Economics, Turkey
- Groupe ISCEA, Morocco
- Bilkent University, Turkey
- Hanyang University, South Korea
- Abdullah Gul University, Turkey
- Universiti Putra, Malaysia
- Beijing Jiaotong University, China

IoBM has entered into an understanding with these universities for exchange of students on the basis of a waiver of university tuition fees and in some cases, provision of free hostel facilities. IoBM also welcomes students from partner universities to spend a semester at IoBM. More students are expected from different universities in the upcoming semesters through the student exchange program. Experts visit IoBM for a semester from Spain, Germany, China and Nigeria. Exchange of students, faculty members as well as joint research projects are a continuous process involving universities all over the world.

Senior Expert Services

A German NGO, Senior Expert Services (SES) has been sending technical experts and faculty to IoBM to give training and assistance in various programs in Health Management, Marketing, Media Management, Industrial Engineering, Corporate Social Responsibility, IT, Human Resource, Supply Chain, Telecommunication, Education, Economics, development of Academics and Vocational Training. SES is also assisting IoBM in setting up a full-fledged academic program in Environment and Energy Management.

Memberships of Professional Bodies

IoBM is an active member of the following international and national professional bodies:

1. International Association of Universities (IAU), UNESCO, France
2. International Association of University Presidents (IAUP)
3. The Association of Commonwealth Universities (ACU), UK
4. Association of Universities of Asia and the Pacific (AUAP), Thailand
5. AACSB International -The Association to Advance Collegiate Schools of Business, USA
6. Asian Media Information and Communication Centre (AMIC), Singapore
7. Management Association of Pakistan (MAP), (Honorary Treasurer)
8. Marketing Association of Pakistan (President)
9. Employers Federation of Pakistan
10. Institute of Corporate Governance
11. International Finance Corporation (IFC), USA
12. Association of University Programs in Health Administration
13. Association of Management Development Institutions in South Asia (AMDISA)
14. OPEN, Karachi (Vice Chairman)
15. Association of Management Development Institutions in Pakistan (AMDIP), (Chairman, Karachi)
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 four 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 two minor elective courses apart from core courses. Our BBA program offer majors and minors in the following disciplines:

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

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

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

**General Education Courses**

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

*BBA program is recognized by ACCA which offers up to 5-course exemptions (F1 - F5) to BBA students of IoBM.*
LAN 10* Foreign Language I  
LAN 20** Foreign Language II  
*1 = Introduction to Arabic  
*4 = Introduction to German  
*8 = Introduction to Chinese  
**1 = Intermediate Arabic  
**4 = Intermediate German  
**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.

**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  
- MKT201 Marketing Management (Level 1)  
- 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
ACC533 Accounting for Specialized Businesses
ACC534 International Financial Reporting Standards II
ACC535 Sustainable Accounting Practices
ACC546 Budgeting & Performance Reporting
ACC591 Capstone Project
LAW202 Banking Laws in Pakistan
LAW203 Insurance Laws in Pakistan

Data Sciences
BDS150 Programming Fundamentals (Compulsory elective)
CSC217 Introduction to Database (Compulsory elective)
BDS301 Data Mining
BDS401 Data Visualization
BDS403 Big Data and Analytics
BDS404 Machine Learning
BDS411 Time Series Analysis & Forecasting
BDS412 Business Analytics
BDS414 Game Theory
BDS416 Introduction to Data Warehousing
BDS417 Artificial Intelligence
MIS591 Capstone Project

Finance & Banking
FIN301 Financial Institutions (Compulsory elective)
FIN503 Corporate Finance (Compulsory elective)
FIN504 International Finance
FIN505 Treasury & Fund Management
FIN507 Portfolio Management
FIN509 Financial Derivatives
FIN511 Analysis of Financial Statements
FIN513 Project Appraisal
FIN520 Financial Risk Management
FIN530 Commercial & Corporate Banking
FIN534 Retail & Consumer Banking
FIN541 Technical Analysis
FIN542 Financial Forecasting & Planning
FIN544 FINTECH & Digital Finance
FIN546 Budgeting & Performance Reporting
FIN591 Capstone Project

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

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

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

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<td>Islamic Studies</td>
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<td>Academic English</td>
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<td>Business &amp; Professional Speech</td>
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<td>Introduction to ERP</td>
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<td>Strategic Management</td>
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<td>Business Ethics</td>
<td>Corporate &amp; Business Law</td>
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</tbody>
</table>

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

### Organizational Entrepreneurship Courses
- ENT401 Seminar in Org. Entrepreneurship (Compulsory)
- ENT402 Intro. to Design Thinking Methodology (Compulsory)
- ENT501 Cost Effective Design and Innovation
- ENT502 Green Entrepreneurship
- ENT503 Competitive Strategies for Startups
- ENT504 Scalability & Sustainability in Startups
- ENT505 Establishing Startup Ecosystem
- ENT506 Innovative Internet Based Business Models
- ENT507 Stakeholder Analysis
- ENT591 Capstone Project
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. Four 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
  *4 = Introduction to German
  *8 = Introduction to Chinese
  *2 = Introduction to French
  *6 = Introduction to Italian
  **1 = Intermediate Arabic
  **4 = Intermediate German
  **8 = Intermediate Chinese
  **2 = Intermediate French
  **6 = Intermediate Italian

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 Introduction to Management & Organizational Behavior
- MAN309 Leadership Journey
- ECO402 Pakistan Economic Policy
- MAN405 Strategic Management
- MIS402 Computer Concepts and Application
- MKT201 Marketing Management (Level 1)
- 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
- FIN507 Portfolio Management
- FIN509 Financial Derivatives
- FIN511 Analysis of Financial Statements
- FIN513 Project Appraisal
- FIN520 Financial Risk Management
- FIN530 Commercial & Corporate Banking
- FIN534 Retail & Consumer Banking
- FIN541 Technical Analysis
- FIN542 Financial Forecasting & Planning
- FIN544 FINTEH & Digital Finance
- FIN546 Budgeting & Performance Reporting
## Course Structure

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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. Four 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 eight 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. Furthermore, ICAP recognizes IoBM as Relevant Degree Awarding Institute (RDA) enabling students to get exemption from all four papers of Assessment of Fundamental Competencies (AFC) and the first four papers of Certificate in Accounting and Finance (CAF).

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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**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 BS (Joint) Honors Accounting and Finance 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
- ACC503 Taxation
- ACC530 Financial Regulation & Reporting
- 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 Introduction to Management & Organizational Behavior
- MAN309 Leadership Journey
- ECO402 Pakistan Economic Policy
- MAN405 Strategic Management
- MIS402 Computer Concepts and Application
- MKT201 Marketing Management (Level 1)
- 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
- ACC505 Auditing
- ACC520 Managerial Analysis and Decision Making
- ACC521 International Financial Reporting Standards
- ACC524 Corporate Governance and Reporting
- ACC533 Accounting for Specialized Businesses
- ACC534 International Financial Reporting Standards II
- ACC535 Sustainable Accounting Practices
- LAW202 Banking Laws in Pakistan
- LAW203 Insurance Laws in Pakistan

#### Finance Major Electives 6
- FIN504 International Finance
- FIN505 Treasury & Fund Management
- FIN507 Portfolio Management
- FIN509 Financial Derivatives
- FIN511 Analysis of Financial Statements
- FIN513 Project Appraisal
- FIN520 Financial Risk Management
- FIN530 Commercial & Corporate Banking
- FIN534 Retail & Consumer Banking
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- FIN546 Budgeting & Performance Reporting
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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 eight semesters or four 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. Four 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  
*4 = Introduction to German  
*8 = Introduction to Chinese  
*2 = Introduction to French  
*6 = Introduction to Italian  
**1 = Intermediate Arabic  
**4 = Intermediate German  
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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
- **MKT201** Marketing Management (Level 1)
- **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

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<td><strong>Business Mathematics</strong></td>
<td><strong>Quantitative Techniques in Business</strong></td>
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<td><strong>Principles of Microeconomics</strong></td>
<td><strong>Pakistan Studies</strong></td>
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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 nine 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. Four hours of lab session are required every week for four semesters in order to complete the requirement to graduate. Apart from core courses, students are required to take six major elective courses and two projects.

General Education Courses

SSC101  Introduction to Psychology
SSC301  History of Ideas
INM306  Social and Ethical Aspects in Industrialization
INM103  Industrial Economics
MTH103  Calculus for Business Decisions
STA204  Industrial Applications of Statistics
COM107  Academic English
COM202  Business Speech
COM205  Persuasive & Analytical Writing for Business Comm.
PSC301  Pakistan Studies
(Pre req: COM107)
REL101  Islamic Studies

LAN 10*  Foreign Language I
LAN 20** Foreign Language II
*1 = Introduction to Arabic  *2 = Introduction to French
*4 = Introduction to German  *6 = Introduction to Italian
*8 = Introduction to Chinese

**1 = Intermediate Arabic  **2 = Intermediate French
**4 = Intermediate German  **6 = Intermediate Italian

MTH100  Basic Mathematics ***
COM100  Foundation English***
(*** Remedial non-credit course to be taken by those students who have not been able to reach the desired level of competence in the admission test.)

Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit hours (six courses) in a semester. To obtain the B.S Industrial Management degree in four years, they need to complete twelve courses in a year. A full load of six courses can be taken each in Fall and Spring semesters with an option for fewer courses in the latter and making up for the shortfall in the summer session.
**Subject Foundation Core courses**
INM101 Production Process (Pre req NA)
INM102 Industrial Safety & Health (Pre req INM 101)
INM104 Fundamentals of quality (Pre req NA)
INM105 Introduction to Industrial management (Pre req NA)
INM106 Foundation of Industrial Design and thinking (Pre req INM 101)
INM201 Methods Analysis and Time Study (Pre req: INM101 & INM 105)
INM202 Energy Management (Pre req NA)
INM203 Introduction to Production & Operation Management (Pre req: INM105)
INM204 Ergonomics (Pre req: INM201)

**Distribution Courses**
ACC101 Fundamentals of Accounting
MIS104 Computer Programming & Graphics
FIN201 Fundamentals of Finance
SSC202 Environmental studies
MAN306 Introduction to Management & Organizational Behavior
MAN309 Leadership journey
MKT201 Marketing management (Level 1)
MAN405 Strategic management
SSC401 Business Ethics

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

**Industrial Management Electives- (6 Courses)**
INM404 Introduction to Enterprise Life Cycle Mgmt.
INM405 Technology Management
INM406 Operation Research
INM407 Enterprise Risk Management
INM408 Procurement Management
INM409 Production Planning & Control
INM412 Integrated Manufacturing Systems
INM413 Manufacturing Processes
INM414 E-Commerce for Manufacturing Industries

**Project: 2**
INM501 Project I
INM502 Project II
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<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Management (Level 1)</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>
<td>Introduction to Planning and Scheduling</td>
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</tbody>
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<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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<tr>
<td>Elective II</td>
<td>Elective V</td>
</tr>
<tr>
<td>Elective III</td>
<td>Elective VI</td>
</tr>
</tbody>
</table>

### Notes:
- **Catalog 2022-2023**: The course structure is designed to provide a comprehensive education in industrial management and related fields, encompassing both theoretical and practical aspects of the discipline.
BS (Joint) Honors 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. Four 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SSC101</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>SSC301</td>
<td>History of Ideas</td>
</tr>
<tr>
<td>SSC401</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>LAW409</td>
<td>Corporate &amp; Business Law</td>
</tr>
<tr>
<td>MTH102</td>
<td>Business Mathematics</td>
</tr>
<tr>
<td>STA203</td>
<td>Probability Theory &amp; Statistics</td>
</tr>
<tr>
<td>COM107</td>
<td>Academic English</td>
</tr>
<tr>
<td>COM205</td>
<td>Persuasive &amp; Analytical Writing for Business Communication</td>
</tr>
<tr>
<td>COM202</td>
<td>Business &amp; Professional Speech</td>
</tr>
<tr>
<td>REL101</td>
<td>Islamic Studies</td>
</tr>
<tr>
<td>PSC301</td>
<td>Pakistan Studies</td>
</tr>
<tr>
<td>LAN 10*</td>
<td>Foreign Language I</td>
</tr>
<tr>
<td>LAN 20**</td>
<td>Foreign Language II</td>
</tr>
</tbody>
</table>

*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 Introduction to Management & Organizational Behavior
- MAN309 Leadership Journey
- ECO402 Pakistan Economic Policy
- MAN405 Strategic Management
- MIS402 Computer Concepts and Application
- MKT201 Marketing Management (Level 1)
- ECO409 Business Economics
- ACC206 Fundamentals of Accounting
- FIN310 Fundamentals of Finance

### Supply Chain Major Electives – 6
- SCM751 Supply Chain Finance and Costing
- SCM752 Supply Chain Technology, Systems and Innovation
- SCM753 Globalization and Outsourcing Strategies
- SCM754 Packaging Design and Environmental Aspects
- SCM755 E-business Strategies in SCM
- SCM756 Operational Research and Simulation
- SCM757 Managing Sustainable Supply Chain
- SCM758 Supply Chain i4.0 & Data Sciences

### Logistics Major Electives – 6
- LOG751 Import Export Management
- LOG752 Lean Six Sigma and Lean Manufacturing
- LOG753 Shipping, Ocean Freights and Port Operations
- LOG754 Humanitarian Logistics Supply Chain Management
- LOG755 Reverse Logistics and Supply Chain Sustainability
- LOG756 Retail Management
- LOG757 Dock Mgmt. Systems & IT Applications in Logistics
- LOG758 Inventory Management

### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
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</thead>
<tbody>
<tr>
<td>Introduction to Psychology</td>
<td>History of Ideas</td>
<td>Fundamentals of Accounting</td>
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<tr>
<td>Islamic Studies</td>
<td>Foreign Language I</td>
<td>Computer Concepts and Application</td>
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<tr>
<td>Business Mathematics</td>
<td>Probability Theory &amp; Statistics</td>
<td>Foreign Language II</td>
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<tr>
<td>Business Ethics</td>
<td>Corporate &amp; Business Law</td>
<td>Pakistan Studies</td>
</tr>
<tr>
<td>Academic English</td>
<td>Persuasive &amp; Analytical Writing for Business Communication</td>
<td>Business &amp; Professional Speech</td>
</tr>
<tr>
<td>Business Economics</td>
<td>Essentials of Supply Chain Management</td>
<td>Logistics and Operations Management</td>
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<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<tr>
<td>Principles of Mgmt. &amp; Org. Behavior</td>
<td>Marketing Management (Level 1)</td>
<td>Leadership Journey</td>
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<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>
</tr>
<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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<thead>
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<th>Semester Seven</th>
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<tbody>
<tr>
<td>Pakistan Economic Policy</td>
<td>Logistics Elective III</td>
</tr>
<tr>
<td>Quantitative Methods in Production &amp; Logistics</td>
<td>Logistics Elective IV</td>
</tr>
<tr>
<td>Distribution Management in Logistics &amp; Supply Chain</td>
<td>Logistics Elective V</td>
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<tr>
<td>Logistics Elective I</td>
<td>Logistics Elective VI</td>
</tr>
<tr>
<td>Business Research Project (Supply Chain)</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Logistics Elective II</td>
<td>Business Research Project (Logistics)</td>
</tr>
</tbody>
</table>
MBA PROGRAM

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

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

Structure of MBA program

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

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

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

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

Foundation Stage

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

Students joining CBM for the first time are expected to have qualified the MBA Boot Camp (Details on Page No. 44).
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

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

MBA Structure

**Semester One**
Quantitative Analysis for Decision Making* (STA411)
Financial Accounting (ACC419)
Business Communication¹ (COM402)
Business Economics² (ECO409)
Marketing Management (MKT402)
Management and Organizational Dynamics (MAN418)

**Semester Two**
Consumer Behavior¹ (MKT509)
Methods in Business Research¹ (MKT404)
Entrepreneurial and Small Business Management⁶ (ENT403)
Theory and Practice of Financial Management (FIN408)
Corporate and Business Law⁶ (LAW409)
Managing Human Capital (HRM410)

**Semester Three**
Business Analytics for Decision Making⁷ (MAN606)
Strategic Financial Analysis and Design⁸ (FIN601)
Marketing Strategies and Value Innovation¹⁷ (MKT610)
Elective 1**
Elective 2º
Capstone 1¹⁰

**Semester Four**
Strategic Management¹¹ (MAN612)
Technology Operations and Innovation¹² (MAN608)
Leadership, Ethics and Change¹³ (HRM606)
Elective 3¹⁸
Elective 4¹⁶
Capstone II¹¹

Please refer to the list of courses and select courses according to your specialization area.

*Quantitative Methods for Logistics and SCM (MBA Logistics and Supply chain Management), Quantitative Research and Statistical Analysis (MBA Educational Management), Quantitative Analysis (Bio-Stats) MHM-530

**Environmental Impact Assessment and Management (MBA Industrial Management), Industrial & Municipal Waste Management (MBA Environment and Energy Management)

¹Digital Business Communication (MBA MMM)

²Business and Health Economics (MBA MHM), Economics of Energy and Environment (MBA Environment and Energy Management), Educational Policy and Economics (MBA Educational Management)
Health Psychology (MBA MHM), Educational Philosophy and Ethics (MBA Educational Management), Supply chain management (MBA Logistics and Supply chain Management), Media and Social Change (MBA Media Management and Marketing), Supply Chain management (MBA Industrial Management), Environmental Issues and Management (MBA Environment and Energy Management), Analysis of Finance Statement (MBA Finance & Risk Management).


Health Ethics, Law and Jurisprudence (MBA MHM), Environmental Rules, Laws and Regulations (MBA Environment and Energy Management)

Health Policy and Analytics for Decision Making (MBA MHM), Business Process re-engineering (MBA Industrial Management), Computational Methods in Risk (MBA Finance & Risk Management).


Innovation Management in Supply Chain (MBA Logistics and Supply chain Management), Seminar in Media Marketing (MBA Media Management and Marketing), Environmental Impact Assessment and Management (MBA Environment and Energy Management)


Strategic Management of Health Services (MBA MHM), Strategic Supply Chain Management (MBA Logistics and Supply chain Management)

Health Service Delivery and Operation Management (MBA MHM), Introduction to ERP (MBA Logistics and Supply chain Management), Media and Public Opinion (MBA Media Management and Marketing), Production and Operations Management (MBA Industrial Management), Innovations and Technology in Education (MBA Educational Management), Advanced Financial Risk Management (MBA Finance & Risk Management).

Healthcare Leadership (MBA MHM), Project Management (MBA Industrial Management)

Production and Operations Management (MBA Logistics and Supply chain Management), Role of Media in World Affairs (MBA Media Management and Marketing), Enterprise Asset Management and Financial Analysis (MBA Industrial Management), Safety Health & Environmental management (MBA Environment and Energy Management)

Curriculum Management and Planned Change (MBA Educational Management), Risk Management in Supply Networks (MBA Logistics and Supply chain Management), Integrated Marketing Communication (MBA Media Management and Marketing)

Thesis Writing-Capstone Project II* (MBA Educational Management), Corporate Consultancy Project in Logistics (MBA Logistics and Supply Chain Management), Introduction to Financial Risk Management (MBA Finance & Risk Management).

Risk Financing Techniques (MBA Finance & Risk Management).
### Elective Courses

**Majors in Accounting**
- ACC602 Advanced Managerial Accounting
- ACC605 Financial Legal Framework
- ACC607 Introduction to Forensic Accounting
- ACC608 Audit, Taxation and Accounting Policy
- ACC609 Cases in Corporate 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**
- FIN506* Investment Banking and Security Analysis
- FIN514* Asset and Liability Management
- FIN612* SME and Micro-Financing
- FIN633* Mergers, Acquisitions and Restructuring
- FIN634* Enterprise Risk Management
- FIN602** Behavioral Finance
- FIN603** Entrepreneurial Finance
- FIN610** Debt and Equity Markets
- FIN613** Financial Modeling for Investment Decisions

*Choose two courses

**Majors in Human Resource Management**
- HRM612 Strategic Human Resource Management
- 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
- MAN 502 Business Process Re-engineering

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

**Majors in 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
Elective Courses for MBA Health and Hospital Management

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

Elective Courses for MBA Finance and Risk Management

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
Students selecting a functional area specialization major given below are expected to have completed the 30 credit hours of foundation stage (page No. 37) 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.

- **Accounting**: Specialization in accounting will expand the breadth of your understanding of accounting concepts and prepare you for application of modern accounting practices opening new job avenues.

- **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.

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.
MBA’s domain specialization is designed for building careers in specific field such as Health & Hospital Management, Media Management & Marketing, Environment & Energy Management, Logistics & Supply Chain Management etc.

Students selecting the domain based specialization are expected to have completed the 30 credit hours of foundation stage (page No. 37) 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.

- **Health & 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.

- **Media Management & Marketing**: program seeks to develop quality human resource, capable of playing strategic leadership roles across a variety of mainstream traditional and new media organizations, as well as top-level consumer marketing companies.

- **Environment & 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.

- **Logistics & 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.

- **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.

- **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.

- **Educational Management**: 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. (for details, Page No. 117).
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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<tbody>
<tr>
<td>1 Business English</td>
<td>12 hrs</td>
</tr>
<tr>
<td>2 Economics</td>
<td>12 hrs</td>
</tr>
<tr>
<td>3 Personal Effective and Leadership</td>
<td>12 hrs</td>
</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>
</tr>
</tbody>
</table>
MS IN BUSINESS MANAGEMENT

The MS in Business Management program has been designed considering the needs of the corporate sector as well as academia. This program offers a blend of relevant industry-related skills and equips the students with up-to-date research knowledge. MS program in Business Management is a research route for a PhD in Business Management. The career path for the MS in Business Management graduates is faculty, independent researchers, research associate, and management consultant.

Learning Outcomes
- Apply concepts to solve business problems
- Demonstrate effective blend of theory and practice
- Understand the functional aspects of business management
- Ability to undertake research projects as an independent researcher
- Create a base on which to continue PhD in Business Management

Program Structure
MS in Business Management is a 30-credit-hour program with eight courses and one thesis of 6 credit hours. Each of the 08 courses is of 3 credit hours. After successful completion of course work, students are required to carry out a research study for the thesis under the guidance of a research supervisor assigned by CBM.

Eligibility
- 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 in a relevant field from HEC recognized university/institution
- GAT general test conducted by the NTS is required with a minimum of 60% marks or a minimum of 70% marks in the IoBM test.
- An interview conducted by the Institute
- All other HEC stipulated requirements

Course Structure
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
MPM626 Qualitative Research
MPM625 Quantitative Research

Thesis (06 Credit hours)

Duration: Minimum 2 years, Maximum 4 years

*It is mandatory for research students of MS and Ph.D. programs to attend the Multi-Disciplinary Research Seminar Series (MRSS) sessions on Saturdays (12:00 to 2:00 PM) each semester.*
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

PBMs 21 Research Thesis (3 units) PBMs 22 Research Thesis (6 units) PBMs 23 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

**Research Publication requirement for intake from Fall-2021:** Each PhD scholar shall be required to publish at least one research paper based on dissertation as a first author along with his/her supervisor/co-supervisor in Clarivate Analytics Impact Factor Journal listed in Journal Citation Reports (Web of Science Group).

**Pre-Requisite Courses**

The interview committee may prescribe certain pre-requisite courses.
Course Structure

Semester One
EEM701 Methods and Issues in Advanced Qualitative Research
EEM702 Methods and Issues in Advanced Quantitative Research

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

Semester Three
Elective Courses (any two)
EEM801 Advanced Environment Toxicology & Epidemiology
EEM802 Advanced Pollution Control Technologies and Mitigation Options
EEM803 Advances in Green Technology Mechanism
EEM804 Disaster Risk Management and Mitigation Strategies
EEM805 Trade and Environment
EEM806 Sustainability and Conservation of Major Ecosystems

Semester Four to Nine
EEM921 Research thesis
EEM922 Research thesis
EEM923 Research thesis

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

Vision Statement

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

Mission Statement

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

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

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

Students from pre-medical background are required to additionally complete the following two mathematics courses:
- MTH011 Basic College Mathematics
- MTH012 Intermediate College Mathematics

Eligibility Criteria: The eligibility criteria for admission into BS Computer Science is given on Page No. 164.

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) Students from BS Software Engineering and BS Data Science are required to complete the 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 departments within CCSIS are required to complete the following:
  1. Computing Core 39 Credit Hours
  2. CS Electives 15 Credit Hours
  Total 54 Credit Hours
Minor Requirements for students:

a) Students from BS Software Engineering and BS Data Science are required to complete the following:

1. CS Elective 15 Credit Hours
2. Programming Fundamentals 3+1
3. Object Oriented Programming 3+1
4. Data Structures and Algorithms 3+1
5. Operating Systems 3+1
Total 15 Credit Hours

b) Students from other colleges or other departments within CCSIS are required to complete the following:

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

Career Path:

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

Prospective Employers:

1. Cyber Internet Services
2. Internet Service Providers
3. Real Estate Sector
4. Banking Sectors
5. Hospital Sector
6. Industrial Sector

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
<table>
<thead>
<tr>
<th>Communication</th>
<th>Computer Science (Compulsory Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM107 Academic English</td>
<td>CSC115 Digital Logic &amp; Design</td>
</tr>
<tr>
<td>COM202 Business and Professional Speech</td>
<td>CSC115 Digital Logic &amp; Design LAB</td>
</tr>
<tr>
<td>COM205 Persuasive &amp; Analytical Writing for Business Comm.</td>
<td>CSC211 Computer Organization and Assembly Language</td>
</tr>
<tr>
<td>Management</td>
<td>CSC211 Computer Organization and Assembly Language LAB</td>
</tr>
<tr>
<td>MAN101 Principles of Management</td>
<td>CSC311 Theory of Automata &amp; Formal Language</td>
</tr>
<tr>
<td>Natural Science</td>
<td>CSC315 Design Analysis of Algorithms</td>
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<tr>
<td>SSC202 Environmental Studies</td>
<td>CSC411 Compiler Construction</td>
</tr>
<tr>
<td>Physics</td>
<td>CSC413 Artificial Intelligence</td>
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<tr>
<td>PHY111 Applied Physics</td>
<td>CSC413 Artificial Intelligence LAB</td>
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<tr>
<td>Computer Science</td>
<td>CSC418 Parallel &amp; Distributed Computing</td>
</tr>
<tr>
<td>CSC111 Intro to Info &amp; Communication Technology</td>
<td>Computer Science (Supporting Courses)</td>
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<tr>
<td>CSC111 Intro to Info &amp; Communication Technology LAB</td>
<td>CSC233 Multivariable Calculus</td>
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<tr>
<td>CSC219 Professional Practices</td>
<td>CSC331 Differential Equation</td>
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<td>Political Sciences</td>
<td>CSC333 Numerical Computing</td>
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<td>PSC301 Pakistan Studies</td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>MTH107 Calculus and Analytical Geometry</td>
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<td>MTH204 Linear Algebra</td>
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<td>Statistics</td>
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<td>STA203 Probability Theory and Statistics</td>
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<td>Religious Studies</td>
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<td>REL101 Islamic Studies</td>
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<tr>
<td>Computer Science (Elective Courses)</td>
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<tr>
<td>CSC371 Computer Graphics</td>
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<td>CSC372 Human Computer Interaction</td>
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<td>CSC373 Web Engineering</td>
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<td>CSC374 Mobile Application Development</td>
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<td>CSC471 Database Administration and Management</td>
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<td>CSC472 Visual Programming</td>
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<td>CSC473 Enterprise Systems</td>
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<td>CSC474 Data Warehousing</td>
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<tr>
<td>CSC475 Big Data Analytics</td>
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<td>CSC476 E-Commerce</td>
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<td>CSC477 IT Infrastructure</td>
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<tr>
<td>CSC478 Digital Image Processing</td>
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<td>CSC479 Digital Signal Processing</td>
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<tr>
<td>CSC481 Software Quality Assurance</td>
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<tr>
<td>CSC482 Formal Methods in Software Engineering</td>
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<td>CSC483 Information Security Audit</td>
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<td>CSC484 Network Security</td>
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<td>CSC485 Cyber Security</td>
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<td>CSC486 Wireless Network</td>
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<td>CSC487 Neural Network</td>
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<tr>
<td>CSC488 Fuzzy Logic</td>
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<tr>
<td>CSC489 Software Project Management</td>
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### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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<tbody>
<tr>
<td>Intro to Info &amp; Communication Technology (2+0) [Pre Req. NA]</td>
<td>Programming Fundamentals (3+0) [Pre-Req. NA]</td>
</tr>
<tr>
<td>Intro to Info &amp; Communication Technology (0+1) [Pre Req. NA]</td>
<td>Programming Fundamentals Lab (0+1) [Pre-Req. NA]</td>
</tr>
<tr>
<td>Academic English (3+0) [Pre-Req. NA]</td>
<td>Persuasive &amp; Analytical Writing for Bus. Com (3+0) [Pre-Req. COM107]</td>
</tr>
<tr>
<td>Applied Physics (3+0) [Pre-Req. NA]</td>
<td>Discrete Structure (3+0) [Pre-Req. NA]</td>
</tr>
<tr>
<td>Micro and Macroeconomics (3+0)</td>
<td>Digital Logic and Design (3+0) [Pre-Req. PHY111]</td>
</tr>
<tr>
<td>Pakistan Studies (3+0)</td>
<td>Digital Logic and Design Lab (0+1) [Pre-Req. PHY111]</td>
</tr>
<tr>
<td>Islamic Studies (3+0) [Pre-Req. NA]</td>
<td>Foreign Language I (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>Object Oriented Programming (3+0) [Pre-Req. CSC113]</td>
<td>Data Structures and Algorithms (3+0) [Pre-Req. CSC213]</td>
</tr>
<tr>
<td>Object Oriented Programming Lab (0+1) [Pre-Req. CSC113]</td>
<td>Data Structures and Algorithms Lab (0+1) [Pre-Req. CSC213]</td>
</tr>
<tr>
<td>Business and Professional Speech (3+0) [Pre-Req. COM107]</td>
<td>Professional Practices (3+0) [Pre-Req. NA]</td>
</tr>
<tr>
<td>Calculus and Analytical Geometry (3+0) [Pre-Req. NA]</td>
<td>History of Ideas (3+0) [Pre-Req. NA]</td>
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<tr>
<td>Comp. Organization &amp; Assembly Lang. (3+0) [Pre-Req. NA]</td>
<td>Intro. to Database Systems (3+0) [Pre-Req. CSC215]</td>
</tr>
<tr>
<td>Comp. Organization &amp; Assembly Lang. (Lab.) (0+1)</td>
<td>Intro. to Database Systems Lab (0+1) [Pre-Req. CSC215]</td>
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<tr>
<td>Foreign Language II (3+0) [Pre-Req. LAN10*]</td>
<td>Environmental Studies (3+0) [Pre-Req. NA]</td>
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<tr>
<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<tr>
<td>Principles of Management (3+0) [Pre-Req. NA]</td>
<td>Operating Systems (3+0) [Pre-Req. CSC215]</td>
</tr>
<tr>
<td>Probability Theory and Statistics (3+0) [Pre-Req. NA]</td>
<td>Operating Systems LAB (0+1) [Pre-Req. CSC215]</td>
</tr>
<tr>
<td>CS Supporting 1 (Multivariable Calculus) (3+0) [Pre-Req. MTH107]</td>
<td>Computer Networks (3+0) [Pre-Req. CSC215]</td>
</tr>
<tr>
<td>Intro. to Software Engineering (3+0) [Pre-Req. NA]</td>
<td>Computer Networks LAB (0+1) [Pre-Req. CSC311]</td>
</tr>
<tr>
<td>Theory of Automata &amp; Formal Lang. (3+0) [Pre-Req. CSC231]</td>
<td>Design &amp; Analysis of Algorithms (3+0) [Pre-Req. NA]</td>
</tr>
<tr>
<td>Linear Algebra (3+0) [Pre-Req. MTH107]</td>
<td>Compiler Constructions (3+0) [Pre-Req. NA]</td>
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<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
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<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>CS Supporting 3 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

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>
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<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<tr>
<td>Numerical Computing</td>
<td>Financial Derivatives</td>
<td>Portfolio Management</td>
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<tr>
<td>Business Law</td>
<td>Actuarial Mathematics</td>
<td>Life and Other Contingencies</td>
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<tr>
<td>Introduction to Econometrics</td>
<td>Principles of Risk Management</td>
<td>Enterprise Risk Management</td>
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<tr>
<td>Principles of Management</td>
<td>Stochastic Processes</td>
<td>Sampling Theory</td>
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<td>Pakistan Studies</td>
<td>Financial Econometrics</td>
<td>Models in Financial Economics I</td>
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<tr>
<td>Method of Data Analysis</td>
<td>Corporate Finance</td>
<td>Methods in Business Research</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>Institutional Investments</td>
<td>Decision Theory</td>
<td>Elective I</td>
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<tr>
<td>Models in Financial Economics II</td>
<td>Loss Models II</td>
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<tr>
<td>Applied Regression Analysis</td>
<td>Risk Financing Techniques</td>
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<tr>
<td>Computational Methods in Risk Mgmt.</td>
<td>Time Series Analysis &amp; Forecasting</td>
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<tr>
<td>Loss Models I</td>
<td>Project</td>
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<tr>
<td>Elective I</td>
<td>Elective II</td>
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</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 H.Sc with minimum 50% marks in Pre-Engineering or in General Group (with Mathematics) or A-Levels with a maximum 2 ‘C’s in three principal subjects (with Mathematics) are eligible to apply for admission. The graduation requirement is the completion of 138 credit hours of course work and 6 credit hours of a project approved by the college. Students must take a minimum load of 12 credit hours (four courses) or a maximum load of 18 credit hours (six courses) in a semester. In order to obtain a BS degree in four years, a student is required to cover twelve courses in a year. Full load of six courses can be taken each in the Fall and Spring semesters with an option of four courses in the latter and making up the shortfall in the summer session. Students must maintain a CGPA of 2.5 for the conferment of the degree.

BS Mathematics and Economics students learn to:

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

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

Eligibility Criteria

The BS (Mathematics & Economics) is a four-year program. Applicants who have successfully completed H.Sc with minimum 50% marks in Pre-Engineering or in General Group (with Mathematics) or A-Levels with a maximum 2 ‘C’s in three principal subjects (with Mathematics) are eligible to apply for admission.
Required Courses

**Communication (3 courses, 9 credit hours)**
- COM107 Academic English
- COM202 Business and Professional Speech
- COM205 Persuasive. & Analytical Writing for Business Comm.

**Economics**
- ECO101 Principles of Microeconomics
- ECO102 Principles of Macroeconomics
- ECO301 Managerial Economics
- ECO302 International Trade
- ECO303 Financial Economics
- ECO304 Econometrics I
- ECO307 Monetary theory and Policy
- ECO316 Macroeconomics Analysis
- ECO323 Development Economics
- ECO402 Pakistan Economic Policy
- ECO412 Econometrics II
- ECOXXX Elective I
- ECOXXX Elective II

**Language (1 course, 3 credit hours)**
- 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

**Social Sciences (1 course, 3 credit hours)**
- SSC301 History of Ideas

**Elective Courses**

**Mathematics (15 courses, 45 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 (4 courses, 12 credit hours)**
- STA203 Probability Theory and Statistics
- STA301 Model and Inference
- STA302 Methods of Data Analysis
- STA303 Time Series Analysis

**Natural Science Courses (2 courses, 6 credit hours)**
- PHY111 Applied Physics
- SSC202 Environmental Studies

**Economics**
- ECO314 Contemporary Issues in Macroeconomics
- ECO411 Islamic Economics
- ECO416 Growth Theories
- 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
- ECO310 History of Economic Thoughts
- 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

<table>
<thead>
<tr>
<th>Semester One (19 Credit Hours)</th>
<th>Semester Two (19 Credit Hours)</th>
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</thead>
<tbody>
<tr>
<td>Islamic studies (3+0) [Pre req NA]</td>
<td>Persuasive. &amp; Analytical Writing for Business Communication (3+0) [COM107]</td>
</tr>
<tr>
<td>Academic English (3+0) [Pre req NA]</td>
<td>Foreign Language I (3+0) [Pre req NA]</td>
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<tr>
<td>Applied Physics (3+0) [Pre req NA]</td>
<td>Probability theory &amp; Statistics (3+0) [Pre req MTH104]</td>
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<tr>
<td>Principles of Microeconomics (3+0) [Pre req NA]</td>
<td>Principles of Macroeconomics (3+0) [Pre req NA]</td>
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<tr>
<td>Calculus I (3+0) [Pre req NA]</td>
<td>Calculus II (3+0) [Pre req MTH104]</td>
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<tr>
<td>Programming Fundamentals (3+1) [Pre req NA]</td>
<td>Object Oriented Programming (3+1) [Pre req CSS113]</td>
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<table>
<thead>
<tr>
<th>Semester Three (19 Credit Hours)</th>
<th>Semester Four (18 Credit Hours)</th>
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<tbody>
<tr>
<td>Managerial Economics (3+0) [Pre req ECO101, ECO102]</td>
<td>Macroeconomics Analysis (3+0) [Pre req ECO102]</td>
</tr>
<tr>
<td>Multivariable Calculus (3+0) [Pre req MTH105]</td>
<td>Real Analysis I (3+0) [Pre req MTH203]</td>
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<tr>
<td>Model and inference (3+0) [Pre req STA203]</td>
<td>Methods of Data Analysis (3+0) [Pre req STA301]</td>
</tr>
<tr>
<td>Introduction to Formal Mathematics (3+0) [Pre req NA]</td>
<td>Linear Algebra (3+0) [Pre req NA]</td>
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<tr>
<td>Business and Professional Speech (3+0) [Pre req COM202]</td>
<td>Pakistan Studies (3+0) [Pre req NA]</td>
</tr>
<tr>
<td>Data Structure and Algorithms (3+1) [Pre Req CSC213]</td>
<td>Topics in Mathematical Economics (3+0) [Pre req MTH104, ECO 101]</td>
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<thead>
<tr>
<th>Semester Five (18 Credit Hours)</th>
<th>Semester Six (18 Credit Hours)</th>
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</thead>
<tbody>
<tr>
<td>Development Economics (3+0) [Pre req ECO103 &amp; ECO316]</td>
<td>Numerical Analysis (3+0) [Pre req MTH105, MTH204 &amp; MTH344]</td>
</tr>
<tr>
<td>International Trade (3+0) [Pre req ECO103 &amp; ECO316]</td>
<td>Complex Analysis (3+0) [Pre req MTH303 &amp; MTH304]</td>
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<tr>
<td>Real Analysis II (3+0) [Pre req MTH301]</td>
<td>Econometrics I (3+0) [Pre req STA301]</td>
</tr>
<tr>
<td>Environmental Studies (3+0) [Pre req NA]</td>
<td>Financial Economics (3+0) [Pre req ECO102]</td>
</tr>
<tr>
<td>Ordinary Differential Equations (3+0) [Pre req MTH224]</td>
<td>Partial Differential Equations (3+0) [Pre req MTH 344]</td>
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<tr>
<td>History of Ideas (3+0) [Pre req NA]</td>
<td>Monetary theory &amp; Policy (3+0) [Pre req ECO316]</td>
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<tr>
<th>Semester Seven (18 Credit Hours)</th>
<th>Semester Eight (15 Credit Hours)</th>
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<tbody>
<tr>
<td>Econometrics II (3+0) [Pre req ECO304]</td>
<td>Pakistan Economic Policy</td>
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<tr>
<td>Topology (3+0)</td>
<td>Time Series Analysis (3+0) [Pre req STA302]</td>
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<tr>
<td>Optimization Techniques (3+0)</td>
<td>Economics Elective II (3+0)</td>
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<tr>
<td>Economics Elective I (3+0)</td>
<td>Mathematics Elective II (3+0)</td>
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<tr>
<td>Mathematics Elective I (3+0)</td>
<td>Final Year Project II (0+3)</td>
</tr>
<tr>
<td>Final Year Project I (0+3)</td>
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</tr>
</tbody>
</table>
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 are required to additionally complete the following two mathematics courses:
MTH011 Basic College Mathematics
MTH012 Intermediate College Mathematics

Eligibility Criteria: The eligibility criteria for admission into BS Data Science is given on Page No. 164.

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
9. Insurance Industry
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 LAB  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 LAB  Programming Fundamentals LAB
CSC213  Object Oriented Programming
CSC213 LAB  Object Oriented Programming LAB
CSC215  Data Structures & Algorithms
CSC215 LAB  Data Structures & Algorithms LAB
CSC217  Intro to Database Systems
CSC217 LAB  Intro to Database Systems LAB
CSC231  Discrete Structures
CSC313  Operating Systems
CSC313 LAB  Operating Systems LAB
CSC317  Intro to Software Engineering
CSC319  Computer Networks
CSC319 LAB  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 LAB  Digital Logic & Design LAB
CSC211  Computer Organization and Assembly Language
CSC211 LAB  Computer Organization & Assembly Language LAB
CSC315  Design Analysis of Algorithms
CSC413  Artificial Intelligence
CSC413 LAB  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]
- 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]
- 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]
- 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]
- Probability Theory & Statistics II (3+0) [Pre Req. STA203]
- Introduction to Data Science (2+0) [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
- BDS410 Stochastic Processes
- CSC311 Theory of Automata & Formal Languages
- BDS402 Big Data & Concepts
- BDS418 Health Informatics
- BDS414 Game Theory
- BDS421 Deep Learning
- BDS422 Platform & Architecture for Data Science
- BDS424 Speech Processing
- ECO304 Introduction to Econometrics

#### BDS404 Machine Learning
- BDS201 Business Process Analysis
- BDS411 Time Series Analysis & Forecasting
- BDS413 Bioinformatics
- BDS415 Financial Data Analytics
- BDS417 Artificial Neural Networks
- BDS423 Privacy Preservation
- BDS425 Text Mining
- BDS429 Topics in Data Science
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 desire 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

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<tr>
<th>Communication</th>
<th>Economics</th>
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<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>
<td>Finance</td>
<td>Mathematics</td>
</tr>
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<td>---------------------------------</td>
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</tr>
<tr>
<td>FIN201  Introduction to Business Finance (3+0)</td>
<td>MTH102  Calculus I (3+0) MTH106 Calculus II (3+0)</td>
</tr>
<tr>
<td>FIN202  Financial Management (3+0)</td>
<td>MTH204  Linear Algebra (3+0)</td>
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<td>FIN503  Corporate Finance (3+0)</td>
<td>MTH224  Multivariable Calculus (3+0)</td>
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<tr>
<td>FIN509  Financial Derivatives (3+0)</td>
<td>MTH203  Introduction to Formal Mathematics (3+0)</td>
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<tr>
<td>FIN613  Financial Modeling (3+0)</td>
<td>MTH303  Real Analysis I (3+0)</td>
</tr>
<tr>
<td>FIN***  FinTech (3+0)</td>
<td>MTH304  Real Analysis II (3+0)</td>
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<tr>
<td>FIN***  Finance Elective I (3+0)</td>
<td>MTH309  Stochastic Processes (3+0)</td>
</tr>
<tr>
<td>FIN***  Finance Elective II (3+0)</td>
<td>MTH344  Differential Equations (3+0)</td>
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<tr>
<td>Language</td>
<td>MTH346  Partial Differential Equations (3+0)</td>
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<tr>
<td>LAN10*  Foreign Language I</td>
<td>MTH403  Numerical Analysis (3+0)</td>
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<tr>
<td>*1 = Introduction to Arabic</td>
<td>MTH310  Discrete Time Finance (3+0)</td>
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<tr>
<td>*2 = Introduction to French</td>
<td>MTH410  Continuous Time Finance (3+0)</td>
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<tr>
<td>*4 = Introduction to German</td>
<td>MTH***  Mathematics Elective I (3+0)</td>
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<tr>
<td>*6 = Introduction to Italian</td>
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<td>*8 = Introduction to Chinese</td>
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<tr>
<td>Religious Studies</td>
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<tr>
<td>REL101  Islamic Studies</td>
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<td>Political Sciences</td>
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<td>PSC301  Pakistan Studies</td>
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<tr>
<td>Statistics</td>
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<tr>
<td>STA203  Probability Theory and Statistics (3+0)</td>
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<tr>
<td>STA207  Qualitative Data Analysis (3+0)</td>
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</tr>
<tr>
<td>STA301  Model and Inference (3+0)</td>
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</tr>
<tr>
<td>STA304  Quantitative Data Analysis (1+2)</td>
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</tr>
<tr>
<td>STA306  Applied Econometrics (2+1)</td>
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</tr>
<tr>
<td>Social Sciences</td>
<td></td>
</tr>
<tr>
<td>SSC301  History of Ideas</td>
<td></td>
</tr>
<tr>
<td>Internship</td>
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<tr>
<td>Internship related to Financial Mathematics</td>
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### Elective Courses

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<thead>
<tr>
<th>Mathematics</th>
<th>Finance</th>
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<tbody>
<tr>
<td>MTH430  Operations Research (3+0)</td>
<td>FIN403  Islamic Banking and Finance</td>
</tr>
<tr>
<td>MTH439  Introduction to Dynamical Systems</td>
<td>FIN506  Investment Banking and Security Analysis</td>
</tr>
<tr>
<td>MTH437  Functional Analysis</td>
<td>FIN507  Portfolio Management</td>
</tr>
<tr>
<td>MTH406  Finite Element Methods</td>
<td>FIN511  Analysis of Financial Statement</td>
</tr>
<tr>
<td>MTH456  Statistical Machine Learning</td>
<td>FIN512  Money and Capital Market</td>
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<tr>
<td>MTH457  Deep Learning</td>
<td>FIN515  Foreign Trade and Banking</td>
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<tr>
<td>MTH440  Advanced Methods for Data Analysis</td>
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<tr>
<td>MTH452  Convex and Non-Linear Analysis</td>
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<td>MTH451  Number Theory</td>
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## Course Structure

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

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

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

Students from pre-medical background are required to additionally complete the following two mathematics courses:
MTH011 Basic College Mathematics
MTH012 Intermediate College Mathematics

Eligibility Criteria: The eligibility criteria for admission into BS Software Engineering is given on Page No. 164.

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
• To enable entrepreneurship and innovation in Software Industry

Learning Outcomes for BS Software Engineering Students include:
• An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems
• 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
• 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
• 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
• An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an understanding of the limitations
• 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
• An ability to understand the impact of professional engineering solutions in societal and environmental contexts, demonstrate knowledge of, and need for sustainable development
• Apply ethical principles and commit to professional ethics, responsibilities, and norms of engineering practice
• An ability to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings
• 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
• 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
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
4. Front End Developer
7. SQL Developer
10. Unity Developer

Prospектив Employers:
1. Cyber Internet Services
2. Internet Service Providers
4. Real Estate Industry
7. Communication Industry

University Elective Courses

Arts & Humanities
SSC301 History of Ideas
MAN101 Principles of Management

Social Sciences
ECO104 Micro and Macroeconomics

Natural Sciences
SSC202 Environmental Studies

Language
LAN 10*  Foreign Language I
LAN 20** Foreign Language II
*1 = Introduction to Arabic  *2 = Introduction to French
*4 = Introduction to German  *6 = Introduction to Italian
*8 = Introduction to Chinese
**1 = Intermediate Arabic  **2 = Intermediate French
**4 = Intermediate German  **6 = Intermediate Italian
**8 = Intermediate Chinese

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
## 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
- CSC213 Object Oriented Programming
- CSC215 Data Structures & Algorithms
- CSC217 Intro to Database Systems
- CSC231 Discrete Structures
- CSC313 Operating Systems
- CSC317 Intro to Software Engineering
- CSC319 Computer Networks
- CSC419 Information Security

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

### Software Engineering Supporting Courses (any three)
- SEC351 Business Process Engineering
- SEC352 Formal Methods in Software Engineering
- SEC354 Operations Research
- SEC355 Simulation and Modelling
- SEC353 Stochastic Processes

## Elective Courses

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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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<tbody>
<tr>
<td>Intro to Info. &amp; Comm. Technology (2+0) [Pre Req. NA]</td>
<td>Programming Fundamentals (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Intro to Info. &amp; Comm. Technology Lab(0+1) [Pre Req. NA]</td>
<td>Programming Fundamentals Lab (0+1) [Pre Req. NA]</td>
</tr>
<tr>
<td>Academic English (3+0) [Pre Req. NA]</td>
<td>Persuasive &amp; Analytical Writing for Bus. Comm. (3+0) [Pre Req. COM107]</td>
</tr>
<tr>
<td>Applied Physics (3+0) [Pre Req. NA]</td>
<td>Foreign Language I (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Pakistan Studies (3+0) [Pre Req. NA]</td>
<td>Discrete Structures (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Micro and Macroeconomics (3+0) [Pre Req. NA]</td>
<td>Environmental Studies (3+0) [Pre Req. NA]</td>
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<tr>
<td>Islamic Studies (3+0) [Pre Req. NA]</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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<tbody>
<tr>
<td>Object Oriented Programming (3+0) [Pre-Req. CSC113]</td>
<td>Data Structures and Algorithms (3+0) [ Pre-Req. CSC213]</td>
</tr>
<tr>
<td>Object Oriented Programming Lab (0+1) [Pre Req. CSC113]</td>
<td>Data Structures and Algorithms Lab (0+1) [Pre-Req. CSC213]</td>
</tr>
<tr>
<td>Business and Professional Speech (3+0) [Pre Req. NA]</td>
<td>Professional Practices (3+0) [Pre-Req. NA]</td>
</tr>
<tr>
<td>Calculus and Analytical Geometry (3+0) [Pre Req. NA]</td>
<td>Intro. to Software Engineering (3+0) [Pre-Req. NA]</td>
</tr>
<tr>
<td>History of Ideas (3+0) [Pre Req. NA]</td>
<td>Probability Theory and Statistics (3+0) [Pre Req.NA]</td>
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<tr>
<td>Foreign Language II (3+0) Pre Req. LAN10*</td>
<td>Intro. to Database Systems (3+0) [Pre. Req. CSC215]</td>
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<th>Semester Six</th>
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<tr>
<td>Principles of Management (3+0) [Pre. Req. NA]</td>
<td>Operating Systems (3+0) [Pre Req.NA]</td>
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<tr>
<td>Web Engineering (3+0) [Pre-Req. NA]</td>
<td>Operating Systems Lab (0+1) [Pre Req.NA]</td>
</tr>
<tr>
<td>Software Requirements Engineering (3+0) [Pre-Req. CSC317]</td>
<td>Software Design &amp; Architecture (3+0) [Pre Req.NA]</td>
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<td>SE Supporting-I(3+0) [Pre Req. NA]</td>
<td>Software Construction &amp; Development (3+0) [Pre Req.NA]</td>
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<tr>
<td>SE Supporting-II(3+0) [Pre Req. NA]</td>
<td>Computer Networks3+0) [Pre Req. NA]</td>
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<tr>
<td>Linear Algebra (3+0) [Pre. Req. MTH107]</td>
<td>Computer Networks Lab(0+1) [Pre Req. NA]</td>
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<th>Semester Seven</th>
<th>Semester Eight</th>
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<tr>
<td>Software Re-Engineering (3+0) [Pre-Req. NA]</td>
<td>Software Quality Engineering (3+0) [Pre-Req. NA]</td>
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<tr>
<td>Human Computer Interaction</td>
<td>Information Security(3+0) [Pre Req. NA]</td>
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<td>SE Elective 1(3+0) [Pre Req. NA]</td>
<td>SE Elective 3(3+0) [Pre Req. NA]</td>
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<td>SE Elective 2(3+0) [Pre Req. NA]</td>
<td>SE Elective 4(3+0) [Pre Req. NA]</td>
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<tr>
<td>Software Project Management(3+0) [Pre Req. NA]</td>
<td>SE Elective 5(3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Final Year Project I</td>
<td>Final Year Project II</td>
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</tbody>
</table>
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 ‘Cs in three principal subjects (with Mathematics/Statistics/Computer Science) are eligible to apply for admission.
Required Courses

Accounting
ACC101 Introduction to Financial Accounting
ACC201 Intermediate Financial Accounting

Finance
FIN201 Introduction to Business Finance
FIN202 Financial Management

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

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

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

Political Sciences
PSC301 Pakistan Studies

Social Sciences
SSC301 History of Ideas

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
PHY111 Applied Physics
SSC202 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>
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<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] Calculus I (3+0) [Pre Req. NA]</td>
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<tr>
<td>Principles of Management (3+0) [Pre Req. NA]</td>
<td>Probability Theory and Statistics II (3+0) [Pre Req. STA203]</td>
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<tr>
<td>Introduction to Micro and Macroeconomics (3+0) [Pre Req. ECO102]</td>
<td>Principles of Marketing (3+0) [Pre Req. NA]</td>
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<tr>
<td>Probability Theory and Statistics I (3+0) [Pre Req. NA]</td>
<td>Foreign Language I [Pre Req. NA]</td>
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<td>Academic English (3+0) [Pre Req. NA]</td>
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<thead>
<tr>
<th>Semester Two (18 Credit Hours)</th>
<th>Semester (18 Credit Hours)</th>
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<tbody>
<tr>
<td>Persuasive and Analytical Writing for Bus. Comm. (3+0) [Pre Req. COM107]</td>
<td>Pakistan Studies (3+0) [Pre Req. NA] Calculus I (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Calculus I (3+0) [Pre Req. MTH104]</td>
<td>Probability Theory and Statistics II (3+0) [Pre Req. STA203]</td>
</tr>
<tr>
<td>Introduction to Financial Accounting (3+0) [Pre Req. NA]</td>
<td>Principles of Marketing (3+0) [Pre Req. NA]</td>
</tr>
<tr>
<td>Probability Theory and Statistics II (3+0) [Pre Req. STA203]</td>
<td>Foreign Language I [Pre Req. NA]</td>
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<tr>
<td>Principles of Management (3+0) [Pre Req. NA]</td>
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<tr>
<th>Semester Three (18 Credit Hours)</th>
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<tbody>
<tr>
<td>Linear Algebra (3+0) [Pre Req. NA]</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>Intermediate Micro and Macroeconomics (3+0) [Pre Req. ECOXXX]</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>Applied Physics (3+0) [Pre Req. NA]</td>
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<tr>
<td>Computer Applications (2+1) [Pre Req. NA]</td>
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<th>Semester Four (18 Credit Hours)</th>
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<tbody>
<tr>
<td>Financial Management (3+0) [Pre Req. FIN201]</td>
<td>Organizational Behavior (3+0) [Pre Req. MAN101]</td>
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<tr>
<td>Sampling Theory (2+1) [Pre Req. STA302]</td>
<td>Intermediate Financial Accounting (3+0) [Pre Req. ACC101]</td>
</tr>
<tr>
<td>Numerical Analysis (3+0) [Pre Req. MTH204]</td>
<td>Marketing Management (3+0) [Pre Req. MKT301]</td>
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<tr>
<td>Elective I (STATISTICS) (3+0) [Pre Req. NA]</td>
<td>Methods of Data Analysis (2+1) [Pre Req. STA301]</td>
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<tr>
<td>Pakistan Economic Policy (3+0) [Pre Req. ECO103]</td>
<td>Applied Physics (3+0) [Pre Req. NA]</td>
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<tr>
<td>Environmental studies (3+0) [Pre Req. NA]</td>
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<tr>
<th>Semester Five (18 Credit Hours)</th>
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<tbody>
<tr>
<td>Human Resource Management (3+0) [Pre Req. MAN302]</td>
<td>Organizational Behavior (3+0) [Pre Req. MAN101]</td>
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<tr>
<td>Introduction to Econometrics (2+1) [Pre Req. ECO102]</td>
<td>Intermediate Financial Accounting (3+0) [Pre Req. ACC101]</td>
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<tr>
<td>Introduction to Business Finance (3+0) [Pre Req. NA]</td>
<td>Marketing Management (3+0) [Pre Req. MKT301]</td>
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<tr>
<td>Methods in Business Research (3+0) [Pre Req. MKT302]</td>
<td>Methods of Data Analysis (2+1) [Pre Req. STA301]</td>
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<tr>
<td>Applied Regression Analysis (2+1) [Pre Req. STA302]</td>
<td>Applied Physics (3+0) [Pre Req. NA]</td>
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<td>Environmental studies (3+0) [Pre Req. NA]</td>
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<table>
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<tr>
<th>Semester Six (18 Credit Hours)</th>
<th>Semester (18 Credit Hours)</th>
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<tbody>
<tr>
<td>Applied Multivariate Analysis (2+1) [Pre Req. STA305]</td>
<td>Organizational Behavior (3+0) [Pre Req. MAN101]</td>
</tr>
<tr>
<td>Time Series Analysis and Forecasting (2+1) [Pre Req. STA305]</td>
<td>Intermediate Financial Accounting (3+0) [Pre Req. ACC101]</td>
</tr>
<tr>
<td>Elective II (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
<td>Marketing Management (3+0) [Pre Req. MKT301]</td>
</tr>
<tr>
<td>Elective II (STATISTICS) (3+0) [Pre Req. NA]</td>
<td>Methods of Data Analysis (2+1) [Pre Req. STA301]</td>
</tr>
<tr>
<td>Final Year Project II (0+3) [Pre Req. STA491]</td>
<td>Applied Physics (3+0) [Pre Req. NA]</td>
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<td>Final Year Project (0+3) [Pre Req. STA491]</td>
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<tr>
<th>Semester Seven (18 Credit Hours)</th>
<th>Semester (15 Credit Hours)</th>
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<tr>
<td>Decision Theory (3+0) [Pre Req. STA301]</td>
<td>Organizational Behavior (3+0) [Pre Req. MAN101]</td>
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<tr>
<td>Design of Experiment I (2+1) [Pre Req. STA305]</td>
<td>Intermediate Financial Accounting (3+0) [Pre Req. ACC101]</td>
</tr>
<tr>
<td>Production and Operations Management (3+0) [Pre Req. NA]</td>
<td>Marketing Management (3+0) [Pre Req. MKT301]</td>
</tr>
<tr>
<td>Elective I (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
<td>Methods of Data Analysis (2+1) [Pre Req. STA301]</td>
</tr>
<tr>
<td>Elective II (STATISTICS) (3+0) [Pre Req. NA]</td>
<td>Applied Physics (3+0) [Pre Req. NA]</td>
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<tr>
<td>Final Year Project I (0+3) [Pre Req. MKT404, STA305]</td>
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<table>
<thead>
<tr>
<th>Semester Eight (15 Credit Hours)</th>
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<tbody>
<tr>
<td>Elective III (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
<td>Organizational Behavior (3+0) [Pre Req. MAN101]</td>
</tr>
<tr>
<td>Elective II (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
<td>Intermediate Financial Accounting (3+0) [Pre Req. ACC101]</td>
</tr>
<tr>
<td>Final Year Project II (0+3) [Pre Req. STA491]</td>
<td>Marketing Management (3+0) [Pre Req. MKT301]</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Nine (15 Credit Hours)</th>
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<tbody>
<tr>
<td>Elective III (BUSINESS ANALYTICS) (3+0) [Pre Req. NA]</td>
<td>Methods of Data Analysis (2+1) [Pre Req. STA301]</td>
</tr>
<tr>
<td>Final Year Project II (0+3) [Pre Req. STA491]</td>
<td>Applied Physics (3+0) [Pre Req. NA]</td>
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</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 four 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 two courses to fulfill degree require-
ments. 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, envi-
   ronment, 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 & Transportaion Sector
8. Colleges & Universities
9. Govt. & 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 two years and the maximum is four 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 (3+0)</td>
</tr>
<tr>
<td>Advanced Computer Architecture (3+0)</td>
<td>Theory of Programming Languages (3+0)</td>
</tr>
<tr>
<td>Advanced Analysis of Algorithm (3+0)</td>
<td>Elective I (3+0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective II (3+0)</td>
<td>Elective IV (3+0)</td>
</tr>
<tr>
<td>Elective III (3+0)</td>
<td>MS Thesis-II (0+3)</td>
</tr>
<tr>
<td>MS Thesis-I (0+3)</td>
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</tbody>
</table>
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 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 four 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 two years and the maximum is four years:
• MS course work requirements consist of nine graduate-level courses (27 credit hours)
• On completion of the dissertation/thesis, the student is awarded 6 credits

A MS student must additionally complete the following requirements:
• MS proposal/synopsis development
• MS proposal/synopsis defense
• BASR approval of MS proposal/synopsis
• Continuous enrollment in supervised research courses for meeting the full-time residency requirements
• Completion of MS dissertation/thesis
• Selection of external evaluators by BASR
• Evaluation of MS dissertation by two external faculty members as per HEC criteria
• Dissertation/thesis finalization
• Open defense of MS dissertation
• Any other HEC requirement
• Final dissertation/thesis submission to BASR
Required Courses

Compulsory Courses (15 credit hours)
MTS609 Research Methodology
MTS616 Advanced Real Analysis
MTS617 Advanced Numerical Analysis
MTS618 Statistical Modeling and Computing
MTS638 Advanced Topics in Algebra

Elective Courses

Mathematics Concentration* (6 credit hours)
MTS612 Numerical Methods for ODEs and PDEs
MTS615 Dynamical System
MTS634 Advanced Numerical Linear Algebra
MTS644 Computational Fluid Dynamics
MTS646 Financial Mathematics
MTS654 Advance Functional Analysis
MTS663 Numerical Computing and Optimization
MTS664 Special Topics in Mathematics
* 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
MTS655 Special Topics in Computing
MTS656 Advance design analysis and Algorithm
MTS657 Machine Learning
*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 (9 credit hours)</th>
<th>Semester Two (9 credit hours)</th>
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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>
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<td>Advanced Real Analysis</td>
<td>Mathematics Concentration I</td>
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<table>
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<tr>
<th>Semester Three (9 credit hours)</th>
<th>Semester Four (6 credit hours)</th>
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<tbody>
<tr>
<td>Mathematics Concentration II</td>
<td>Computation Concentration II</td>
</tr>
<tr>
<td>Computation Concentration I</td>
<td>Thesis II</td>
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<tr>
<td>Thesis I</td>
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</tr>
</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 nine courses (five compulsory and four 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 four 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 two 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>
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</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>
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<td></td>
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<tr>
<td>Semester Three</td>
<td>Semester Four</td>
</tr>
<tr>
<td>Statistics Concentration II</td>
<td>Computation Concentration II</td>
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<td>Computation Concentration I</td>
<td>Thesis I</td>
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<tr>
<td>Thesis I</td>
<td>Thesis II</td>
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</table>
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 designed 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. Software Development Manager
8. Security Architect
9. Data Modeler
10. Educationist

**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. In addition, each PhD scholar shall be required to publish at least one research paper based on dissertation as a first author along with his/her supervisor/co-supervisor in Clarivate Analytics Impact Factor Journal listed in Journal Citation Reports (Web of Science Group). Minimum duration is three years and the maximum is seven/ten 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 field
   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 field
   Maximum 12 credit hours of deficiency courses (from BS CS program approved by Doctoral Committee) plus 30/33 Credit Hours of courses of MS Program (instead of thesis two Independent Studies of 3 credit hours each) plus 18 credit hours of PhD Courses plus 30 credit hours of PhD Thesis
A PhD student must additionally complete the following requirements:

- Comprehensive exam
- PhD proposal/synopsis development
- PhD proposal/synopsis defense
- BASR approval of PhD proposal/synopsis
- Continuous enrollment in supervised research courses for meeting the full-time residency requirements
- Completion of PhD dissertation/thesis
- Selection of external evaluators by BASR
- Publication or an official acceptance of at least one paper in an ISI impact factor journal as a first author
- Evaluation of PhD dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/thesis finalization
- Open defense of PhD dissertation
- Any other HEC requirement
- Final dissertation/thesis submission to BASR

Course Structure
Select Six courses

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

**PhD (Statistics & Scientific Computing)**
PST701  Advanced Statistical Computing and Graphics
PST703  Regression Modeling and Computing
PST705  Advanced Mathematical Statistics
PST707  Advanced Bayesian Inference and Stochastic Modeling
PST713  Nonlinear and Integer Programming
PST715  Advanced Design and Analysis of Experiments
PST717  Advances in Time Series Analysis
PST719  Advances in Bioinformatics & Biostatistics
PST721  Statistical Quality Control
PST723  Stochastic Modeling in Finance
PST725  Special topics in Statistics
PST850  Research Thesis (30 Credit Hours)
College of Engineering and Sciences (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 six to eight 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
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>1</td>
</tr>
<tr>
<td>2</td>
<td>Problem Analysis</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Design/Development of Solutions</td>
<td>3</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 Programming 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
EPE434 Power System Analysis

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
IDE404  Engineering Mechanics
IDE405  Heat and Mass Transfer

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>
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<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>
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<tr>
<td>Linear Circuit Analysis (3+1)</td>
<td>Communication Skills (2+0)</td>
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<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>
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</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>Engineering Mechanics (3+0) OR</td>
</tr>
<tr>
<td>Numerical Analysis (3+0)</td>
<td>Heat and Mass Transfer (3+0)</td>
</tr>
<tr>
<td>Linear Control Systems (3+1)</td>
<td>Engineering Economics (2+0)</td>
</tr>
<tr>
<td>Instrumentation and Measurements (3+1)</td>
<td>Communication System (3+1)</td>
</tr>
<tr>
<td>Probability Methods in Engineering (3+0)</td>
<td>Digital Signal Processing (3+1)</td>
</tr>
<tr>
<td>Opto-Electronics (3+0 credit hours)</td>
<td>Power Electronics (3+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Courses (3+1 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE415 Opto-Electronics</td>
</tr>
<tr>
<td>ELE417 Industrial Electronics</td>
</tr>
<tr>
<td>ELE423 Digital Control Systems</td>
</tr>
<tr>
<td>ELE422 VLSI Design</td>
</tr>
<tr>
<td>ELE428 Digital Electronics</td>
</tr>
<tr>
<td>ELE433 Artificial Neural Networks</td>
</tr>
<tr>
<td>ELE430 Solid State Devices</td>
</tr>
<tr>
<td>CME414 Digital Image Processing</td>
</tr>
<tr>
<td>CME301 Computer Communication Networks</td>
</tr>
<tr>
<td>TCE416 Digital Communication</td>
</tr>
<tr>
<td>EPE434 Introduction to Smart Grid Technology</td>
</tr>
<tr>
<td>EPE433 Power Quality Analysis</td>
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<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 credit hours)</td>
</tr>
<tr>
<td>Elective III (3+1)</td>
<td>Community Service (0 ch)</td>
</tr>
<tr>
<td>Management and Organizational Dynamics (3+0) OR</td>
<td>Senior Design Project I (0+3)</td>
</tr>
<tr>
<td>Project Management (3+0)</td>
<td>Small Business and Entrepreneurship (3+0)</td>
</tr>
<tr>
<td>Senior Design Project I (0+3)</td>
<td>Renewable Energy Methods (3+0)</td>
</tr>
<tr>
<td>Introduction to ERP (3+0)</td>
<td>Power System Analysis (3+0)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Courses (3+1 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCE415 Transmission and Switching Systems</td>
</tr>
<tr>
<td>TCE420 Information Theory and Coding</td>
</tr>
<tr>
<td>TCE424 Radar Systems</td>
</tr>
<tr>
<td>TCE426 Electromagnetic Compatibility</td>
</tr>
<tr>
<td>TCE428 Mobile and Pervasive Computing</td>
</tr>
<tr>
<td>TCE429 Tele-traffic Engineering</td>
</tr>
<tr>
<td>TCE430 Satellite Communication</td>
</tr>
<tr>
<td>TCE431 Digital Filter Design</td>
</tr>
<tr>
<td>TCE433 Multimedia and Optical Fiber</td>
</tr>
<tr>
<td>TCE434 Wireless Sensor Networks</td>
</tr>
<tr>
<td>TCE461 Wireless and Mobile Communication</td>
</tr>
<tr>
<td>TCE471 Optical Fiber Communication</td>
</tr>
<tr>
<td>CME414 Digital Image Processing</td>
</tr>
<tr>
<td>ELE415 Opto-Electronics</td>
</tr>
<tr>
<td>EPE434 Introduction to Smart Grid Technology</td>
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#### Stream 2: Telecommunication Engineering

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
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</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>Wave Propagation and Antennas (3+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Courses (3+1 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCE415 Transmission and Switching Systems</td>
</tr>
<tr>
<td>TCE421 Digital Communication Networks</td>
</tr>
<tr>
<td>TCE426 Electromagnetic Compatibility</td>
</tr>
<tr>
<td>TCE428 Mobile and Pervasive Computing</td>
</tr>
<tr>
<td>TCE429 Tele-traffic Engineering</td>
</tr>
<tr>
<td>TCE430 Satellite Communication</td>
</tr>
<tr>
<td>TCE431 Digital Filter Design</td>
</tr>
<tr>
<td>TCE433 Multimedia and Optical Fiber</td>
</tr>
<tr>
<td>TCE434 Wireless Sensor Networks</td>
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<tr>
<td>TCE461 Wireless and Mobile Communication</td>
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<tr>
<td>TCE471 Optical Fiber Communication</td>
</tr>
<tr>
<td>CME414 Digital Image Processing</td>
</tr>
<tr>
<td>ELE415 Opto-Electronics</td>
</tr>
<tr>
<td>EPE434 Introduction to Smart Grid Technology</td>
</tr>
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</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 credit hours)</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>Small Business and Entrepreneurship (3+0)</td>
</tr>
<tr>
<td>Renewable Energy Methods (3+0)</td>
<td>Principles of Applied Mechatronics (3+1) OR</td>
</tr>
<tr>
<td>Project Management</td>
<td>Power System Analysis (3+0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Courses (3+1 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCE416 Digital Communications</td>
</tr>
<tr>
<td>TCE423 RF and Microwave Engineering</td>
</tr>
<tr>
<td>TCE425 Telecom Management</td>
</tr>
<tr>
<td>TCE427 Antenna Theory and Design</td>
</tr>
<tr>
<td>EPE432 Wireless Power Transmission</td>
</tr>
<tr>
<td>ELE432 Introduction to Internet of Things</td>
</tr>
<tr>
<td>CME415 Cyber Physical Systems and Industry</td>
</tr>
<tr>
<td>ELE435 Technology and Society</td>
</tr>
</tbody>
</table>
BS in Technology Management is inspired to combine the advancements in technology with a hands-on management approach to solve the problems of 21st Century.

The focus of this program is to produce graduates that can ensure sustainable digital future. The key for which is automation and digital transformation. This program aims to produce graduates that can identify, plan, and execute the conversation of an existing organization. Students, by the end of the program, will be able to enter an Industry 4.0 enabled company and optimize the process and streamline the workflow and to improve efficiency productivity.

1. Apply knowledge of strategy, marketing, digital technology, and big data analysis to complex Industry 4.0 based problems / situations / scenarios including 3D printer, AI, Block chain and Cyber Physical Systems.
2. Develop expertise in mapping processes of an industry and strategize the conversion to digital platform
3. Identify operations that can be automated to reduce resources (time, raw material, people etc.)

Career Prospects:
1. Technology Managers
2. System Analysts
4. Management Consultants
5. Computer network architect
6. Engineering Managers

Main Features:
a. Name of the proposed Program: Bachelor of Science in Technology Management
b. Total Credit Hours for completion of the program: 144
c. Program duration: eight semester/ four years
d. Proposed initial date for implementation of the program: Spring 2022

Eligibility:
Applicants who have successfully completed HSC with minimum 50% marks in pre-engineering, pre-medical or in General Group (with Mathematics/ Statistics/ Computer Science) or A-Levels with a maximum of 2-Cs in three principal subjects are eligible to apply for admission.

Degree Requirements:
Minimum duration: 4 years Number of semesters: 8
Number of weeks per semester: 16-18 Total number of credit hours: 144
Number of credit hours per semester: 17-19 Technology courses: 41 %
Non Tech & Management courses: 59 % Laboratory work: 03 hrs.
Total number of courses: 46 Courses + 9 weeks Internship
Total credit hours: 144

Required Courses

Core Courses
BTM101 Introduction to Computing
BTM103 Information and Communications Technology
ELE201 Digital Logic Design
BTM202 Operating Systems
TCE205 Signals and Systems
BTM301 Data Communication & Networks
BTM304 Sensors and Transducers
BTM401 Big Data and Cloud Computing
BTM403 Artificial Intelligence & Machine Learning
MTH216 Complex Variable and Transforms

BTM102 Basic Electrical Circuits
CME104 Computer Programming & Problem Solving
EPE201 CAD/CAM
CME203 Data Structure & Algorithms
CME205 Microprocessor & Microcontroller Systems
ELE419 Linear Control System
IDE401 Principles of Applied Mechatronics
BTM402 Emerging Trends in Connected Systems
BTM404 Cyber physical Systems
Management
MAN101 Principles of Management
ACC101 Introduction to Financial Accounting
HRM301 Human Resource Management
BTM302 Technology Management
IDE400 Introduction to Enterprise Resource Planning
FIN202 Digital Financial Management
BTM305 Total Quality Management
ENT403 Small Business & Entrepreneurship

Natural Sciences
GSC103 Applied Physics
BTM201 Renewable Energy

Expository Writing
COM117 Functional English
COM119 Communication Skills
COM 208 Technical Report Writing

Elective Courses

Digital Technology Transformation (3+0)
IDE404 Design Thinking
IDE409 Philosophy of Technology
IDE405 Business and Technology Strategy
CME415 Management Information System
CME416 IoT System Development
CME417 UI/UX Design Development
CME418 IoT Business Case
BTM405 Nano Technology Fundamentals
ELE432 Introduction to Internet of Things
EPE432 Wireless Power Transmission
BTM406 Wireless Sensor Networks
BTM407 Information Theory and Coding

E-Business (3+0)
BTM410 Auditing & Taxation
BTM411 Industrial Relations
BTM412 Business Transformation
BTM413 Digital Business Law
BTM414 Supply Chain Fundamentals & Inventory Mgmt.
IDE406 Production Planning & Control
IDE407 Software Project Management
IDE408 Professional Practices
ELE435 Technology and Society

Arts and Humanities
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

Social Sciences
ENG203 Engineering Economics
BTM303 Organizational Behavior

Quantitative Reasoning
MTH107 Calculus & Analytical Geometry
MTH204 Linear Algebra

Civilized Courses
REL101 Islamic Studies
PSC301 Pakistan Studies

Emerging Trends in Technology (3+1)
BTM415 Real time Embedded System
BTM416 Opto Electronics
BTM417 Smart Grid Technology
BTM418 Digital Image Processing
BTM419 Industrial Electronics
BTM420 Robotics Design Lab (modular)
BTM421 Underwater Internet of Things
BTM422 VLSI Basics
BTM423 Optical Fiber Communication
BTM424 Digital Communication Systems
BTM425 Network Communication Protocols
BTM426 Power Electronics
BTM427 Internet of Robotic Things (IoRT)
## Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
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<tbody>
<tr>
<td>Functional English (3+0)</td>
<td>Basic Electrical Circuits (2+1)</td>
</tr>
<tr>
<td>Applied Physics (3+1)</td>
<td>Principles of Management (3+0)</td>
</tr>
<tr>
<td>Islamic Studies (3+0)</td>
<td>Linear Algebra (3+0)</td>
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<tr>
<td>Introduction to Computing (2+1)</td>
<td>Communication Skills (3+0)</td>
</tr>
<tr>
<td>Calculus &amp; Analytical Geometry (3+0)</td>
<td>Pakistan Studies (3+0)</td>
</tr>
<tr>
<td>Foreign languages (3+0)</td>
<td>Information &amp; Communications Technology (2+1)</td>
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<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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</thead>
<tbody>
<tr>
<td>Computer Programming &amp; Problem Solving (2+1)</td>
<td>Data Structure &amp; Algorithms (3+1)</td>
</tr>
<tr>
<td>Digital Logic Design (3+1)</td>
<td>Signals and Systems (3+1)</td>
</tr>
<tr>
<td>Complex Variables (3+0)</td>
<td>Renewable Energy (3+0)</td>
</tr>
<tr>
<td>CAD/CAM (0+2)</td>
<td>Microprocessor &amp; Microcontroller Systems (3+1)</td>
</tr>
<tr>
<td>Design Thinking (3+0)</td>
<td>Technical Report Writing (3+0)</td>
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<tr>
<td>Operating Systems (2+1)</td>
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<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Financial Accounting (3+0)</td>
<td>Linear Control System (3+1)</td>
</tr>
<tr>
<td>Data Communication &amp; Networks (2+1)</td>
<td>Principles of Applied Mechatronics (2+1)</td>
</tr>
<tr>
<td>Human Resource Management (3+0)</td>
<td>Sensors and Instrumentation (2+1)</td>
</tr>
<tr>
<td>Engineering Economics (3+0)</td>
<td>Digital Financial Management (3+0)</td>
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<tr>
<td>Organizational Behavior (3+0)</td>
<td>Total Quality Management (3+0)</td>
</tr>
<tr>
<td>Technology Management (2+0)</td>
<td>Elective I (2+1)</td>
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<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
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<tbody>
<tr>
<td>Elective II (2+1)</td>
<td>Small Business &amp; Entrepreneurship (3+0)</td>
</tr>
<tr>
<td>Elective III (3+0)</td>
<td>Artificial Intelligence &amp; Machine Learning (2+1)</td>
</tr>
<tr>
<td>Intro to Enterprise Resource Planning (3+0)</td>
<td>Final Year Project II (0+3)</td>
</tr>
<tr>
<td>Big Data and Cloud Computing (2+1)</td>
<td>Cyber Physical Systems &amp; Internet of People (3+1)</td>
</tr>
<tr>
<td>Emerging Trends in Connected Systems (3+1)</td>
<td>Elective IV (3+0)</td>
</tr>
<tr>
<td>Final Year Project I (0+3)</td>
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</tr>
</tbody>
</table>
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 (three courses) in each of the three 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)**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEM505 Applied Engineering Analysis</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM506 Production System Design and Analysis</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM507 Operations Analysis &amp; Resource Allocation</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM508 Operation Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM509 Simulation Modeling</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM510 Production Planning and Control</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM511 Advanced Practices in Engineering Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM512 Environmental and Safety Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM513 Industrial Costing Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM514 Technology Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM515 Lean Six Sigma &amp; Lean Manufacturing</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM516 Marketing Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM517 Global Business Strategy</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM518 Leadership, Innovation &amp; Entrepreneurship</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM519 Financial Statement Analysis</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM520 Engineering Economics</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM521 Problem Solving &amp; Decision Making</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM522 Supply Chain Management</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM523 Management of Organizations</td>
<td>(3+0)</td>
</tr>
<tr>
<td>MEM524 Advanced Topics in Project Management</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

**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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<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 HIRS/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>MEE504</th>
<th>Research Methodology 3+0</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEE509</td>
<td>Simulation and Modeling 2+1</td>
</tr>
<tr>
<td>MEE600</td>
<td>Independent Study 3+0</td>
</tr>
</tbody>
</table>

<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)</td>
<td>ELE602 (Core)</td>
<td>ECE602 (Core)</td>
<td></td>
</tr>
<tr>
<td>Power Electronics</td>
<td>Linear Control Theory</td>
<td>Wireless Communication</td>
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</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>Power System Analysis</td>
<td>Advanced Digital Signal Processing</td>
<td>Information &amp; Coding Theory</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE611</td>
<td>CME601</td>
<td>ECE612</td>
<td></td>
</tr>
<tr>
<td>Power System Analysis</td>
<td>Detection and Estimation</td>
<td>Stochastic System Process</td>
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</tr>
<tr>
<td>EPE612</td>
<td>ELE612</td>
<td>MTH601</td>
<td></td>
</tr>
<tr>
<td>EPE613</td>
<td>ELE613</td>
<td>ECE614</td>
<td></td>
</tr>
<tr>
<td>Power System Reliability</td>
<td>Artificial Intelligence and Machine Learning</td>
<td>Advanced Computer Networks</td>
<td></td>
</tr>
<tr>
<td>CME602</td>
<td>ECE615</td>
<td>GSC601</td>
<td></td>
</tr>
<tr>
<td>Renewable Energy Systems</td>
<td>Optimal Control Systems</td>
<td>Advanced Computer Networks</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE615</td>
<td>ELE615</td>
<td>GSC601</td>
<td></td>
</tr>
<tr>
<td>Embedded Power Generation</td>
<td>Special topics on Automation (upon the discretion of course instructor)</td>
<td>Special topics on Communications (upon the discretion of course instructor)</td>
<td>3+0</td>
</tr>
<tr>
<td>EPE616</td>
<td>Special topics on Smart Grid (upon the discretion of course instructor)</td>
<td>GSC601</td>
<td></td>
</tr>
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</table>
# Course Structure:

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Methodology (3+0)</td>
<td>Independent study (3+0)</td>
</tr>
<tr>
<td>Simulation Modeling (2+1)</td>
<td>Elective-I</td>
</tr>
<tr>
<td>Required Stream based Course (3+0)</td>
<td>Elective-II</td>
</tr>
<tr>
<td></td>
<td>Initial Seminar / Symposium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective-III</td>
<td>Thesis (3+0)</td>
</tr>
<tr>
<td>Elective-IV</td>
<td>Final Seminar / Symposium</td>
</tr>
<tr>
<td>Thesis (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 HJRS/WOS/Scopus Indexed Journal or any conference proceedings) before forwarding MS thesis for evaluation.

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

## Program Summary:

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

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

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)

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

Civilized Studies
REL101 Islamic Studies
PSC301 Pakistan Studies

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

Human Resource Management
HRM301 Human Resource Management

Marketing
MKT301 Principles of Marketing

Natural Sciences
BED101 General Sciences
SSC202 Environmental Studies
Economics
ECO107   Fundamentals of Microeconomics (ICAP-CAF-2, ACCA-F1)
ECO201   Fundamentals of Macroeconomics (ICAP-CAF-2, ACCA-F1)

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

Languages
LAN 10*   Foreign Language I
*1 = Introduction to Arabic *2 = Introduction to French
*4 = Introduction to German *6 = Introduction to Italian
*8 = Introduction to Chinese

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

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>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Three</td>
<td>Semester Four</td>
</tr>
<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</td>
<td>Principle of Taxation</td>
</tr>
<tr>
<td>Practices</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>Business Communication - AML</td>
<td></td>
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<tr>
<td></td>
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</tr>
<tr>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Auditing 1: Conceptual Foundations of Auditing Banking Laws 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>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Seven</td>
<td>Semester Eight</td>
</tr>
<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>

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BS (HONORS) MEDIA STUDIES

BS (Honors) Media Studies is a hands-on multidisciplinary 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 couple of years, 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 can major in either one of two streams i.e. Journalism and Filmmaking, that are offered in the program. However, they share common foundation courses in the first four semesters, before branching out towards their chosen major and concentrate on their mandatory core courses and electives. A total of 144 credit hours of coursework needs to be undertaken for completing the degree requirement, along with a compulsory 6-week internship stint after the sixth semester.

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 still contribute toward the department’s work, as well as from media organizations, digital marketing agencies, and production studios among others.

**Foundation Courses**

- **Communication**
  - COM111 Critical Reading & Creative Writing
  - COM112 Appreciation of Literary Text

- **Economics**
  - ECO106 Basic Economics

- **Islamic Studies**
  - REL101 Islamic Studies

- **Language**
  - LAN112 Urdu I
  - LAN113 Urdu II

- **Law**
  - LAW405 Media Law & Business Ethics

- **Pakistan Studies**
  - PSC301 Pakistan Studies

- **Social Sciences**
  - MMM398 Social Sciences for Media

**Core Course (All Students)**

- MMM344 Screenplay I
- MMM354 Intro to Sound Design
- MMM360 Introduction to Photography
- MMM362 History of Filmmaking
- MMM363 Intro to Design Tools
- MMM374 Introduction to Journalism
- MMM376 Intro to Performing Arts
- MMM383 Introduction to Video Production
- MMM394 Introduction to Creative Arts
- MMM395 Media History
- MMM396 Concept Art
- MMM405 Cinematography

**Core Courses (Production Major)**

- MMM342 Filmmaking – The Art & Craft: Thesis I (6C)
- MMM351 Production Management
- MMM366 Filmmaking – The Art & Craft: Thesis II (6C)
- MMM369 Production Design
- MMM373 Content Creation
- MMM375 Advanced Sound Design
- MMM377 Direction
- MMM382 Editing & Post Production III (6C)
- MMM402 Introduction to Unreal Engine
Core Courses (Journalism Major)

- MMM301  Photojournalism
- MMM318  Business Journalism
- MMM333  Sports Journalism
- MMM336  Human Rights & Gender Reporting
- MMM367  Digital Journalism
- MMM372  Environmental Journalism
- MMM378  Investigative Journalism: Thesis I
- MMM392  Investigative Journalism: Thesis II (6C)

Elective Courses (Production Major)

- MMM301  Photojournalism
- MMM367  Digital Journalism
- MMM384  Design Thinking
- MMM386  Intro to Podcast & Audio Journalism
- MMM399  New Media Technologies: Tools & Applications
- MMM402  Introduction to Unreal Engine
- MMM555  Discovering Film
- ENT403  Entrepreneurship & Small Business

Elective Courses (Journalism Major)

- MMM384  Design Thinking
- MMM396  Concept Art
- MMM399  New Media Technologies: Tools & Applications
- MMM555  Discovering Film
- ENT403  Entrepreneurship & Small Business

Special Summer Course offered to all BS/BBA students

- MMM555  Discovering Film
- MMM399  New Media Technologies: Tools & Applications

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>Introduction to Design Tools</td>
</tr>
<tr>
<td>Introduction to photography</td>
<td>Introduction to Journalism</td>
</tr>
<tr>
<td>Urdu I</td>
<td>Introduction to Video Production</td>
</tr>
<tr>
<td>Intro to Creative Arts</td>
<td>Intro to Performing Arts</td>
</tr>
<tr>
<td>Pakistan Studies</td>
<td>Islamic Studies</td>
</tr>
<tr>
<td>Media History</td>
<td>History of Filmmaking</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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<tbody>
<tr>
<td>Screenplay I</td>
<td>Intro to 3D Animation &amp; Motion Graphics</td>
</tr>
<tr>
<td>Cinematography</td>
<td>UI/UX for Interactive Media</td>
</tr>
<tr>
<td>Concept Art</td>
<td>Introduction to Advertising &amp; PR</td>
</tr>
<tr>
<td>Edit &amp; Post Production</td>
<td>Writing for Digital Media</td>
</tr>
<tr>
<td>Urdu II</td>
<td>Digital Journalism</td>
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<tr>
<td>Introduction to Sound Design</td>
<td>Intro to Podcast &amp; Audio Journalism (J)</td>
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<td></td>
<td>Elective I (P)</td>
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<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<tr>
<td>Studio Production</td>
<td>Production of Documentary</td>
</tr>
<tr>
<td>Digital Marketing Basics</td>
<td>Direction</td>
</tr>
<tr>
<td>Social Sciences in Media</td>
<td>New Media Technologies: Tools &amp; Applications</td>
</tr>
<tr>
<td>Creative Portfolio Management</td>
<td>Content Creation</td>
</tr>
<tr>
<td>Production Design (P)</td>
<td>Production Management (P)</td>
</tr>
<tr>
<td>Screenplay II (P)</td>
<td>Direction (P)</td>
</tr>
<tr>
<td>Sports Journalism (J)</td>
<td>Business Journalism (J)</td>
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<tr>
<td>Photojournalism (J)</td>
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<table>
<thead>
<tr>
<th>Semester Seven</th>
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<tbody>
<tr>
<td>Methods in Media Research</td>
<td>Content Distribution &amp; Promotion</td>
</tr>
<tr>
<td>Media Law &amp; Ethics</td>
<td>Entrepreneurship &amp; Small Business</td>
</tr>
<tr>
<td>Creative Portfolio Management</td>
<td>Human Rights &amp; Gender Reporting (J)</td>
</tr>
<tr>
<td>Investigative Journalism: Thesis I (J)</td>
<td>Editing &amp; Post Production III (6C)</td>
</tr>
<tr>
<td>Elective I – Design Thinking</td>
<td>Investigative Journalism: Thesis II (6C)</td>
</tr>
<tr>
<td>Elective II</td>
<td>Elective I – Discovering Film (J)</td>
</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), eight elective courses (3 credit hours each), five 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 MPhil 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
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<td>Models of Inferences</td>
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<td>STA302</td>
<td>Methods of Data Analysis</td>
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<td>SSC301</td>
<td>History of Ideas</td>
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<td>LAN 1**</td>
<td>Foreign Language I</td>
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<tr>
<td>LAN 2**</td>
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*1 = Introduction to Arabic  
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## Core Courses

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<td>Company Law</td>
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<td>Banking Law in Pakistan</td>
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<td>LAW203</td>
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<td>ECO102</td>
<td>Principles of Macroeconomics</td>
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<td>ECO302</td>
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<td>Monetary Theory &amp; Policy</td>
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<td>ECO315</td>
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<td>BIR302</td>
<td>Political Geography</td>
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<td>World Politics</td>
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<td>BIR305</td>
<td>Religion, Culture &amp; IR</td>
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<td>BIR308</td>
<td>Peace Building and Conflict Zones</td>
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## Elective Courses

### Economics

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<td>ECO310</td>
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<td>ECO314</td>
<td>Contemporary Issues in Macroeconomics</td>
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<td>ECO407</td>
<td>Analysis of Pakistan Industry</td>
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<td>ECO410</td>
<td>Issues in Political Economy</td>
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<td>Resources &amp; Environmental Economics</td>
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<td>ECO518</td>
<td>Governance &amp; Public Policy</td>
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<td>ECOXXX</td>
<td>Agronomics</td>
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<td>ECOXXX</td>
<td>Merger, Acquisition &amp; Restructuring</td>
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### International Relations (IR)

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<td>Confidence Building Measures</td>
</tr>
<tr>
<td>BIRXXX</td>
<td>Introduction to Political Science</td>
</tr>
<tr>
<td>BIRXX</td>
<td>Global Governance</td>
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<tr>
<td>BIRXXX</td>
<td>Muslim Political Thought</td>
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### Law

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<td>LAW407</td>
<td>Statutory Compliance</td>
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<td>LAWXXX</td>
<td>Taxation Law</td>
</tr>
<tr>
<td>LAWXXX</td>
<td>Consumer Protection Act &amp; Electronic Crime Law</td>
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</table>

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<tr>
<td>Islamic Studies</td>
<td>Foreign Language-1</td>
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<td>General English</td>
<td>General Science</td>
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<tr>
<td>Introduction to Psychology</td>
<td>Academic English</td>
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<tr>
<td>Principles of Sociology</td>
<td>Calculus-1</td>
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<td>College Algebra</td>
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Microeconomics Analysis</td>
<td>Macroeconomics Analysis</td>
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<tr>
<td>Foreign Language-2</td>
<td>Methods of Data Analysis</td>
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<tr>
<td>Introduction to IR</td>
<td>Pakistan Studies</td>
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<tr>
<td>Mercantile Law</td>
<td>History of Ideas</td>
</tr>
<tr>
<td>Models and Inferences</td>
<td>Communication skills</td>
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<thead>
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<tr>
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</tr>
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<td>Intellectual property, Patents and copyright</td>
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<td>World Politics</td>
<td>Borders in a Globalization World</td>
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<td>Religion, Culture &amp; IR</td>
<td>Energy Politics</td>
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<thead>
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<th>Semester Seven</th>
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<tbody>
<tr>
<td>Monetary Theory &amp; Policy</td>
<td>Economics Elective-I</td>
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<tr>
<td>Pakistan Economic Policy</td>
<td>Economics Elective-II</td>
</tr>
<tr>
<td>Company Secretarial Practices</td>
<td>Economics Elective-III</td>
</tr>
<tr>
<td>Peacebuilding &amp; Conflict Zone</td>
<td>Economics Elective-IV</td>
</tr>
<tr>
<td>Law Elective-I</td>
<td>Law Elective-II</td>
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<tr>
<td>IR Elective-I</td>
<td>IR Elective-II</td>
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BS ECONOMICS, MEDIA & INTERNATIONAL RELATIONS (EMI)

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It is a 144 credit hour program with 22 compulsory courses (3 credit hours each), eight elective courses (3 credit hours each), five 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.
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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
- 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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  **8 = Intermediate Chinese

Core Courses

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

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

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

Elective Courses

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

International Relations (IR)
- BIR314  Confidence Building Measures
- BIRXXX  Introduction to Political Science
- BIRXXX  Global Governance
- BIRXXX  Muslim Political Thought

Media
- MMM308  Contemporary World Media
- MMM555  Discovering Film
- MMM405  Media, Law and Ethics
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<td>Monetary Theory &amp; Policy</td>
<td>Economics Elective-I</td>
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<tr>
<td>Pakistan Economic Policy</td>
<td>Economics Elective-II</td>
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<tr>
<td>Writing for Digital Media</td>
<td>Economics Elective-III</td>
</tr>
<tr>
<td>Peacebuilding &amp; Conflict Zone</td>
<td>Economics Elective-IV</td>
</tr>
<tr>
<td>Media Elective-I</td>
<td>Media Elective-II</td>
</tr>
<tr>
<td>IR Elective-I</td>
<td>IR Elective-II</td>
</tr>
</tbody>
</table>
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.

This four-year program requires completion of 126 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
MTH102 Business Mathematics
STA104 Quantitative Techniques in Business
SSC104 Principles of Sociology
BED101 General Science
SSC202 Environmental Studies
PSC301 Pakistan Studies
REL101 Islamic Studies
PSY300 Introduction to Psychology

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.)

Psychology Core Courses
PSY301 Research Methods in Business Psychology
PSY302 Writing Business Psychology Research
PSY303 Introduction to Psychological Testing
PSY304 Experimental Psychology
PSY305 Contemporary Social Psychology
PSY309 Developmental Psychology
PSY311 Consumer Psychology
Business Core Courses
ACC101 Introduction to Financial Accounting
FIN201 Introduction to Business Finance
SEL415 Social Advocacy and Change
ENT202 Entrepreneurial Business Operations
LAW409 Corporate and Business Law
SCM501 Supply Chain Management
MKT511 Brand Management

Distribution Courses
ECO101 Principles of Microeconomics
ECO102 Principles of Macroeconomics
MKT302 Marketing Management
MAN306 Intro. to Management & Organizational Behavior
MAN309 Leadership Journey
SSC401 Business Ethics
MAN405 Strategic Management

Elective Courses

Elective Psychology
PSY310 Positive Psychology (Compulsory Elective)
PSY306 Understanding Individual: Personal Construct
PSY307 Psychology of Organizational Change
PSY308 Psychological Aspects of Advertising
PSY501 Work Motivation and Attitude
PSY515 Projective Methods
PSY507 Cyber Psychology, Behavior and Social Networking
PSY508 Health Promotion in Corporate Setting

Elective Business
HRM513 HR Automation (Compulsory Elective)
HRM505 Organizational Change & Development
HRM514 Occupational Health and Safety
HRM515 Employees Engagement & Wellbeing
MKT507 Services Marketing
MKT508 Personal Selling
ENT502 Green Entrepreneurship
ENT503 Competitive Strategies for Startups

Course Structure

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<tr>
<th>Semester One</th>
<th>Semester Two</th>
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</thead>
<tbody>
<tr>
<td>Academic English</td>
<td>Introduction to Financial Accounting</td>
</tr>
<tr>
<td>Business Math</td>
<td>Pakistan Studies</td>
</tr>
<tr>
<td>Islamic Studies</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>General Science</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>Quantitative Techniques in Business</td>
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<tr>
<td>Principles of Sociology</td>
<td>Research Methods in Business Psychology</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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</thead>
<tbody>
<tr>
<td>Introduction to Business Finance</td>
<td>Principles of Management &amp; Organizational Behavior</td>
</tr>
<tr>
<td>Entrepreneurial Business Operations</td>
<td>Business and Professional Speech</td>
</tr>
<tr>
<td>Marketing Management</td>
<td>Environmental Studies</td>
</tr>
<tr>
<td>Persuasive &amp; Analytical Writing for Business Communication</td>
<td>Foreign Language I</td>
</tr>
<tr>
<td>Introduction to Psychological Testing</td>
<td>Business Ethics</td>
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<td>Contemporary Social Psychology</td>
<td>Experimental Psychology</td>
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<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<tr>
<td>Foreign Language II</td>
<td>Consumer Psychology</td>
</tr>
<tr>
<td>Brand Management</td>
<td>Leadership Journey</td>
</tr>
<tr>
<td>Introduction to Data Science</td>
<td>Supply Chain Management</td>
</tr>
<tr>
<td>Writing Business Psychology Research</td>
<td>HR Automation (Compulsory Elective II)</td>
</tr>
<tr>
<td>Developmental Psychology</td>
<td>Elective IV</td>
</tr>
<tr>
<td>Positive Psychology (Compulsory Elective I)</td>
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<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
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</thead>
<tbody>
<tr>
<td>Corporate and Business Law</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Social Advocacy and Change</td>
<td>Elective VII</td>
</tr>
<tr>
<td>Elective V</td>
<td>Elective VIII</td>
</tr>
<tr>
<td>Elective VI</td>
<td>Capstone / Final Year Project</td>
</tr>
<tr>
<td>Internship (non-credit)</td>
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</tbody>
</table>
BS PSYCHOLOGY

The program offers an opportunity to learn about the subject, conventionally, and to see how the notions/theories/models work in the social ecology. Courses like; Psychological crises management; Forensic psychology; Psychology of diversity; Human promotion in corporate settings; Cyber psychology, behavior, and social networking; Work motivation and attitude; Projective methods; Health psychology; Consumer psychology – are phenomenal in imparting knowledge [along with conventional courses] and developing understanding to incorporate the learned ideas in the living situations.

This four years program requires completion of 129 credit hours of course-work [43 courses]. Student can take a minimum load of 12 credit hours (four courses per semester) or a maximum load of 18 credit hours (six 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

COM202 Business and Professional Speech
COM205 Persuasive & Analytical Writing for Business Communication
COM107 Academic English
MTH102 Business Mathematics
STA104 Quantitative Techniques in Business
SSC104 Principles of Sociology
SSC401 Business Ethics
BED101 General Science
SSC202 Environmental Studies
PSC301 Pakistan Studies
REL101 Islamic Studies

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.)
Core Courses
PSY300 Introduction to Psychology
PSY303 Introduction to Psychological Testing
PSY304 Experimental Psychology
PSY305 Contemporary Social Psychology
PSY306 Understanding Individual: Personal Construct
PSY308 Psychological Aspects of Advertising
PSY309 Developmental Psychology
PSY310 Positive Psychology
PSY311 Consumer Psychology
PSY313 History of Psychology
PSY314 Psychopathology
PSY315 Statistics in Psychology

Elective Courses [opt for any 6]
PSY501 Work Motivation and Attitude
PSY515 Projective Methods
PSY507 Cyber Psychology, Behavior and Social Networking
PSY508 Health Promotion in Corporate Setting
PSY502 School Psychology
PSY503 Psychology of Diversity
PSY504 Forensic Psychology
PSY505 Psychological Crisis Management

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>Quantitative Techniques in Business</td>
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<tr>
<td>Business and Professional Speech</td>
<td>Foreign Language I</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>History of Psychology</td>
</tr>
<tr>
<td>Principles of Sociology</td>
<td>Research Methods in Psychology</td>
</tr>
<tr>
<td>Islamic Studies</td>
<td>General Science</td>
</tr>
<tr>
<td>Business Mathematics</td>
<td>Physiological psychology</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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<tbody>
<tr>
<td>Persuasive &amp; Analytical Writing for</td>
<td>Developmental Psychology</td>
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<tr>
<td>Business Communication</td>
<td>Introduction to Psychological Testing</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>Contemporary Social Psychology</td>
</tr>
<tr>
<td>Pakistan Studies</td>
<td>Personality psychology</td>
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<tr>
<td>Writing Psychological Research</td>
<td>Psychology of Education</td>
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<tr>
<td>Foreign Language II</td>
<td>Statistics in psychology</td>
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<td>Business Ethics</td>
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<thead>
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<th>Semester Five</th>
<th>Semester Six</th>
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<tr>
<td>Experimental Psychology</td>
<td>Consumer Psychology</td>
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<tr>
<td>Cognitive Psychology</td>
<td>Understanding Individual: Personal Construct</td>
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<tr>
<td>Psychological Aspects of Advertising</td>
<td>Psychopathology</td>
</tr>
<tr>
<td>Positive Psychology</td>
<td>Clinical Psychology</td>
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<tr>
<td>Organizational Psychology</td>
<td>Fundamentals of Psychological Counselling</td>
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<tr>
<td>Health Psychology</td>
<td>Cross-cultural Psychology</td>
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<thead>
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<th>Semester Seven</th>
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<tr>
<td>Project Practicum</td>
<td>Elective IV</td>
</tr>
<tr>
<td>Elective I</td>
<td>Elective V</td>
</tr>
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<td>Elective II</td>
<td>Elective VI</td>
</tr>
<tr>
<td>Elective III</td>
<td>Internship (Non Credit)</td>
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</table>
BS Education (4 Year)

BS (Education) 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 BS (Education) four years 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 (MPhil/PhD).

This is a 144-credit hour 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 (7 Courses)**
- COM101 General English
- REL101 Islamic Studies
- COM107 Academic English
- BED110 Introduction to Info. & Communication Technology (ICT)
- BED203 Foundations and history of Education
- PSC301 Pakistan Studies
- SSC101 Introduction to Psychology

**Content (10 Courses)**
- LAN112 Urdu I
- BED101 General Science
- BED107 General Mathematics
- BED335 Teaching through Arts and Crafts
- BED303 Contemporary Issues & Trends in Education
- SSC202 Environmental Studies
- BED401 Area of Specialization I
- BED403 Area of Specialization II
- BED405 Area of Specialization III
- BED205 Early Childhood Education

**Foundation (8 Courses)**
- BED206 Educational Psychology
- BED103 General Methods and Principles of Teaching
- SED102 Philosophy of Education and its Psychological Roots
- BED213 Teaching in Early Years
- BED231 Educational Policy and Economics
- BED421 Sociology of Education
- BED301 Curriculum Development
- BED233 Evaluation and Assessment
Professional (19 Courses)
BED21 Teaching of Mathematics
BED415 Lifelong Learning
BED209 English language Teaching
BED341 Teacher Education
BED238 Interpersonal Comm. Skills in Educational 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
BED409 Marketing Education Services
BED417 Quality Assurance
BED491 Research Project

Teaching Practice (2 courses)
BED281 Teaching Practicum – I
BED381 Teaching Practicum – II

Course Structure

<table>
<thead>
<tr>
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<th>Semester Two</th>
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<tbody>
<tr>
<td>General English</td>
<td>Academic English</td>
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<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>
</tr>
<tr>
<td>Urdu I</td>
<td>General Methods and Principles of Teaching</td>
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<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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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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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>
</tr>
<tr>
<td>Teaching of Mathematics</td>
<td>Teaching Practicum – I</td>
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<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
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</thead>
<tbody>
<tr>
<td>Contemporary Issues &amp; Trends in Edu.</td>
<td>Curriculum Development</td>
</tr>
<tr>
<td>Edupreneurship</td>
<td>Research Methods in Education I (Qualitative)</td>
</tr>
<tr>
<td>Teacher Education</td>
<td>Critical Thinking and Reading</td>
</tr>
<tr>
<td>Educational Counseling</td>
<td>Teaching through Arts and Crafts</td>
</tr>
<tr>
<td>Teaching of Social Science Subjects</td>
<td>School Management</td>
</tr>
<tr>
<td>Teaching Practicum – II</td>
<td>Psychological Assessment</td>
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</table>

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<thead>
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<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>
</tr>
<tr>
<td>Research Methods in Education II (Quantitative)</td>
<td>Inclusive Education</td>
</tr>
<tr>
<td>Area of Specialization – I *</td>
<td>Research Project (6 credits)</td>
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<tr>
<td>Area of Specialization – II*</td>
<td>Marketing Education Services</td>
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<tr>
<td>Area of Specialization – III *</td>
<td>Quality Assurance in Education</td>
</tr>
<tr>
<td>Comparative Education System</td>
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</tbody>
</table>

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

**Students must also complete 6 weeks of internship
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 (MPhil/PhD).

This is a 90 credit hours weekend program.

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

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

Foundation Courses (6 Course)
BED120  Academic Writing and Seminar Skills
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

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<thead>
<tr>
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<th>Semester Two</th>
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<tbody>
<tr>
<td>Foundations and History of Education</td>
<td>Inclusive Education</td>
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<tr>
<td>Curriculum Development</td>
<td>Teacher Education</td>
</tr>
<tr>
<td>Evaluation &amp; Assessment</td>
<td>Critical Thinking and Reading</td>
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<tr>
<td>Innovations and Technology in Education</td>
<td>Educational Psychology</td>
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<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
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</thead>
<tbody>
<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 Writing and Seminar Skills</td>
<td>Teaching Practicum-II</td>
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<tr>
<td>Teaching Practicum-I</td>
<td>School Management</td>
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<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
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<tbody>
<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>
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<tr>
<td>Early Childhood Education</td>
<td>Area of Specialization – III*</td>
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<td>Strategic Management of Schools</td>
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<tbody>
<tr>
<td>Comparative Education Systems</td>
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<td>Educational Counselling</td>
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<tr>
<td>Teaching Practicum (6 credit hours)</td>
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<tr>
<td>Research Project (6 credit hours)</td>
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</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 (MPhil/PhD).

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, MSc., MCom 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

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<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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<tr>
<td>Foundations and History of Education</td>
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<td>Evaluation &amp; Assessment</td>
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<tr>
<td>Innovations and Technology in Education</td>
<td>Teacher Education</td>
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<th>Semester Three</th>
<th>Semester Four</th>
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<tbody>
<tr>
<td>Area of Specialization – I *</td>
<td>School Management</td>
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<td>Area of Specialization – II *</td>
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<tr>
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<tr>
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</tbody>
</table>

* Areas of Specialization: School Leadership & Management, Early Childhood Development, English Language Teaching, Teaching of Science, Teaching of Mathematics, Teaching of Social Sciences
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**
EDM415  Educational Philosophy and Ethics
EDM437  Qualitative Methods in Research
EDM439  Quantitative Research and Statistical Analysis
EDM518  Evaluation and Assessment in Education
EDM526  Curriculum Management and Planned Change*
EDM602  Educational Policy and Economics
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

Management
MAN418  Management and Organizational Dynamics
MAN612  Strategic Management*
MAN606  Business Analytics

Marketing
MKT402  Marketing Management
MKT509  Consumer Behavior
MKT610  Marketing Strategies and Value Innovation*

Course Structure
Refer to Page No. 38.

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
MSc ORGANIZATIONAL PSYCHOLOGY AND HUMAN RESOURCE MANAGEMENT

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 84 credit hours of course work – 28 courses including a research project of 3 credit hours. 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, 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
PSY434 Personality Theories
Human Resource Management
HRM617 HR Analytics
HRM619 Talent Acquisition
HRM621 Learning and Organizational Development
HRM408 Human Resource Issues in Pakistan
HRM409 Organizational Consulting Skills
HRM530 Research Practicum in HRM
HRM620 Labor Studies and Employee Relations
HRM622 Negotiations and Conflict Resolution Skills
HRM623 Managing Organizational Change
HRM624 Talent Management and Performance Development

Elective Courses

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

Human Resource Management
HRM618 Managing Diversity and Inclusion in Organization
HRM612 Strategic Human Resource Management

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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<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>
<td>Managing Human Capital</td>
<td>Psychological Testing-I</td>
</tr>
<tr>
<td>HR Analytics</td>
<td>Talent Acquisition</td>
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<tr>
<td>Introduction to Behavioral Statistics</td>
<td>Human Resource Issues in Pakistan</td>
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<td>Semester Three</td>
<td>Semester Four</td>
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<td>Research Methods in Organizational Psychology</td>
<td>Consumer Psychology</td>
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<tr>
<td>Counseling Psychology</td>
<td>Personality Theories</td>
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<tr>
<td>Negotiations and Conflict Resolution Skills</td>
<td>Learning and Organizational Development</td>
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<tr>
<td>Labor Studies and Employee Relations</td>
<td>Leadership and Strategic Change</td>
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<tr>
<td>Managing Organizational Change</td>
<td>Talent Management and Performance Development</td>
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<td>Semester Five</td>
<td>Semester Six</td>
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<td>Psychological Testing-II</td>
<td>Elective I</td>
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<tr>
<td>Behavior Modification in Industry</td>
<td>Elective II</td>
</tr>
<tr>
<td>Personnel Psychology</td>
<td>Elective III</td>
</tr>
<tr>
<td>Research Practicum in HRM</td>
<td>Elective IV</td>
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</tbody>
</table>

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

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

Eligibility

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

Program Structure

MPhil is a 30 credit hour program with 8 courses and one thesis of 6 credit hours. Each of the eight 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.
MS ECONOMICS

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 four deficiency courses* as a pre-requisite to the MPhil 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 MPhil/MS (Education) or equivalent will complete a course work of 24 credit hours from Column –I.

ii. The candidates already holding an MPhil/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 four deficiency courses from Column-III.

(All candidates applying for PhD 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 three years and maximum are eight 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>
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</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><strong>Elective Courses</strong></td>
<td>BED341 Teacher Education</td>
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<td><strong>Elective Courses</strong></td>
<td><strong>Elective Courses</strong></td>
<td><strong>Elective Courses</strong></td>
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<tr>
<td>PED741 Application of Research Methods in Education</td>
<td>MPE706 Global Trends 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>
<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>
<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>
<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>
<td>MPE721 Edupreneurship in the Changing World</td>
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<td>PED820 Innovations &amp; Pedagogies in Teacher Education</td>
<td>MPE725 Distance Learning in 21st Century</td>
<td>MPE725 Distance Learning in 21st Century</td>
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<td>PED839 Designing &amp; Conducting Action Research in Education</td>
<td>MPE727 Lifelong Learning in Changing Contexts</td>
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<td>MPE730 Planning Developing and Evaluating Curriculum</td>
<td>MPE730 Planning Developing and Evaluating Curriculum</td>
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</tbody>
</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 coursework and dissertation/thesis. Minimum duration is three years and maximum is eight 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)
four 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>
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</thead>
<tbody>
<tr>
<td>Advanced Applied Econometric</td>
<td>Elective I</td>
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<tr>
<td>Advance Microeconomics</td>
<td>Elective II</td>
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### Course Structure (MS Without Economics background)

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

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<th>Semester One</th>
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<td>Microeconomics</td>
<td>Development Economics I</td>
<td>Applied Econometrics Qualitative Research Methods International Trade &amp; Globalization</td>
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<td>Semester Seven</td>
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<td>Research Thesis</td>
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<td>Deficiency Course I</td>
<td>Deficiency Course IV</td>
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<td>Advance Microeconomics</td>
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<td>Semester Four</td>
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<td>Semester Seven</td>
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<td>Semester Eight</td>
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INTERNSHIP PROGRAM

At IoBM the Internship Program is designed to allow students to work on meaningful assignments and gain real-world experience; thus, making them immediately valuable for the organisations they join upon graduation. The internship aims to provide IoBM students with relevant corporate experience in reputed organisations. An internship bridges the gap between the theoretical knowledge and practical skills needed in professional life. Real-world experience related to their field and knowledge is of vital importance to students in two main areas:

Work Experience

An internship is a means to gain hands-on work experience, develop specific skills and knowledge, and network with people from the student’s chosen field. Moreover, employers assess the skills and abilities of prospective employees by evaluating their previous experience. Students pursue career-related opportunities before graduation, thereby obtaining an edge over other candidates in the competitive job market.

Career Choices

An internship provides a more accurate picture of what individuals would do in certain professions. After experiencing a particular job environment and observing what it entails, students may decide if this is the right career. The internship is compulsory for MBA regular and Bachelors’ students. MBA weekend program and evening program students are exempted from the internship program as they are already on the job.

Eligibility for Internship

MBA: Minimum CGPA = 2.8  Semesters completed at IoBM = Two  
Bachelors Degree CGPA = 2.4  Semesters completed at IoBM = Four or Five

- Candidates must have completed MKT 404, Methods in Business Research (MBR) or any other equivalent course according to their degree program.
- Interested and eligible students are required to register INT 302 (Non credit) on SMARTZ.
- A registration fee may apply.
- The internship is for a minimum of six continuous weeks.
- Students are not allowed to take any weekday course along with official internship program.
- The internship is allowed only in organisations approved by the Internships & Placements Department.
- All interns are required to write a report based on the given guidelines.
- SOPs of internship will be provided to registered interns prior to the start of internship.
**LIST OF COMPANIES IN WHICH IoBM STUDENTS DO INTERNSHIP**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>10Pearls</td>
<td>Alternate Research Pvt. Ltd.</td>
</tr>
<tr>
<td>14th Street Pizza</td>
<td>Aman Foundation</td>
</tr>
<tr>
<td>360 Training</td>
<td>American Pacific Enterprises LLC</td>
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<tr>
<td>360Training.com</td>
<td>AMFCO International</td>
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<td>3M Pakistan Pvt. Limited</td>
<td>Amir Adnan</td>
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<td>A.F. Ferguson &amp; Co. Chartered Accountants</td>
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<td>A.I. MIR LLC</td>
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<td>AAJ News TV</td>
<td>APL Pakistan Pvt. Ltd.</td>
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<td>Aaj TV</td>
<td>Apna Karachi FM 107</td>
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<td>AASA Consulting (Pvt) Ltd.</td>
<td>APTECH Computers Education</td>
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<td>Aba Ali Habib Securities</td>
<td>Arif Habib Bank Limited</td>
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<td>Abacus-Global</td>
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<td>ABAMCO Limited</td>
<td>ARMTECH Business Solutions (Pvt.) Ltd.</td>
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<td>Abbott Laboratories Pakistan Ltd.</td>
<td>Arpatech</td>
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<td>Abudawood Trading Company</td>
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<td>Artal Group of Companies</td>
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<td>Artistic Milliners</td>
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<td>Adam Motor Co. Limited</td>
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<td>Adamjee Life Insurance Company</td>
<td>AsiaCare Health &amp; Life Insurance</td>
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<td>ADVANS Micro Finance Bank</td>
<td>Asktourism</td>
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<td>Atlas Honda</td>
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<td>Aga Khan Health Services</td>
<td>Attock Cement Pvt. Limited</td>
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<td>Auspak</td>
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<td>Agha Steel</td>
<td>Automobile Corporation Pakistan</td>
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<td>Ahmed Foods</td>
<td>Avanza Solutions</td>
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<td>AIG Pakistan</td>
<td>Aventis Pharma Pakistan Limited</td>
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<td>Airlift</td>
<td>Axis Communications</td>
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<td>Airmen Golf Course &amp; Recreational Park</td>
<td>Badar Expo Solutions (BXSS)</td>
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<td>Aisha Steel Mills Ltd.</td>
<td>Bandhani Group</td>
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<td>Akber Ali &amp; Sons</td>
<td>Bank Al Baraka</td>
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<td>AKD Commodities</td>
<td>Bank Al Habib</td>
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<td>AKD Securities</td>
<td>Bank AlFalah Limited</td>
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<td>Akhuwat Foundation</td>
<td>Bank Al-Habib Limited</td>
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<td>Al Marai, Saudia Arabia</td>
<td>Bank Islami Limited</td>
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<td>Al Meezan Investment Management Ltd</td>
<td>Bank of Punjab</td>
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<td>Barclays Bank Limited</td>
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<td>Alfalaha Securities</td>
<td>BASF Pakistan</td>
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<td>Ali Asghar Textile Mills Ltd.</td>
<td>Bayer Pakistan</td>
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<td>Allianz EFU Health Insurance Limited</td>
<td>BenchMatrix</td>
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<td>Al-Mughal Trading Corporation</td>
<td>Bentham Science Publishers</td>
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<td>Alstom Pakistan (Pvt.) Limited</td>
<td>Berger Paints Pakistan Limited</td>
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Berlitz
Beyond Profits
Blitz Advertising (Pvt.) Limited
Blue Communications
BMA Capital Management Limited
BOC Pakistan Limited
BOL Network
Boom Group Pakistan
Bosch Pharmaceuticals
Bottomline Pvt. Ltd.
Bounty Studio
Brand Mileage
Brand Synario
Breeze Com Pvt. Ltd.
Bridgestone Tires Pakistan Limited
Bullseye 360
Burj Bank Ltd.
Business Plus
Business Recorder
Byco Petroleum Pakistan Ltd.
Cadbury Pakistan Ltd.
Calibre Vintage
Candyland Industries Limited
Capital Management (Pvt.) Limited
Carbonated TV
Careem
CDC Pakistan
Celentas Digital Solutions
Centry Technologies (Pvt.) Ltd.
Central Depository Company of Pakistan
CIM Shipping
Citi Security
Citibank N.A.
Citizen Archive of Pakistan
Citizens Foundation
Clariant Pakistan Limited
Classic Designs
Clicktrade
Cloud BPO
Clouds Innovators Solution
CM Pak Ltd.
Coats Pakistan Pvt. Ltd.
Coca-Cola Beverages Pakistan Ltd.
Colgate Palmolive Pakistan Ltd.
Collective Wizdom
CommTel Digital
Contact Plus
Continental Biscuits Pvt. Limited
Contract Advertising
Converge Technologies Pvt Ltd.
Creative Chaos Pvt. Ltd.
Creative Edge Communications
Creative Factor
Creek Developers
Crescent Insurance
Crescent Steel and Allied Products Limited
Crown Group of Companies
Crystal-Lite
Cubix Labs
Cupola Pakistan Limited
Custom HR Solutions
Cybernet
Dadabhoy Investments Pvt. Ltd.
Dadex
Dalda Foods Pvt. Ltd.
DAMCO Pakistan (Pvt) Ltd.
Dany Technologies
Daraz Pakistan
Daraz.Com
Dawlance (Pvt.) Limited
DAWN News
Dawood Hercules Corporation
Deal Club
Deal Today
Dealon
Deloitte Pakistan
Descon Engineering
Deutsche Bank
Dewan Group of Companies
Dewan Mushtaq Trade Ltd.
DG Harbour
DGS Pvt. Ltd.
DHL Global Forwarding
DHL Pakistan Limited
Digital Tribe
Directing Edge
DMK Consultancy
Dollar Industries
Dolmen Group
Dot Images
Drug Information Systems
Dubai Islamic Bank Limited
Duleaf
Dupont Pakistan
EDGE Financials
EFU General Insurance Limited
EFU Life Assurance Limited
Elixir Securities Pakistan Ltd.
Empact
Engage 24X7
Engage Consulting
English Biscuits Manufacturers Ltd.
Engro Corp.
ENI Pakistan Limited
EPFirms
Ephlux
EPlanet Communication
Epoxy Industries (Pvt.) Limited
Invortex Technologies
Iris Communication
Islamic Investment Bank
Ismail Industries
Ismail Iqbal Securities
IT Link Online
J. Walter Thompson Asiatic (Pvt.) Ltd.
Jaag Broadcasting Systems Pvt Ltd.
Jaffer Brothers Limited
Jahangir Siddiqui & Co. Limited
Jason Group of Companies
Jazz Warid
JCR -VIS
Jeem Solutions
Johnson & Johnson Pakistan Ltd.
Jotun Paints
JS Bank Limited
JS Global Capital Limited
JS Investment
Junctionz
KalSoft (Pvt.) Limited
Karachi Deals
Karachi International Container Terminal Ltd.
Karachi Stock Exchange Limited
Karachi Vocational Training Institute
KASB Bank Limited
KASB Capital
KASB Funds Limited
KASB Securities
K-Electric
Khaliq Fashion
Khwaja Ghareeb Nawaz Trust
KNYSYS
Kopak Shipping Company
KPMG Taseer Hadi & Co.
KZR Associates
Lakson Group of Companies
Lalani & Associates
Land O’Lakes Inc.
Lane 12
Lasmo Oil Pakistan Limited
LGS Matrix
Liberty Books
Lilly Pakistan (Pvt) Ltd.
Linde Pakistan
Live Securities Pvt. Ltd.
Lo’real Pakistan
Logic Information’s
Logicose
Lootlo.pk
Lucky Cement
Lucky Textile Mills
Lucky Knits
M. Yousuf Adil Saleem & Co. Chartered Accountants
Maersk Sealand
Magnus Investment Advisors Ltd.
Majsons Corporation
MAL Pakistan Limited
Manhattan Leo Burnet
Manzor Pakistan
Maple Pharmaceuticals Pvt. Ltd.
Marie Stopes Society
Markematics Pvt. Ltd.
Martin Dow Pharmaceutical
Mass Advertising Pvt. Ltd.
Mazars
MCB Bank Limited
MCB-Arif Habib Savings & Investments Limited
Meat One
Media Axis
Media Max Pvt. Limited
Media Pulse Pvt. Limited
Meezan Bank Ltd.
Mehran Enterprises
Merck Marker Pvt. Ltd.
Merit Packaging Pvt. Ltd.
Meritocracy
Metro Cash & Carry Pakistan
Metropolitan Bank Limited
MGH Group
Microsoft Corporation
Midas Safety
Mindshare Pakistan Pvt. Limited
Mitsubishi Corporation
Mobil Askari Lubricants
Mobilink
Mobitel, KSA
Mondelz
Monsieur
Mother and Child Welfare Foundation
MS Associates
MullenLowe & Rauf
Muller & Phipps Pakistan Pvt. Ltd.
Multinet Pakistan Pvt Ltd
Multinet Pakistan Pvt. Ltd.
Mushawar Consulting
Mustafa & Co. Pvt. Limited
MWM Studio
Nabiqasim Industries
Najmi Bilrami Collaborative Pvt. Ltd.
Nanosoft Technologies Pvt. Ltd.
Narejo Human Resources
National Bank of Pakistan
National Clearing Company of Pakistan Ltd.
National Commodity Exchange
National Foods Limited
National Fullerton Asset Management Ltd.
National Industrial Parks Ltd. (NIP)
National Insurance Company
National Investment Company of Pakistan
National Investment Trust
National Marketing Services
Naveena Export Pvt. Limited
NBP Funds Management
Nedo Corporation
Nestle Pakistan
Net Space Systems
New Era Industries
New Jubilee Insurance Co. Limited
Next Degree
Next Generation Innovations
NIB Bank Ltd.
Nielsen Pakistan
Nike Pakistan Limited
Nizami Bijli
Nolin BPO
Novartis Pharma Pakistan Limited
OBS Group
Oceanic Star Line (Pvt) LTD
Oman National Electronics, Dubai
OMD Pakistan
OMV Pakistan Exploration
Oratech Systems Pvt. Limited
Orient Public Relations
Orix Pakistan Limited
Oxford University Press
Oxygene Pakistan
P&O Nedlloyd
Packages Limited
Pak Mediacom Pvt. Limited
Pak Oman Microfinance Bank
Pak-Arab Refinery Limited
Pakistan Institute of Corporate Governance
Pakistan Institute of Management
Pakistan Petroleum Ltd.
Pakistan Refinery Ltd.
Pakistan Services Limited
Pakistan State Oil Company Ltd.
Pakistan Super League (PSL)
Pakistan Telecommunication Co. Ltd.
Pakistan Television Corporation
Pakistan Tobacco Company (British American Tobacco)
Pakistan Vehicle Engineering (Pvt) Ltd.
Pak-Kuwait Investment Co. Ltd.
Pak-Petrochemical
Pak-Suzuki Motors Co. Limited
Parke Davis & Co. Limited
Pastel Communications
Path Group of Companies
PCI Group
Pearl Packages
Pegasus Consultancy (Pvt.) Ltd.
Pfizer Laboratories Limited
PharmEvo Pvt. Ltd.
Pharmatec
Philip Morris International
Philip Pakistan
Philips Electrical Co. of Pakistan
PIRANA Group
Pixarch
Pizza Hut
Pizza Hut – MCR (Pvt) Ltd.
Pizza Next - MFC Pvt. Ltd.
Plastech Products (Pvt.) Ltd.
Polaris
Premier Systems Pvt. Ltd.
Prestige Communications Ltd.
Prestige Grey
Price Solution Pvt. Ltd.
Prime HR
Procter & Gamble
Promotech Media Solution (Pvt) Ltd.
Protege Global
Qineqt
Qordata
Qubee
Rain Bargain
Reactivate Pvt. Ltd
Reckitt Benckiser Pakistan Ltd.
Red Tape Media
Resources Linked
Reveal Pakistan
RG Blue Communications (Pvt) Limited
Rhone Poulenc Rorer Pakistan Ltd.
Rising Technologies
Robotics Labs
Roche Pharmaceuticals Limited
Rohi International Pvt. Ltd.
Roshan Media
S13 - Systems Innovations Pvt. Ltd.
Sach International
Sagacious Business Consultancy
Salsoft Technologies Pvt. Ltd
Samba Bank Ltd.
Sana Safinaz
Sanofi Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
SBT Japan
Schneider Electric
School of Leadership
SCT Group
Sea Gold limited
Searle Pharmaceuticals
Security Papers Limited
Service Sales Co.
Shabbir Tiles & Ceramics Ltd.
Shafi-Reso Chemicals
Shaheen Air International
Shaheen Airlines
Shajar Capital
Shamrock
Shan Foods Pvt. Ltd.
Shangrila Pvt. Ltd.
Sharaf Shipping Agency
Shell Pakistan Limited
SibiSoft Inc.
Sidat Hyder Morshed Associates Private Limited
Siemens Pakistan Engineering Co. Limited
Signium International
Silk Bank
Sindh Education Foundation
Singer Pakistan Limited
SKF Pakistan Pvt. Ltd
Small & Medium Enterprise Development Authority (SM-EDA)
Snack Bites Company
So Safe Pakistan
Social Sell
Socially Global
Solutionicks
Soorty Enterprises
Spark Communication
SSG Consulting
Stancos Pvt. Limited
Standard Chartered Bank Limited
Starcom Pakistan
Starcrest Communications
State Bank of Pakistan
Statuspro Inc.
STEP Consultants
Stitchers International
Stork Prints Pakistan
Strategic HR Promotion (SHRP)
Streebo
Strongman Medline
Structure Lab Services Pakistan
Sufi Brothers
Sui Southern Gas Company Ltd.
Sukoon.Com
Summit Bank Limited
Sun Consultants
Sun Enterprises
Sun Systems
Super Trading Inc.
SWVL
Symbios.pk
Synapse Consulting
Sysnet Pakistan Pvt. Ltd.
Systems Limited
Talent Optimizers
Tameer Micro Finance Bank Ltd.
Tapal Tea Pvt. Ltd.
Target Resourcing
Tarzz
Tata Group of Industries
Tata Textile Mills Ltd.
Taurus Securities Ltd.
TBH Employment and Consulting Services
TCS (Pvt.) Limited
TCS E-COM
Teach for Pakistan
Teamants
Teamz International
TeleCard Ltd.
Telemart
Telenor Pakistan Limited
TenPearls
The Bank of Khyber
The Brand Consultant
The Express Tribune
The First Micro Finance Bank Ltd.
The Learning Organisation
The Leatger Grandeur
The Recruiters
The Snack Bites Company
Thinkline
Third Eye Managed Services
Time & Vision Advertising
Times Consultant (Pvt) Ltd.
TIPU Associates
TNI - Worldwide Partners Inc.
Together
Top Boss
Total Lubricants
Touchpoint (Pvt) Ltd.
Toyota Indus Motor Company
TPL Holdings
TPL Trakker Limited
TPS
TradeKey
Transit HR Consulting
Transworld Associates
Travel Mate
Travel Solutions
Travelport
Tri Pack
Triple E Pvt. Limited
TV One - Airwaves Media Pvt. Ltd.
Uber
UBL Fund Manager
UBL Insurers
Ufone
Uniferoz
Unilever Pakistan Limited
Unique Pakistan
Unisys Pakistan Pvt. Limited
United Consultants
United Assets Management Co. Ltd.
United Bank Limited
United Consultants Pvt. Limited
United Energy Pakistan Ltd.
United Marine Agencies
United Registrar of Systems Limited
United Sales Pvt. Limited
Unity Foods
Universal Brush Ware Pvt. Ltd.
Universal Brushware
Urbanite
US Consulate, Karachi
USAID Pakistan
Utopia Pvt Ltd
Versa Canada Inc.
Visa International (Asia Pacific) Ltd.
Vision Express
Walnut Communications
Ward Howell International
Warid Telecom
Waterlink Group of Companies
Wavetec Pvt. Ltd.
Weekend World Marketing Limited
Westminster & Eastern Financial Services Ltd.
Winstar Pvt. Ltd.
World Tel
WorldCall Broadband Limited
Wrap n Roll
WWF Pakistan
Xenith Public Relations (Pvt.) Ltd.
Younus Brothers Group
Yunus Textile Mills Ltd.
Zameen.com
ZAP Infotech Inc.
ZEPCOM
ZH Technologies Inc.
ZIL Limited
Zishan Engineers Pvt. Ltd
Zong China Mobile
ZRG International
IoBM emphasises close collaboration with the government, firms, banks and leading HR consultants to ensure appropriate induction of its graduates into these organisations. Close links are maintained with CEOs and Heads of Departments in organisations to provide graduates with the best possible career prospects. Efforts are made to match students’ talents with the requirements of both multinational and local organisations.

IoBM’s Placement Department provides a firm commitment to its graduates for developing their careers. This begins when the student is inducted and continues with a lifelong partnership. Some of the activities designed students’ placement include but are not limited to the following.

**Publishing Graduate Directory**

Graduates are invited to showcase their resumes in IoBM’s Graduate Directory. GD is circulated to 150 national and multinational companies and is an essential tool for being placed in the market.

**Career Counselling Sessions**

The placement department holds Career Counselling Sessions for the final semester students. In these sessions, executives of renowned companies mentor the graduating batch students in one-to-one sessions. The purpose of these sessions is to

- uncover the underlying concerns of students about their area of interest,
- answer their questions regarding professional life,
- guide them in building their career road map and prepare them to step into the corporate world.

**Job Announcements**

IoBM’s placement department manages a database of job opportunities of reputed companies/organisations in the market. These opportunities are communicated regularly to our students, graduates & alumni via group emails.

**Career Fairs**

Career Fair is the annual feature of IoBM. It provides a meeting ground between the corporate world and students/graduates with resumes to HR representatives. Students are selected for jobs against companies’ requirements immediately or later since their data remains readily available with such organisations for possible employment.

**Employability Enhancement**

The department organises workshops and sessions on employability enhancement for our students. These workshops are on how to give interviews, CV writing, professional personality development etc. These workshops are conducted by professionals having extensive corporate experience and provide the students with a boardroom perspective, valuable practical tips and a unique networking opportunity with industry gurus. It helps our students & graduates to get good jobs and achieve rapid progression therein.

**On-Campus Recruitment Drives**

The department facilitates companies to conduct on-campus recruitment drives. On the day of the recruitment drive, employers can conduct information sessions, as well as conduct employment tests or on-the-spot interviews

**Career Counseling advice**

Guidance and counselling are essential aspects of development for young adults at IoBM. The department is constantly engaged in
LIST OF COMPANIES IN WHICH IoBM GRADUATES ARE EMPLOYED

10Pearl
14th Street Pizza
1LINK (Guarantee) Limited
360 Training
3M Pakistan Pvt. Limited
A.F. Ferguson & Co. Chartered Accountants
A.I. MIR LLC
AAJ News TV
Aaj TV
AASA Consulting (Pvt) Ltd.
Aba Ali Habib Securities
Abacus Consulting
Abacus-Global
ABAMCO Limited
Abbott Laboratories Pakistan Ltd.
Abudawood Pakistan
ACCA Pakistan
Ace Insurance Limited
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Adam Motor Co. Limited
Adamjee Life Insurance Company
Adcom Leo Burnett
ADM Denim
ADVANS Micro Finance Bank
Aftab Associates
Aga Khan Education Services
Aga Khan Health Services
Aga Khan University
Agha Steel Mills
Agility Logistics Pakistan
Agro Processors and Atmospheric Gases (Pvt.) Ltd.
Ahmed Foods
AIG Pakistan
Airlift Technologies
Airmen Golf Course & Recreational Park
Aisha Steel Mills Ltd.
Akber Ali & Sons
AKD Commodities
AKD Investment Management Ltd
AKD Securities
Akhuwat Foundation
Al Marai, Saudia Arabia
Al Meezan Investment Management Limited
Albaraka Bank Limited
Alfalah Securities
Ali Asghar Textile Mills Ltd.
Ali Gohar & Co. Limited

Ali Gohar and Company (Pvt) Limited
Al-Khair Distributor
Allianz EFU Health Insurance Limited
Al-Mughal Trading Corporation
Alstom Pakistan (Pvt.) Limited
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AMFCO International
Amir Adnan
Amreli Steels Limited
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Automobile Corporation Pakistan
Avanza Solutions
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Bentham Science Publishers
Berger Paints Pakistan Limited
Beyond Profits
Blitz Advertising (Pvt.) Limited
Blue Chip FMCG (UAE)
Blue Communications
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BOC Pakistan Limited
BOL Network
Boom Group Pakistan
Bosch Pharmaceuticals
Bottomline Pvt. Ltd.
Bounty Studio
Brand Mileage
Brand Synario
Breezecom Pvt. Ltd
Bridgestone Tires Pakistan Limited
British Council Pakistan
Brookes Pharma
Bulls Eye Communications
Bulseye 360
Burj Bank Ltd.
Business Plus
Business Recorder
Byco Petroleum Pakistan Ltd.
Cadbury Pakistan Ltd.
Calibre Vintage
Capital Management (Pvt.) Limited
Carbonated TV
Careem Pakistan
Carfirst
Celentas Digital Solutions
Centegy Technologies (Pvt.) Ltd.
Central Depository Company of Pakistan
Charter for Compassion Pakistan
Child Life Foundation
CIM Shipping
Citi Security
Citibank N.A.
Citibank N.A. Pakistan
Citizen Archive of Pakistan
Citizens Foundation
Clariant Pakistan Limited
Classic Design
Clicktrade
Cloud BPO
Cloud Innovators Solution
CM Pak Ltd.
Coats Pakistan Pvt. Ltd.
Coca-Cola Beverages Pakistan Ltd.
Colgate Palmolive Pakistan Ltd.
Collective Wizdom
Commtel Digital
Contact Plus
Continental Biscuits Pvt. Limited
Contract Advertising
Converge Technologies Pvt Ltd.
Creative Chaos Pvt. Ltd.
Creative Edge Communications
Creative Factor
Creek Developers
Crescent Insurance
Crescent Steel and Allied Products Limited
Cubix Labs
Cupola Pakistan Limited
Custom HR Solutions
Cybernet
Dadabhoy Investments Pvt. Ltd.
Dadex
Daewoo Pakistan Express Bus Service
Dalda Foods Pvt. Ltd.
DAMCO Pakistan (Pvt) Ltd.
Dany Technologies
Daraz Pakistan
Dawlance (Pvt.) Limited
DAWN News
Dawood Hercules Corporation
Deal Club
Deal Today
Dealon
Deloitte Pakistan
Descon Engineering
Deutsche Bank
Dewan Group of Companies
Dewan Mushtaq Trade Ltd.
DG Harbour
DGS Pvt. Ltd.
DHL Global Forwarding
DHL Pakistan Limited
Digital Tribe
Directing Edge
DMK Consultancy
Dollar Industries
Dolmen Group of Companies
Dot Images
Drug Information Systems
Dubai Islamic Bank Limited
Duleaf
Dupont Pakistan
EDGE Financials
EFU General Insurance Limited
EFU Life Assurance Limited
Ellahi Group
Elixir Securities Pakistan Ltd.
Empact
Engage 24X7
Engage Consulting
Engage Consulting Limited
English Biscuits Manufacturers Ltd.
Engro Corp.
Engro Fertilizer
Engro Foods
Engro Polymer
ENI Pakistan Limited
EPFirms
Ephlux
EPlanet Communication
Epoxy Industries (Pvt.) Limited
Escape Advertisement
eSys Pakistan
Etihad Airways
Etilize Pvt. Ltd.
Evaluation Factor (Pvt) Ltd.
Evernew Entertainment
Evolution Advertising
Excelerate
Express Media Network
Express News
EY Ford Rhodes
Faysal Asset Management Ltd.
Faysal Bank Limited
Fidelity Insurance
Finja Pvt Ltd
First Capital Equities Pvt. Limited
First Women Bank Ltd
First Women Bank Ltd.
Fitness Republic
Flight Connections
Float Securities (Pvt.) Ltd.
Folio 3
Food Connections Pakistan
Forex Financial Products
Forte Pakistan Pvt. Ltd.
Foundation Public School
Freight Systems Co. Ltd.
Friends of Literacy & Mass Education
Fulcrum Pvt Ltd
FYSL Trade
Gadoon Textile Mills Limited
Gatron Industries Ltd.
Novatex Ltd.
GEMCO Pakistan Ltd.
General Tyre & Rubber Company Ltd.
Genix Pharma Private Limited.
Gentipak
Getz Pharma
GfK Etilize Pakistan
Ghulam Faruque Group
Giga Group of Companies
GlaxoSmithKline Pakistan Limited
Global Food Marketing
Global Industries Intelligence
Global Securities Pvt. Ltd.
Goodcore Technologies
Greaves (Pvt) Ltd.
Green Cherry Solutions
Greenstar Social Marketing Pakistan Limited
Gul-Ahmed Textile Mills Pvt. Ltd.
Gumcorp Pvt. Ltd.
Gwadar International Terminals Ltd
Habib Bank AG Zurich
Habib Bank Limited
Habib Metropolitan Bank Ltd.
Habib Oil Mills Limited
Habib University Foundation
Habitt
Haleeb Foods,
HANDS Pakistan
Hard Howell International
Hashwani Group of Companies
Hasnain Tanveer Associates (Pvt) Ltd.
Hasnain Tanweer Associates (Pvt.) Ltd
HBL Asset Management Ltd.
Herbion International Inc.
Hilal Confectionary Pvt. Ltd.
Himont Pharmaceutical Pvt. Ltd.
Hinopak Motors Limited
Hirelabs
Home Express
House of Habib
HR Outsourcing & Consulting
HRS Global
HRS International
HRSG
HSBC Bank Middle East Ltd.
HUBCO
HUBCO Laraib Energy Limited
Hudson Pharma
Hum Network Ltd
Hum TV
Human Resource Solutions
Hurd Consultancy
IAL Satchi & Satchi
IBEX Global
IBL Group
IBM Pakistan
ICE Animation
ICI Pakistan Limited
Icon Group of Companies
ICS Group
ICS Group of Companies
Ifrasoft Technology Limited
IGI Financial Services
IGI Life Insurance
IJARA
imrooz.com
Inbox Business Technology
Indus Motors Company
Industrial & Commercial Bank of China
Industrial Development Bank of Pakistan
Information Technology Services
Institute of Chartered Accountants of Pakistan
Intel Pakistan
Interactive Cell
Interactive Health Solutions
Interflow Communications Pvt. Ltd.
International Advertising Pvt. Ltd.
International Asset Management Company Ltd.
Interwood Mobel
INVATERRA
Invest & Finance Securities Limited
In vortex Technologies
Iris Communication
Islamic Investment Bank
Ismail Industries
Ismail Iqbal Securities
IT Link Online
J. Walter Thompson Asiatic (Pvt.) Ltd.
Jaag Broadcasting Systems Pvt Ltd.
Jaffer Agro Services
Jaffer Brothers Limited
Jaffer Business Systems
Jahangir Siddiqui & Co. Limited
Jason Group of Companies
JCR -VIS
Jeem Solutions
Johnson & Johnson Pakistan Ltd.
Jotun Paints
JP Coats Pakistan (Private) Limited
JS Bank Limited
JS Global Capital Limited
JS Investments
Jubilee Life Insurance Pvt Ltd
Jumani Group of companies
Junctionz
KAFI COMMODITIES PRIVATE LTD
KalSoft (Pvt.) Limited
Karachi Deals
Karachi International Container Terminal Ltd.
Karachi Lubricants Pvt Ltd
Karachi Stock Exchange Limited
Karachi Vocational Training Institute
KASB Bank Limited
KASB Capital
KASB Funds Limited
KASB Securities
Kaymu.PK
K-Electric
Khaadi
Khaliq Fashion
Khwaja Ghareeb Nawaz Trust
KNYSYS
Kopak Shipping Company
KPMG Taseer Hadi & Co.
KZR Associates
Lakson Business Solutions
Lakson Group of Companies
Lalani & Associates
Land O’Lakes Inc.
Lane 12
Lasmo Oil Pakistan Limited
Levi Strauss & Co
LGS Matrix
Liberty Books
Lilly Pakistan (Pvt) Ltd.
Live Securities Pvt. Ltd.
Lo’real Pakistan
Logic Information’s
Logicose
Lootlo.pk
Lucky Cement Ltd.
Lucky Knits
Lucky Textile Mills
M. Yousuf Adil Saleem & Co. Chartered Accountants
Maersk Sealand
Magnus Investment Advisors Ltd.
Magnus Investments Advisors Limited
Majsons Corporation
MAL Pakistan Limited
Mandi Express
Manhattan Leo Burnet
Manzar Pakistan
Maple Pharmaceuticals Pvt. Ltd.
Marie Stopes Society
Markematics Pvt. Ltd.
Martin Dow Limited
Martin Dow Pharmaceutical
Mass Advertising (Pvt) Ltd
Mass Advertising Pvt. Ltd.
Mayfair
Mazars
Mazars Consulting
MCB Bank Limited
MCB-Arif Habib Savings & Investments Limited
Meat One
Media Axis
Media Max Pvt. Limited
Media Pulse Pvt. Limited
Meezan Bank Ltd.
Mehran Enterprises
Merck Marker Pvt. Ltd.
Merit Packaging Pvt. Ltd.
Meritocracy
Metro Cash & Carry Pakistan
Metropolitan Bank Limited
MGH Group
MGH Logistics Pakistan
Microsoft Corporation
Midas Safety
Mindshare Pakistan Pvt. Limited
Minha Soft
Mitchell's Fruit Farms
Mitsubishi Corporation
Mobil Askari Lubricants
Mobilink
Mobitel, KSA
Mondelz
Monsieur
MS Associates
MullenLowe & Rauf
Muller & Phipps Pakistan Pvt. Ltd.
Multinet Pakistan Pvt. Ltd.
Mushawar Consulting
Mustafa & Co. Pvt. Limited
MWM Studioz
Nabiqasim Industries
Najmi Bilrami Collaborative Pvt. Ltd.
Nanosoft Technologies Pvt. Ltd.
Narejo Human Resources
National Bank of Pakistan
National Clearing Company of Pakistan
National Commodity Exchange
National Foods Limited
National Fullerton Asset Management Ltd.
National Industrial Parks Ltd. (NIP)
National Insurance Company
National Investment Company of Pakistan
National Investment Trust
National Marketing Services
Naveena Export Pvt. Limited
Nedo Corporation
Nestle Pakistan
Net Space Systems
New Era Industries
New Jubilee Insurance Co. Limited
Next Degree
Next Generation Innovations
Nielsen Pakistan
Nike Pakistan Limited
Nizam Bijli
Novartis Pharma Pakistan Limited
OBS Group
Oman National Electronics, Dubai
OMD Pakistan
OMV Pakistan Exploration
Optimus Capital Management
Oratech Systems Pvt. Limited
Orient Automotive Industries (PVT.) LTD
Orient Public Relations
ORIX Leasing Company
Orix Pakistan Limited
Oxford University Press
Oxygene Pakistan
P&O Nedlloyd
Packages Limited
Pak Mediacom Pvt. Limited
Pak Oman Microfinance Bank
Pak Petrochemical Industries
Pak-Arab Refinery Limited
Pakistan Institute of Corporate Governance
Pakistan Institute of Management
Pakistan Mercantile Exchange Limited
Pakistan Petroleum Ltd.
Pakistan Refinery Ltd.
Pakistan Services Limited
Pakistan State Oil Company Ltd.
Pakistan Telecommunication Co. Ltd.
Pakistan Television Corporation
Pakistan Tobacco Company (British American Tobacco)
Pakistan Vehicle Engineering (Pvt) Ltd.
Pak-Kuwait Investment Co. Ltd.
Pak-Petrochemical
Pak-Suzuki Motors Co. Limited
Parke Davis & Co. Limited
Pastel Communications
Path Group of Companies
PCI Group
Pearl Packages
Pegasus Consultancy (Pvt.) Ltd.
Pfizer Laboratories Limited
Pharmatec
PharmEvo (Pvt.) Ltd
Philip Morris International
Philips Electrical Co. of Pakistan
Philips Pakistan
PIRANA Group
Pixarch
Pizza Hut – MCR (Pvt) Ltd.
Pizza Next - MFC Pvt. Ltd.
Plastech Products (Pvt.) Ltd.
Point Blanc Media
Polaris
Premier Software (Pvt.) Ltd
Premier Systems Pvt. Ltd.
Prestige Communications Ltd.
Prestige Grey
Price Solution Pvt. Ltd.
Price Waterhouse Coopers Pakistan (PWC)
Primatics Financial
Prime HR
Procter & Gamble
Promotech Media Solution (Pvt) Ltd.
Protege Global
Qineqt
Qubee
Rafi Securities
Rain Bargain
Reckitt Benckiser Pakistan Ltd.
Red Tape Media
Red Tape Media
Resource Linked Private Limited
Reveal Pakistan
RG Blue Communications (Pvt) Limited
Rhone Poulenc Rorer Pakistan Ltd.
Rising Technologies
Robotics Labs
Roche Diagnostics
Roche Pharmaceuticals Limited
Rohi International Pvt. Ltd.
Roshan Media
S13 - Systems Innovations Pvt. Ltd.
Sach International
Sagacious Business Consultancy
Salsoft Technologies Pvt. Ltd
Samba Bank Ltd.
Sana Safinaz
Sanofi Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
SASPAK Cargo Pvt Ltd.
SBT Japan
Schneider Electric
School of Leadership
SCT Group
Searle Pharmaceuticals
Service Sales Co.
Shabbir Tiles & Ceramics Ltd.
Shafi-Reso Chemicals
Shaheen Airlines
Shajar Capital
Shajar Capital Pakistan (pvt) Ltd
Shamrock
Shan Foods Pvt. Ltd.
Shandaar Corporation
Shangrila Pvt. Ltd.
Sharaf Shipping Agency
Sheild Corporation
Shekha & Mufti
Shell Pakistan Limited
Shipco Transport Pakistan (Pvt.) Ltd
SibiSoft Inc.
Sidak Hyder Morshed Associates Private Limited
Siddiqsons Limited
Siemens Pakistan Engineering Co. Limited
SIGNium International
Silk Bank
Sindh Education Foundation
Singer Pakistan Limited
SKF Pakistan Pvt. Ltd.
Snack Bites Company
So Safe Pakistan
Social Investment Managers and Advisors (SIMA)

LLC
Social Sell
Socially Global
Sofcom (Private) Limited
Softtech Microsystems
Solutionicks
Soorty Enterprises
South Asia Pakistan Terminals Limited
Spark Communication
SSG Consulting
Stancos Pvt. Limited
Standard Chartered Bank Limited
Starcom Pakistan
Starcrest Communications
State Bank of Pakistan
Statuspro Inc.
STEP Consultants
Stitchers International
Stork Prints Pakistan
Strategic HR Promotion (SHRP)
Streebo
Strongman Medline
Sufi Brothers
Sui Southern Gas Company Ltd.
Sukoon.pk.com
Summit Bank Limited
Sun Consultants
Sun Enterprises
Sun Systems
Super Trading Inc.
SWVL
Symbios.pk
Synapse Consulting
Sysnet Pakistan Pvt. Ltd.
Systems Limited
Talent Optimizers
Tameer Micro Finance Bank Ltd.
Tameer Microfinance Bank Limited
Tapal Tea Pvt. Ltd.
Target Resourcing
Tarzz
Tata Group of Industries
Tata Textile Mills Ltd.
Taurus Securities Ltd.
TBH Employment and Consulting Services
TCS – E Com
TCS (Pvt.) Limited
Teach for Pakistan
Teamants
Teamz International
TeleCard Ltd.
Telenor Pakistan Limited
TenPearls
Thal Ltd
Thatta Cement Company Limited
The Arkadians, AKD Group
The Bank of Khyber
The Bank of Tokyo, MUFG
The Brand Consultants (TBC)
The Citizen Foundation
The Express Tribune
The First Micro Finance Bank Ltd.
The Hub Power Company Ltd
The Learning Organisation
The Leatger Grandeur
The Recruiters
The Searle Company Ltd
The Snack Bites Company
Thinkline
Third Eye Managed Services
Time & Vision Advertising
Times Consultant (Pvt) Ltd.
TIPU Associates
TNI - Worldwide Partners Inc.
Top Boss
Torque Corporation Pvt. Ltd
Total Lubricants
Touchpoint (Pvt) Ltd.
TPL Holdings
TPL Trakker Limited
TPS
TradeKey
Transit HR Consulting
Transworld Associates
Travel Mate
Travel Solutions
Travelport
TripleE Pvt. Limited
TV One - Airwaves Media Pvt. Ltd.
Uber
UBL Fund Manager
UBL Insurers
Ufone
UNDP Pakistan
Uniferoz
Unilever Pakistan Limited
Unique Pakistan
Unisys Pakistan Pvt. Limited
United Assets Management Co. Ltd.
United Bank Limited
United Consultants Pvt. Limited
United Energy Pakistan Ltd.
United Marine Agencies
United Registrar of Systems Limited
United Sales Pvt. Limited
Unity Foods
Universal Brush Ware Pvt. Ltd.
Urbanite
US Consulate, Karachi
USAID Pakistan

Versa Canada Inc.
Visa International (Asia Pacific) Ltd.
Vision Express
Vivo Mobile Pvt Ltd
Ward Howell International
Warid Telecom
Waterlink Group of Companies
Wavetec Pvt. Ltd.
Weekend World Marketing Limited
Wemsol Pvt. Ltd (KEENU)
Westminster & Eastern Financial Services Ltd.
Winstar Pvt. Ltd.
World Tel
WorldCall Broadband Limited
Wrap n Roll
WWF Pakistan
Xenith Public Relations (Pvt.) Ltd.
YB Holdings
Younus Brothers Group
Yunus Textile Mills Ltd.
Zameen.com
ZAP Infotech Inc.
ZEPCOM
ZH Technologies Inc.
ZIL Limited
Zishan Engineers Pvt. Ltd
Zong China Mobile
ZRG International
ENTREPRENEURSHIP & MANAGEMENT EXCELLENCE CENTER (EMEC)

Introduction

The Entrepreneurship & Management Excellence Center (EMEC) is the executive education and consultancy wing of Institute of Business Management. EMEC is responsible for conducting specialized management training programs by closely working with its clients. It provides a wide range of open enrolment, customized training programs, post-graduate diploma and summer school. These programs are designed for professionals, business personnel and leaders from various public and private sector organizations who aspire to seek new perspectives and insights on management issues. These training programs are conducted by our distinct faculty members and leading industry scholars with research interests ranging from global business issues to local problems. Many of our trainers are leaders in their fields and bring in new knowledge and experiences in their sessions.

Initiatives by EMEC

- Trainings, seminars and conferences
- Lectures by foreign experts on specialized topics
- Collaboration with relevant organizations, institutes and associations
- Public & private partnerships administration of entrance tests
- Advisory/consultancy services
- Entrepreneur skills development

Programs at EMEC

Customized Training & Need Assessment Services

In order to bridge the gap between the actual and perceived market demand of organization’s most important resource, their people, EMEC employs a need assessment tool customized for each client. The customized and effective need analysis would translate goals into realistic achievable target determining in what areas the training is needed with a clear outcome. This process helps EMEC develops customized training programs for its clients.

Open Enrolment Training

With an aim of enhancing your skills and understanding to achieve your organizational, personal development and career objective, EMEC offers wide range of training programs. We offer training in the areas of Management, Marketing, Human Resources, Information Technology, Finance and Accounting, Leadership, Supply Chain.

Past Training Programs

Human Resource Management
- Executive Diploma in Human Resources
- Leading HR Change
- Developing Talent Management & Employer Branding Strategy
- Maximizing Return on Training
- Result Driven Performance Management
- Maximize your Sales Force Performance
- Recruitment, Interviewing and Selection
- Management of Contract / Outsourced Labour
- Competency Based People Management
• Compensation and Benefit Management
• New Approaches- Employer Branding and Talent Management
• Fundamentals of Effective Mentoring
• HR as Business Partner
• Management of Contract Labor
• Sindh Labour Laws & Updates

Sales and Marketing
• Diploma in CRM
• Competitive Advantages through Channel Management in FMCG
• Digital Marketing
• Ali Baba store selling
• Strategic Marketing Management
• Digital Marketing

Communication
• Assertive Communication for Managers
• Personal Branding Toolkit
• Business Report Writing
• Company Secretary: Master class

Banking & Finance
• Financial Modeling
• Block chain for Executives
• Pool Management and Profit Distribution
• Halal Audit for Halal Certification

Leadership & Strategy
• Introduction to Design Thinking
• Developing Leadership Excellence
• Consultative Simulation Workshop on Value Innovation
• Aligning HR with Business Strategy
• Pedagogical Leadership Teaching Training
• Design thinking for Business Innovation
• Project Sizing & Costing
• Introduction to Systematic Reviews
• Impression Management
• Criticality and Risk Assessment
• Re-energizing Teams in a New Environment
• Teamwork Skills
• Leadership in Post Pandemic

Soft Skills
• Basic to Advanced Excel
• Advanced Excel & Dashboard Reporting
• Microsoft Power Pivot, Power Query and Power BI

Logistics & Supply Chain Management
• Supply Chain Excellence
• Asset Performance Management - using Blended Learning

Entrepreneurship
• Diploma in Tech Entrepreneurship
• Creative Digital Art Skills for Business Start-ups
Training Facilities

1. A semicircular u-shape Lecture Theatre with a capacity of 85 persons equipped with microphones/speakers on individual desks, BenQ flat-panel interactive touch screen (android based) for sharing whiteboard and other contents with the audience.
2. Flexibility with room layout with plenty of space to move around for games and activities
3. Fully air-conditioned training rooms with a backup power supply.
4. Good acoustics and soundproofing
5. Participant breakout spaces with Mira-cast-based smart screens and flip chart boards
6. Catering – appropriate provision of refreshments/ lunch
7. Location – easy to find on a map, convenient location with access to public transport
8. Ample and secured on-campus parking
9. Trainers Lounge for use of office staff and trainers
10. Wireless Internet access
11. Photocopying/printing/ email on-demand from USB

EMEC Workshops
July 2021 - March 2022

Workshops

- Aligning HR with Business Strategy, HR Diploma Module, August 2021
- Leading HR in Change, HR Diploma Module, August 2021
- Competency Based People Management, HR Diploma Module, September 2021
- Recruitment, Interviewing and Selection, HR Diploma Module, September 2021
- Result Driven Performance Management, HR Diploma Module, October 2021
- Personal Branding, one day workshop by Abbas Ali Iqbal, October 2021
- Compensation and Benefits, HR Diploma Module, October 2021
- Company Secretary Master class, one day workshop by Nausheen Ahmad, October 2021
- Managing Learning & Development Effectiveness, HR Diploma Module, October 2021
- Leadership Development, HR Diploma Module, November 2021
- Diversity and Inclusion in Workplace, one day workshop by Nausheen Ahmad, November 2021
- Employer Branding and Talent Management, HR Diploma Module, December 2021
- Developing Future Leadership Competencies, HR Diploma Module, January 2022
- Leading HR in the World of New Normal, HR Diploma Module, March 2022

Training Programs

Art of Effective Communication
Four-day training for the officers of Sindh Bureau of Statistics (Batch 1), Planning & Development Department, Government of Sindh, September 2021

Effective Business Writing
Three-day (Sundays only) training for the officers of Webotiks, November 2021

Art of Effective Communication
Four-day training for the officers of Sindh Bureau of Statistics (Batch 2), Planning & Development Department, Government of Sindh, December 2021

Capacity Building Training for the Teachers
Two-day Capacity Building training for the teachers of DHA College & School System (DHACSS), March 2022

Capacity Building Consultative Workshops
Four-day training for the officers of Islamic Relief Pakistan, March 2022
OFFICE OF RESEARCH INNOVATION AND COMMERCIALIZATION (ORIC)

The Office of Research, Innovation and Commercialization (ORIC) is an integral part of the institution’s eco-system. It is headed by the Honourable President of IoBM, with the vision to make IoBM a hub of economic opportunities for academia, faculty and youth alike by fostering a research and innovation culture.

IoBM’s continuously supports its researcher to conduct rigorous applied research to become a centre of excellence. It is imperative that apart from maintaining high standards in teaching, research is rigorously pursued and suitably rewarded. The research & development output of IoBM is in line with national needs and contributes to the country’s socio-economic growth.

ORIC acts as a focal point for providing guidance and support to the constituent institutions in all activities related to research & development. As such, the office has a significant role in achieving IoBM vision. Therefore, the mission of this office is to facilitate and coordinate applied research activities and liaise with other national and international academics, research and industrial organizations to promote research at IoBM.

IoBM aims at making research a top priority for the future knowledge economy, which encompasses all the research activities, from the development of research proposals to the commercialization of research products - under a single umbrella.

The scope of work of ORIC includes, but is not limited to, initiatives as follows:

- Outcome-based research
- The research leading to product development
- Funding opportunities for research and product development
- Capacity building of students/faculty in winning research and product-development awards and hackathons
- Capacity building in research, innovation, and entrepreneurship

IoBM, in pursuance of achieving its agenda, established the President’s Innovation Steering Committee (PISC), which is the regulatory body to oversee and support research, innovation and entrepreneurship. Hence, help ORIC execute its strategy and key performance indicators as per the HEC’s requirements. The Steering Committee is supported through its role and functions by the Deans of IoBM Colleges/faculties and ORIC.

ORIC also, after a rigorous exercise, drafted the ORIC Five Year Strategic Policy (2021-2025), and six strategic themes stood out;

1. Promoting the culture of Research & Development through research excellence & collaboration
2. Entrepreneurship (innovation, commercialization, incubation, patent)
3. Capacity Building of faculty, staff & students (training/exhibitions/community events)
4. Promoting Industry-academia linkage: a source of knowledge creation, innovation & economic growth
5. HR & Operations
6. Sustainability

Following identifying strategic themes, ORIC goals, objectives and strategies are determined to ensure more clarity.
Yearly Insights Highlights of Activities

1. Research Proposal Submitted for Funding

In the year 2021 – 22, around twenty-six (26) proposals have been submitted to numerous donors, including the Higher Education Commission (HEC), Islamic Relief Pakistan (IRP), United Nations Development Programme (UNDP), Government of Sind and other.

However, in 2020 – 21, around thirty-seven (37) proposals were submitted to HEC and numerous other national and international donors by our faculty.

2. Grants Secured

The research grant secured by IoBM through NRPU has amounted to Rs. 15.1 million in the year 2021 – 22, while in 2020 – 21 total amounts confirmed was Rs. 62.8 million.
QUALITY ENHANCEMENT CELL (QEC)

The QEC is an independent department at IoBM, established in 2008 under the directive of the Higher Education Commission (HEC) and is headed by a director. The purpose of QEC is to implement the guidelines provided by the HEC. It is also involved in planning, guiding, and monitoring quality assessment and enhancement activities.

Since its inception, QEC has been successfully functioning over the last eight years, amassing an excellent record. QEC was able to contribute to the implementation of qualitative and quantitative data for several academic programs.

QEC has consecutively been in the W category for the last eight years. In the recent ranking, the QAA of HEC has awarded the QEC of IoBM a score of 100%, which is a strong reflection of the quality assurance system at IoBM.

HEC QEC monitors plagiarism policies provided by HEC and serves as a focal point for the implementation of HEC quality criteria. All research papers are checked for plagiarism by software and reported to HEC on a regular basis.

The QEC is rated very highly by the Asia-Pacific Quality Network (APQN). It has received the best internal quality assurance award from APQN. APQN has recognized that QEC designed a post-graduate diploma in quality assurance in tertiary education which can be conducted locally and internationally. QEC is an active member in the IoBM linkage with APQN, AMDISA, CHEA, ASQ, INQAAHE, the Tallories network, etc.

QEC is responsible for setting up Systems, Applications, and Products (SAP) university alliance linkages with an Australian university with the help of German experts and is among the few institutions in the world to be providing SAP training to its students in the areas of Supply Chain, Human Capital Management, Finance and Accounting, Material Management, Production Planning, Project Management, etc.

QEC has been the focal agency to coordinate acquiring accreditation by NBEAC for IoBM’s BBA and MBA programs, accreditation by the Pakistan Engineering Council (PEC) for its BS-Industrial Engineering and Electrical Engineering programs, and is currently assisting in acquiring AACSB accreditation and a QS ranking.

QEC is also responsible for developing policies, procedures, and their revisions. HEC utilizes the services of QEC in its assessment of Institutional Performance Evaluations of other HEIs on a regular basis. QEC is also conducting workshops on areas of quality and the preparation of self-assessment reports of the programs of other institutions. Uploading of all IoBM programs on the e-portal (PQR) of HEC has been done successfully by QEC.

QEC is now engaged in moving towards ISO-21001 Management Systems for educational organizations and in setting up an IoBM Center of Excellence for Quality Management for continuous quality improvement in the areas of engagement, innovation, and impact.
ADMINISTRATIVE AND ACADEMIC REQUIREMENTS
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
- BASR’s decision to be shared with the candidate and supervisor in writing
- Candidates to submit thesis on a CD for plagiarism (19% acceptable) check to the program BASR Office (Reference section to be excluded from thesis)
  - After Plagiarism check, candidates will submit four copies of final thesis to the BASR
- BASR to approve the examiners’ names: 2 for Thesis Evaluation and 1 for Thesis Defense (equal number of alternative names will also be shared with the BASR) which will be provided by the supervisor
  - Reports from the examiners to be directed to the respective Deans
- Dean to submit the report to BASR for recommendations (if any)
- Final copy of the thesis to be submitted to BASR for thesis defense
- Supervisor, coordinator, respective Dean, external examiner, relevant department faculty to form the thesis defense committee
  - Candidates to defend the thesis through PowerPoint presentation
  - Viva report to be submitted to the respective dean
  - Dean to forward the examiners’ report to BASR for the final approval of degree
  - The Rector to confirm the award of the degree

PhD Thesis / Dissertation

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

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

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

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

Performance Evaluation and Standards

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

<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>Regular Semester:</th>
<th>Approved Absences:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays</td>
<td>4 days</td>
</tr>
<tr>
<td>Weekend</td>
<td>2 days</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer Semester:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays (Crash)</td>
</tr>
<tr>
<td>Weekend</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 condoniation of excess absences supported with concrete evidence to the Academics Officer, who will forward the application along with evidence and attendance record duly verified by him, to the Rector for approval. After the Rector’s approval, the student will have to sign an attendance undertaking. For detail visit the link: http://www.examination.iobm.edu.pk

DRESS CODE POLICY

A. For Female Students:

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

B. For Male Students:

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

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

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

- Impersonation may lead to permanent expulsion from the Institute.
- Cell phones are strictly prohibited in the exam hall/room. Defying this rule may result in confiscation or a fine of Rs. 1000/=.
- Valid college ID card is mandatory for entry to the exam room/hall. There is absolutely no relaxation in this rule.
- Punctuality is most important at all times. Students are expected to reach their exam location and be seated at least 10 minutes prior to the exam time. Late comers will be made to wait for five 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 at least 2C grades, Urdu will be accepted as a 3rd subject and not as a grade as long as the candidate has passed the course
- American High School Diploma with CGPA 2.5 or any other equivalent 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 (you need a total of eight subjects including: English, Urdu, Islamiat, Pakistan Studies, and Math’s as compulsory subjects and three 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 Technology Management
- BS Psychology

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 Software Engineering

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 2C grades including Mathematics subject, Urdu will be accepted as a 3rd subject and not as a grade as long as the candidate has passed the course
- 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%
- Students from pre-medical track will be required to complete few additional courses
- For BS Actuarial Sciences and Risk Management students other than pre-engineering group will be required to complete additional deficiency courses

In addition:

- At least 5C grades in O-Level exams (you need a total of eight subjects including: English, Urdu, Islamiyat, Pakistan Studies, and Math's as compulsory subjects and three electives)
- IBCC equivalence is required for O-Level, A-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 5 C grades in O-Level exams (you need a total of eight subjects including: English, Urdu, Islamiyat, Pakistan Studies, and Math's as compulsory subjects and three 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 panel interview

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 / MCom 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 / BCom or equivalent degree), with minimum 45% or 2.00 CGPA out of 4 from a University/Institute recognized by HEC.

BS Education:

For admission in the BS Education 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 2C grades including Mathematics subject, Urdu will be accepted as a 3rd subject and not as a grade as long as the candidate has passed the course
- 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 (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 SC’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
- Candidates once admitted, not having a four year degree in business management/commerce will attend a Bootcamp of six weeks before the semester begins
Experience is not mandatory for the following programs offered on Weekends / Evening

- 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:

- MS 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 5 Cs in O-Level and 3 A-Levels with at least C grades in any subjects
- Success in interview
- 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

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

Program List
- PhD in Business Management
- PhD in Economics
- PhD in Education
- PhD Computer Science
- PhD Statistics & Scientific Computing

Policy and Procedure for Transfer of Credit Hours

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 three years. The credit equivalence committee (CEC) will examine such cases and decide accordingly, keeping in view the following:

- All requests must be for the same level of program. Courses completed in Bachelor’s program cannot be considered for Master’s program
- The credit hours will not be considered from program which has been completed and the student has been graduated.
- Transfer applications can be submitted once and at least two weeks before commencement of the first semester, late applications for transfer of credits will not be considered nor any second application will be accepted.
- Student will be required to submit the application along with course outlines and an official transcript
- Student must have secured B or better grade as per the IoBM grading plan in each course meant to be transferred and the course title / outline must match with IoBM course plan. However, the decision of the subject specialist or Credit Equivalence Committee will be final.
- The Committee has the right to reject any course or an application
- Maximum of three courses can be transferred in PhD programs
- Maximum of four courses can be transferred in MPhil/MS programs
- Maximum courses of two semesters can be transferred in Bachelor’s / MBA Programs 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 the 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 the following programs are eligible to get 50% tuition fee waiver:

- BE Electrical, BS Industrial Management and BS Education
  GPA 2.5 with minimum 15 credit hours or 5 courses in a semester

- B.Ed (1.5 and 2.5 years)
  GPA 2.5 with minimum 9 credit hours or 3 courses (if working full-time) otherwise 12 credit hours or 4 courses in a semester

External

Endowment Fund
Various endowment funds have been set up by IoBM, public 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>13,950.00</td>
<td>72,000.00</td>
</tr>
<tr>
<td>PhD Programs</td>
<td>5,000.00</td>
<td>15,150.00</td>
<td>363,000.00</td>
</tr>
</tbody>
</table>

The registration duration of the 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.

Convocation Fee:

| Rent for gown and cap with mask (mask is nonreturnable) | 1,000.00 |
| Degree folder including degree cost | 4,500.00 |
| Physical arrangement and lunch cost for the Graduate only | 4,500.00 approximately |
| Brochure | 500.00 |
| Administrative charges | 1,500.00 |
| **Convocation Fee** | **1,200.00** |
| Security deposit for the gown and cap (refundable) | 5,000.00 |
| Convocation fee | 12,000.00 |
| **Total amount with security deposit** | **17,000.00** |

Note:
- **Rs. 5,000.00 will be refunded after the gown and cap are returned in good condition**
- **Parents will be allowed as per the directives of NCOC (National Command and Operation Centre). The catering and physical arrangements costs for parents will be communicated after finalizing the quotation.**
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:

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.

<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>
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
- Secretary, Universities & Boards Department, Government of Sindh
- Mr. Justice Irfan Saadat Khan
- Chairman, Higher Education Commission
- Mr. Masood Hashmi
- Mr. Muhammad Ali Tabba
- Prof. Dr. Sarosh Hashmat Lodi
- Prof. Dr. Tariq Rahim Soomro
- Dr. Shahida Wizarat
- Dr. Shujaat Mubarik
- 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
- Dr. Mehtab Syed Karim
- Mr. Sani Ahmed
- Dr. Mussarrat Hasan
- Mr. Mohsin Furquan
- Mr. Mehoob Syed Kaim
- Mr. Talha Syed Karim
- Mr. Nabhan Shah Karim
- Mr. Naveed Kazi
- Mr. Masood Hashmi
- Syed Amr Ali Karim
- Mr. M. W. Jahangir, Secretary
FACULTY
Acting Rector

Dr. Tariq Rahim Soomro has received his Ph.D. in Computer Applications from Zhejiang University, Hangzhou, China. BSc (Hons) and M.Sc degrees in Computer Science from University of Sindh, Jamshoro, Pakistan. He currently working as Professor of Computer Science & MIS Department, Dean at College of Computer Science & Information Systems and Acting Rector at Institute of Business Management. He has more than 27 years of extensive and diverse experience as an administrator, computer programmer, researcher and teacher. As an administrator, he has served as Coordinator, Head of Department, Head of Faculty, Dean of Faculty, Head of Academic Affairs. He has a wide experience in accreditation related matters, including ABET, NCEAC, HEC Pakistan and Ministry of Higher Education and Scientific Research, United Arab Emirates (UAE). His Research focuses on GIS, Cybersecurity, Big Data, IoT, IDNs, Distance Education, E-Commerce, Multimedia, UNICODE, WAP, P2P, Bioinformatics, ITIL, Cloud Computing, Green Computing, Quality of Software, Telemedicine, VoIP, Databases, Programming and Higher Education. He has published in these areas with over 100 peer-reviewed papers. He is an HEC approved PhD Supervisor since 2021. He is Senior Member of IEEE, IEEE computer society since 2005, Senior Member education society since 2022 and 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 (IACSET) since 2012, Life Member, Computer Society of Pakistan (CSP) since 1999, Global Member, Internet Society (ISOC) USA since 2006. He is member Task Force on Arabic Script IDNs by Middle East Strategy Working Group (MESWG) of ICANN. He has also received the ISOC Fellowship to the IETF for 68th Internet Engineering Task Force (IETF) Meeting. He is IEEE Computer Society distinguished visitor (Speaker) for 2021-2023 and is IEEE R10 Computer Society Area Coordinator since 2020.

College of Business Management

Dr. Muhammad Shujaat Mubarik holds a PhD in Industrial Organization from the University of Malaya. He is a Professor and Dean College of Business Management (CBM), IoBM, Karachi. His areas of interest are intellectual capital, supply chain management, and sustainability economics. He has more than 80 research papers (ISI/ABDC/AJG/Scopus indexed), with cumulative impact factor 201.35, published in journals of high repute, including International Journal of Production research, Technological Forecasting and Social Change, Business Strategy and Environment, Journal of Cleaner Production, Journal of Intellectual Capital, and Management Decision. He has Springer’s book “Dynamics of Intellectual Capital in Current Era” to his credit, which is the only handbook that covers IC from South Asian perspective. His 02 books titled “Human Capital, Innovation and Disruptive Digital Technology: A Multidimensional Perspective” and “Supply Chain mapping, Sustainability, and Industry 4.0”, are underway, both being published by Routledge, Taylor & Francis group. Dr. Mubarik has also contributed various book chapters in the international best-selling handbooks; prominent among them are The Palgrave Handbook on Cross-Cultural Negotiation and The Palgrave Handbook of Corporate Sustainability in the Digital Era. He has been the PI and Co-PI of various nationally and internationally funded projects. Presently, he is working on a funded project on adopting the block chain-driven supply chain in Oil and Gas sector of Pakistan. Owing to his work on Steel industry, he was approached by the Spanish commercial attachee and SIDREX, Spain 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.
Accounting and Finance

Dr. Imam Uddin earned his PhD in Islamic Business & Finance from University of Karachi. He also holds a Specialization Degree in Islamic Jurisprudence, Bachelor of Laws (LL.B), and Post Graduate Diploma in Islamic Banking & Finance from reputable Institutions & got the status of approved PhD supervisor in the field of Business Management & Business Education by HEC. Currently, he is Associate Professor and Head of Department at IoBM. It is considered and recognized as one of the specializations under the umbrella of the Faculty of Management Sciences in the global arena. He brings more than 16 years of blended experience from industry, academia, and research. Being highly demanded in the contemporary Islamic banking industry, his area of specialization was the comparative analysis of the implications of the partnership modes of Islamic Financing on the structures of banking & non-banking financial institutions in the emerging markets. Prior to joining the Institute of Business Management, he has worked for different institutions/universities in Pakistan. He has served DHA Suffa University as an Assistant Professor as well as the Head of Department at the Faculty of Economics and Management Sciences from January 2014 to Mid-2015. Before that, he served the University of Balochistan Quetta in the capacity of Assistant Professor in Islamic Banking and Finance from April 2012 to December 2013. Moreover, he served Mohammad Ali Jinnah University as an Assistant Professor, Department of Banking and Finance & Centre for Islamic Economics (CIE) as a Lecturer of Islamic Banking & Finance from January 2005 to July 2011 which is not only recognized worldwide for its Islamic banking and finance education but also a pioneer to develop Islamic banking industry in Pakistan. Dr. Imam has had the privilege to serve the Islamic Banking Industry in the capacity of Islamic Finance expert for many years where he was engaged in product development, product management, and Sharia’ compliance. He has also designed & developed the courses, curricula for degree & certification programs in Islamic Banking, Finance & Accounting for several Institutes that have started such programs to provide required human capital in the fast-growing field of Islamic Banking, Finance & Accounting. In addition to this, he was honored to speak at several International Conferences in countries like the USA, UK, Australia, Malaysia, UAE, Sri Lanka, Thailand, Turkey, and Singapore. He also got a fellowship from the American Institute of Pakistan Studies (AIPS) to deliver a lecture series to the faculty & students of the Florida International University (FIU), Miami-USA in March 2015. Dr. Imam has extensive research work and published

Sharique Ayubi holds a Master in Business Administration (MBA) from Institute of Business Administration (IBA), Karachi as well as an MA in Economics from the University of Karachi. He joined IoBM in 2004 and is working as an Associate Professor since 2010. He is a Diplomaed Associate at Institute of Bankers, Karachi. His industry experience has been in the National Development Finance Corporation (NDFC), where he worked for fourteen years. While associated with industry, he has been teaching courses in Finance, Accounting, Management and Marketing for over 25 years at various reputable universities and business schools as a visiting faculty member. Sharique Ayubi served KASBIT Institute for four years as HOD, Management Sciences. He has several research publications to his credit. He was awarded CIDA scholarship to attend “Training of Trainers” program under the LUMS-McGill Social Enterprise Development Program. As a trainer, he occasionally provides training to Sales force for mutual fund products. His research interests are financial markets and institutions, Regulations in Banking and Securities Markets, and Comparative Management.

Mehboob Moosa is currently pursuing a PhD in Business Management at IoBM. He holds an MPhil in Business Management and 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.
Dr. Kashan Pirzada holds a PhD in Accounting from Faculty of Business and Accountancy from University of Malaya, Malaysia. In addition, he holds MS from SZABIST and MBA from Bahria University. He is working with IoBM as an Assistant Professor. He has more than 9 years of research, teaching, training and consultancy experience. He has been involved in an extraordinarily diverse range of university programmes and conferences, editorial activities, international study, and professional internships. Dr. Pirzada has acquired considerable expertise by supervising a number of research students. He has acted as a reviewer and a lead guest editor of Elsevier Procedia, Pertanika Journals, IJEM, GBER as well as founding editor of GATR Journals. This rendered an immense service for emerging scholars. He has published articles in many international academic journals, such as Elsevier Journal of Social and Behavioral Sciences, British Accounting and Finance; Polish Journal of Management Studies; Pertanika Journal of Social Sciences and Humanities, and International Journal of Economics and Management. Dr. Prizada’s research has focused on many accounting and finance issues in Asia, Australia and USA. He is currently working on a number of projects.

Dr. Bilal Ahmed Chishty holds his Ph.D. from the University of Malaysia Sarawak (UNIMAS) in the field of Finance. He holds an MBA from Khadim Ali Shah Bukhari Institute of Technology (KASBIT), Karachi, and MS in Finance from Hamdard Institute of Management Sciences (HIMS) Karachi. He is currently associated with the Institute of Business and Management (IoBM) as an Assistant Professor in the Department of Accounting and Finance. Bilal Ahmed Chishty has over 25 years of experience in accounting, finance, management, and teaching at middle and senior positions. He has been associated with private and public sector organizations of the country and serves Pakistan Defense Housing Authority (DHA), Federal Urdu University Karachi, Suffa University, Preston University, and Decent Exports. His doctoral thesis was based on the impact of static and dynamic working capital management on growth of manufacturing firms in Pakistan. His core areas of research are short-term financing, capital structure, corporate finance, behavioral finance, and financial inclusion. He also has a good command on secondary datasets along with the handling of various statistical tools such as STATA, and E-views. Bilal Ahmed Chishty has been teaching various courses in the field of Accounting, and Finance for the last 17 years at various universities and business institutes in Karachi. His teaching interest includes an introduction to business finance, financial management, corporate finance, entrepreneurial finance, analysis of financial statements, investment management, portfolio management, strategic finance, financial modeling, management accounting, and financial accounting. Besides teaching, Bilal Ahmed Chishty also supervised various capstone projects of different industrial groups including Indus Motor Corporation, National Bank of Pakistan (NBP), Toyota Southern Motors, Pakistan Stock Exchange (PSX), and Allied Logistics, First Equity Modaraba, Ismail Iqbal Securities (Pvt.) Ltd. etc.

Syed Sarmad Hasan completed his CMA from ICMA Pakistan in 1994 and MBA from UMS, Malaysia in 2017 with distinction. In addition, he was trained as Financial Strategy Specialist at the prestigious American Management Association (AMA), New York, USA in 2014. Currently, he is working as Assistant Professor in the Accounting & Finance department at IoBM and is also the program coordinator of BS – Accounting & Finance and BS – Economics & Finance. Previously, he has worked in the corporate sector and with international NGOs for 25 years in Pakistan, Thailand, Bangladesh and Malaysia in the areas of Finance & Strategic Management at various positions including CFO and Director Finance. His areas of expertise include financial analysis, strategic planning, budgeting, financial reporting and performance measurement. He is pursuing his PhD in Finance from UMS, Malaysia. He has published several articles in peer reviewed international journals on performance measurement and capital budgeting.

Dr. Arslan Qayyum got his PhD in Finance from University of International Business and Economics (UIBE), Beijing, China in 2019. He got his M.Phil (Finance) from University of Central Punjab in 2012 and did his Bachelor of Commerce (B.Com Honors with specialization in Finance) from Hailey College of Commerce, Punjab University in 2009. 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 has completed the course work of MPhil leading to PhD program. He received his MBA from the Karachi University Business School, M.Com. from the University of Karachi,. 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 twenty-three years. He has also been associated with several prestigious institutions as a visiting faculty member. His areas of interest include Management Accounting practices, and Corporate Finance. He has published several research papers in reputed journals at national and international level and has participated in national and international conferences as well.

Muhammad Muzaffar Ali is currently pursuing an MPhil leading to PhD program. He has received his MCom, MEd and BEd from the University of Karachi. 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 has 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.

Dr. Nayeem Ansari holds a PhD Degree in Management Sciences. He is an active academician and a researcher in the field of Energy & Finance. He has over 20 years of experience both in the corporate sector and academia. He has been acted as a Company Secretary, CFO & also a trainer in different corporate sectors.

Khawaja Masood Raza is currently pursuing PhD in Islamic Banking & Finance from University of Karachi. He holds an MPhil and Masters 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.
Shakira Fareed is currently enrolled in a Ph.D. (Business Management) program at the University of Malaysia Sarawak having specialization in Finance. She holds her MBA in Finance and Risk Management from IoBM and MA in Economics from Karachi University. 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 five and a half years of research experience.

Dr. Arsalan Hussain has completed his PhD in Business Management from Universiti Utara Malaysia. He holds an MPhil degree in Business Management from the Institute of Business Management (IoBM) and MBA from Quaid-i-Azam University, Islamabad. His research interests are in the areas of capital structure, financial performance, innovation, entrepreneurship, and corporate finance. He has published more than 10 articles in international peer-reviewed and indexed journals of Scopus and ISI. The main research has been published in leading management journals (e.g., Quality & Quantity, Springer, International Journal of Methodology, Humanities and Social Sciences Reviews, Journal of Open Innovation: Technology, Market, and Complexity, Administrative Sciences, and Pakistan Journal of Commerce and Social Sciences (PJCSS). He has also presented research papers in International & National conferences. He has been the Assistant Finance Manager at Alshieba Trading in the Sultanate of Oman. Currently, Dr Arsalan is engaged in teaching Business Management courses. His areas of interest are Introduction to Business Finance, Corporate Finance, Portfolio Management, and Financial Institutions.

Dr. Kiran Jameel has completed her PhD. degree in Finance from University of Karachi in 2018. She is currently associated with the Collage of Business & Management (CBM), Institute of Business Management (IoBM) as Assistant Professor in the Department of Accounting & Finance. She is additionally serving as PhD program coordinator of CBM. Dr. Kiran is HEC Approved supervisor in the field of Management Sciences and Business Administration for the next three years. She has nine (09) years teaching and research experience in the public and private sector universities. She has published several research paper in the HEC category journals. Her area of research includes, Corporate Finance, Financial risk Management, Behavioral Finance, Sustainable Finance. Dr. Kiran presented her research papers in various national and international conferences. She has provided her consultancy to the industry projects that helps organizations to solve their business problems. She has supervised many undergraduate and graduate level students. Currently, she is the reviewer and editorial board member of several impact factor journals.

Mohsin Ali has completed MPhil (MS) in Accounting from Charles Sturt University, Australia in 2018. He holds an MBA in Finance from SZABIST and BS in Finance from Karachi University. He has joined Institute of Business Management in 2021 as a Lecturer in Accounts and Finance Department. He has spent 6 years in Australia and have worked in Accounting and Finance industry for couple of years in Australia and Pakistan. He has been giving lectures in the Charles Sturt University and some other universities and institutes in Pakistan. His future plans include a doctorate degree in the same field and to serve his nation with pride and honor. His research interest is specifically in the field of Finance, Islamic finance and Technological advancements in the field of finance and accounting. He has contributed some research in the same field while completing his studies. He is a good mentor and a counsellor for students who have the same interests’ as he got.
Communication & Languages

Dr. Mehvish Saleem has completed her PhD in the field of English and American Studies from the University of Graz, Austria and holds a Master’s degree in English Linguistics from the University of Karachi. She is currently working with IoBM as Associate Professor and HoD. She has been teaching since 2005. Her professional experience includes teaching varied English language and communication courses in diverse higher education contexts. She was a committee member of the IATEFL ReSIG and worked as the Joint Events Coordinator. Her key academic and professional achievements include receiving a PhD fellowship from the HEC, Pakistan, working as an editor, ELT Graz Working Paper at the University of Graz, Austria, working as a support teacher trainer for EDLINKS-USAID and studying as a visiting postgraduate student at the University of Warwick, UK. Her research interests include psychology of language learning and teaching, Complex Systems Theory and teaching English in ‘difficult circumstances’.

Dr. Aliya Sikandar holds a PhD in Education from the Institute of Business Management, MA TESOL from the Institute of Education, University of London, UK, and a Master’s degree in English Literature from the University of Karachi. Dr. Sikandar’s PhD concerns Critical Discourse analysis of research consultations in higher education. She is working with IoBM as Associate Professor and also has an RSA certificate in Teaching of English (COTE) from the University of Cambridge. She has worked for the Aga Khan University for almost 24 years before joining IoBM full time in September, 2013. Currently, she is engaged in teaching Business Communication courses. Her areas of interest are Business Writing and Speech, Critical Discourse Analysis, Scholarly Writing and Spoken Discourse.

Pir Muhammad is an MPhil fellow and is currently working on his research thesis. He holds a Master degree (equivalent certificate) in Arabic and Islamic Studies from the University of Karachi, a Master degree in English Literature and Applied Linguistics from National University of Modern Languages (NUML). He is currently working as Lecturer in Communication and Languages Department. He completed his Dars-e-Nizami (Aalim-e-Deen) course of eight years and one-year specialization course in Islamic Jurisprudence from Jamia Darul Ulom Karachi.. He has done a post graduate diploma in Islamic Banking and Finance from Center for Islamic Economics (CIE) Karachi. He is running an Islamic Seminary (Madrasah) and has been giving Jummah sermons in a Jamia Masjid since 2014. He was the lecturer of Quran, Hadith and Fiqh before joining the institute. He has been teaching Islamic Studies and Arabic language courses at IoBM since 2012. His area of interest is Islamic Studies, Islamic Finance and Arabic language.

Tahira Naseem holds an MS in Applied Linguistics, NEDUET and MA English from University of Karachi. She is working as a Lecturer in Communication & Languages Department. She has been working at IoBM since September 2021. She has worked with NEDUET, IIEE and Japanese Consulate in the Education Department.

Kishwer Nazli holds an M.A in English Literature and Linguistics, MS in Applied Linguistics and MSc in Geography from University of Karachi. Currently, she is working with IoBM as a Senior Lecturer in Communication and Languages Department. Also, she has an extensive work history of more than 14 years with reputed universities as FAST, ZIAUDDIN, KIET and NED as Lecturer. She has published one paper at ICLAP “Gendered Language in Media” and working presently on a paper “Language and Gender at Workplace”. Her interest areas are Critical Discourse Analysis and Second Language Teaching. Her research paper “A Comparative Analysis of Monolingual and Bilingual teaching” has been published in IJRS. Moreover, she trains teachers from the platforms of SPELT and other institutions and hosted many conferences and sessions.
Maria Elina is currently pursuing her Masters in English Linguistics and Literature from Greenwich University. She has earned a Master’s degree in Educational Leadership and Management from University of Karachi in 2017 and an International Graduate Certificate in Education from Australian Catholic University in 2011. At present she is working as a Lecturer in the Communication and Languages Department at Institute of Business Management. Ms. Maria Elina has been a teacher trainer and professional development resource person at prestigious schools in Karachi since 2017.

Lubna Ali holds an MPhil from Institute of Business Management. She is currently working as a Senior Lecturer in Communication and Languages Department and has over seventeen years of teaching experience not only in Pakistan’s reputable universities but also abroad, including Dubai and London. Her research interest lies in teaching English as second language, second language acquisition & critical discourse analysis. Beside teaching, she is an active member of (SPELT).

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 Heads the Department of Environment and Energy Management at IoBM. He represented Pakistan for 4 years as a member of International Seabed Authority, Jamaica. He participated as a scientist in the Pakistan’s expedition to Antarctica. He has been associated with the National Institute of Oceanography as Director General, He is a Member of experts’ Committee SEPA and holds memberships of other prestigious organizations. Dr. Amjad served in 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.

Dr. Jamshaid Iqbal holds a PhD in Environmental Sciences from National University of Sciences and Technology (NUST), Islamabad. He is currently working as an Assistant Professor in Department of Environment and Energy Management. Dr. Iqbal has more than 13 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 from University of Krachi. Previously he has done MBA in International Business from University of Wales Institute Cardiff, United Kingdom, Postgraduate Diploma in Business Administration from London School of Commerce, United Kingdom. He is currently working as an Assistant Professor, Entrepreneurship Department. He is expert of corporate governance structures of SME’s in European Union. He is 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 grant 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 experience of dealing with HEC, NBEAC and other national educational regulatory bodies. Furthermore; national and international accreditations and memberships including United Nations Academic Impact, Microsoft Dynamics, SAP University Alliance etc. He is teaching courses of entrepreneurship since 2013. In addition, he has been involved in supervising entrepreneurial ventures of students, startup incubation and writing entrepreneurial business plans. His research areas are entrepreneurship in Pakistan, corporate structures of startup businesses and SMEs, Geo-economics and business-related regionalism.

**Dr. Omar Javaid** holds a PhD in Community Based Entrepreneurship from Institute of Business Management, MS in Islamic Economics and Finance from PAF-KIET, MBA-Exec from IoBM with majors in Marketing and BE in Industrial & Manufacturing Engineering from NED University. Currently he is serving as an Assistant Professor in the Department of Entrepreneurship at IoBM. Mr. Javaid has a total of 17 years of experience of working in corporate, non-profit and education sectors; this experience also includes extensive international traveling to Japan, Taiwan, Korea, Malaysia, Indonesia, Thailand, Hong Kong, Maldives, Doha for professional and research related activities. Mr. Javaid’s core competence is mentoring new startups and ventures; since 2010 he has helped hundreds of students in their entrepreneurial ambitions. He has also been empowering students to set up micro businesses for poor unemployed folks, and has successfully initiated around 600 such projects during his academic career up till now. Mr. Javaid has been invited multiple times at IBA, NED University, UIT, NEST I/O, SoL and on a number of Podcasts to speak on topics related to his expertise. He has also published various research articles and editorials in various journals, magazines and newspapers; He is a reader of Entrepreneurship, Social Entrepreneurship, Institutional Analysis, Islamic Economics and Finance, and Philosophy of Economics and Business Management.

**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** is currently enrolled in Ph.D. at IIUM Malaysia. He holds an MBA (HR) from University of Wales,UK in Management in Developing countries and The Japanese Management System and an MBA (Marketing) from ILM University. 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 working in several reputable universities.
Sardar Muhammad Nawaz holds an 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 is currently pursuing PhD in Business Management from Institute of Business Management and holds an MBA degree with specialization in Marketing from IoBM together with a BS degree in Zoology from the University of Karachi. She is working as a Lecturer and is also serving as the Program Coordinator for the Entrepreneurship program at IoBM. She has been serving at IoBM for the past four years, teaching core courses of business and entrepreneurship, in addition to having a prior experience of more than 5 years within the fields of academia and research. She also has multiple national and international publications to her credit and is actively engaged in mentoring various entrepreneurs and startups across Karachi and other cities as well. In addition to this, she is serving as a production overseer for a venture since 2014 by the name of Wyllie Consultancy which is a US based company providing professional content development services to clients across the globe.

Marium Mateen Khan holds her MBA and BBA (Honors) both in Marketing from Karachi Institute of Economics and Technology (PAF-KIET). She is working as a Lecturer in Entrepreneurship Department, Cluster Head Marketing, Focal Person of Entrepreneurship Department, Assistant Editor of Journal of Education and Educational Development (JoEED) and PhD Research Scholar at IoBM. Previously, she was affiliated with the Marketing department at IoBM as a Lecturer from 2017 till 2019 and before that as a Coordinator Capstone Projects and Research Assistant from 2015 till 2017. She has been a scholarship holder since her first semester throughout her BBA and MBA. She received best presenter award for her Master’s thesis presentation in 2013. She has specialized in the areas of Consumer Behavior, Brand Management, Customer Relationship Management, Supply Chain Management, Sales Management and Digital Marketing. She is well versed in using research analysis softwares like SPSS, AMOS, SmartPLS and NVIVO. She has 20 research publications in HEC recognized Y and X category journals. She has 18 conference proceeding publications out of which 7 conference proceedings are ISI indexed. She received best paper presenter award at 2nd Pakistan Business Research Conference 2019, held at MAJU, Karachi. She has 8 years of research experience with 145 research citations and an h-index of 7. She has also supervised theses of BBA level students. She is a reviewer for IBIMA, FIIB Business Review, South Asian Journal of Management Sciences & Academia Letters. She was invited as an evaluator for Digital Advertising Awards 2019 held at CUST, Islamabad. She has also conducted a market research for BS Entrepreneurship program with the Program Coordinator BS Entrepreneurship on the advice of Dean CBM to align the BS Entrepreneurship program with the market needs, to market the program and to scale the BS entrepreneurship program in 2020-21. Further she has worked on undergrad policy 2020 on the advice of the Rector IoBM with the Program Coordinator of BS Entrepreneurship program to align the BS Entrepreneurship in the light of the new Undergrad policy of HEC (2020-2021).

Kazim Usman is currently pursuing MPhil in Applied Economics from Applied Economics Research Centre (AERC) and a Master’s degree in Economics from University of Karachi. 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 has a PhD and MPhil in Business Management, MBA in Health and Hospital Management, and MBBS in her educational profile. She is currently working as Associate Professor and Head of Department, Health and Hospital Management at IoBM. She has more than 25 years of experience in the health industry serving diverse roles in Healthcare Management and Academia, comprising from being a faculty in two leading universities, to working for a pharmaceutical company as a third-party consultant, a corporate trainer for practicing physicians on latest medical advances, to serving as a Physician Lead in a private sector hospital. As a part of her social work, she arranged “community development” activities by organizing “Health awareness and Assessment camps on a large scale, and Training programs” for school teachers (TOTs) of more than 100 schools in Sindh Province while working with Sind Education Foundation earlier in her professional life. In addition, she has been actively involved in CSR activities like free Health camps, flood relief and disaster management while being a faculty at IoBM. She also served as Director Media and Marketing and later Director Programs for the development of the Health Management Institute, at its inception, in Dow University of Health Sciences. She also 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. She represented Pakistan and as a Counselor for the inward mission sponsored by the British High Commission to Universities in the United Kingdom for pursuing avenues of internationalization of higher education between the two countries. As a physician, she has been a TV program anchor in multiple talk shows on various social and community healthcare issues.She has authored/co-authored more than 22 published research papers in the field of Health and has supervised more than 40 Masters’ Theses. She has also been presenting her research papers at multiple international forums i.e. USA, Australia, Japan, Italy, France and India. Last year she achieved the title of HEC Approved PHD Supervisor and had won the Best University Teacher Award (BUTA) from IoBM. She served as a medical doctor and was also affiliated with South City Hospital in sharing her expertise in clinical and administrative areas, earlier in her career.

Dr. Ather Akhlaq holds his Ph.D. in Health Informatics and Management from The University of Edinburgh, UK., He is currently working as an Associate Professor at IoBM in the department of Health and Hospital Management. He did MPhil in Management and also received a Master’s degree in Computer Sciences from IoBM. He has been involved in many funded international projects and has published in many high-impact factor journals. At IoBM, he teaches to Ph.D., 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. Currently, he is working as an Assistant Professor, Associate Editor to Pakistan Business Review and Research Consultant to the MHM Research Cell (MRC). His main research interests fall in the areas of Financial Economics, Corporate Finance, Equity Pricing, Islamic Banking & Finance. He is also a lead researcher in the areas of banks’ Charter Value and Market Power. Dr. Aleemi possesses more than 12 years of diverse experience of industry and academia. He has served both in academia and industry at different positions for various projects and responsibilities. He is an experienced researcher and consultant in the field of Islamic, Conventional Finance, and Health Management. He has been involved in funded projects with institutions of high repute and has published several research papers in impact factor journals and 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 currently working as the Head of the Department Management & HR, Assistant Professor and Faculty advisor SHRS,. 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. She has several conference presentations and research publications in HEC and Scopus recognized journals. She is also the Patron and faculty advisor of Strategic Human Resource Society and has been organizing the Zenith Leadership & Development Conference on an annual basis since the last eleven years.

Javaid Ahmed holds an MBA degree 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 the Head of Strategy & Accreditation, Consultant & Trainer Strategic Planning & Market Creation. He has been Head of the Departments of Marketing and Management/HRM from 2003 to 2015. He is an IFC Certified Board Director, FCMI-Fellow of the Chartered Management Institute, FCIM-Fellow of the Chartered Institute of Marketing (UK), Member of MENSA and a UK Chartered Engineer. 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 conferred 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 creation, 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 1100 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.

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 and Master in Maritime Affairs from Bahria University. He is a recipient of Tumgha-e-Imtiaz and currently working as Assistant Professor and Director Research at IoBM. He has done number of management and leadership courses at national and international level. 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 Sangha. 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. He is serving at IoBM since January 2019.

Dr. Bilqees Ghani holds a PhD and MPhil in Human Resource Management and Organizational Behaviour from IoBM. She is currently working as an Assistant Professor in HRM & Management Department. Her Journey at IoBM began in the year of 2019 as an Assistant Professor in the capacity of the HR & Management department. Her primary responsibilities include educating the students both at under-graduate and graduate level as well as producing high-quality research. She is also engaged in supervising thesis to the Ph.D.’s and M.Phil. students. In addition to this, she has supervised industry-driven research capstone projects to the under-graduate students. Her responsibilities also include preparing and developing the teaching material, course curriculum updates as a course lead, and take part in the departmental or institutional events. Prior joining to IoBM, she has worked for Ilyas Textile Processors as an Assistant Manager HR. Moreover, she has been a part of Abbott Laboratory, Civil Aviation Authority of Pakistan, and Yousf Adil Saleem & Co (Deloitte).

Dr. Shiraz Ahmed has recently achieved his Ph.D. in Business Management from IoBM. He is working as Assistant Professor in Management and HRM Department. He is ICF credentialed coach (PCC), EMCC accredited practitioner coach (EIA), and certified TPMA trainer from IFC-LPI. With over 10 years’ experience, he has expertise in designing, developing and executing world-class programs in Management and Leadership Development and Executive Coaching. He has trained and coached mid-senior professionals and future CEOs from ASA, APAC, and MENA regions from fortune-500 Company. Some of his coaches are promoted to C-suite level, and now working as CEO, CFO, COO, Executive Director, Head Brand Management (14 countries) and Financial controller in FMCG, Banking and Finance industry. In last 5 years, Shiraz has coached 40+ senior executives such as (heads of global, commercial, investment, consumer and corporate banking, Head HR, Chief Risk Officer, Head of Marketing & Brand Management, Head of Compliance and Finance), and Hi-Po leaders from a global bank from (Singapore, Thailand, Indonesia, Vietnam, Phillipe, Brunei, Nepal, Bangladesh, India, Pakistan, UAE, Kenya, Uganda, Mauritius, Zambia, and Zimbabwe). He has developed and facilitated Leadership development programs for hundreds of junior-senior level professionals from different industries from Ethiopia, Ghana, China and many more countries.

Zafar Mehti is pursuing his PhD in Human Resource Management from IoBM. He is currently working as an Assistant Professor with IoBM. He has worked in several business institutions before joining IoBM including 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. Mehti 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 is postdoctoral research fellow at the University of Malaysia Perlis (UniMAP). He obtained his PhD degree in the field of Business Management and awarded the Certificate of Merit for distinguished performance during his Ph.D. (3.93 CGPA) from IoBM. 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 from Institute of Business and Technology. He also earned an MBA degree in the field of Human Resource Management from the Institute of Business and Technology, Karachi. Currently, he is working as an Assistant Professor in the Department of Management & HR. He is also HEC approved PhD supervisor and associate editor of Pakistan Business Review (PBR). 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 national and international peer-reviewed journals. He has also presented his research work at several national and international conferences. He has supervised several PhD and MS/MPhil candidates. Prior to joining IoBM, he has been Research Associate and Lecturer at the Institute of Business and Technology, Karachi. He was awarded the best faculty award in 2015 for his extraordinary performance as a lecturer. He has also been visiting faculty at KASB Institute of Technology (KASBIT).

Dr. Afaq Ahmed Kazi holds a PhD in Human Resources Management, B. Pharmacy, LLLB, MBA and MPA from University of Karachi. He is working as an Associate Professor & Senior Management Consultant with IoBM. He got his professional training 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 a senior Human Resources and Industrial Relations professional with over 27 years of professional experience. He has served the industry in HR and management 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 Human Resources & Management besides expertise in employment laws. As a researcher he has many research publications in local and international journals and international conferences.

Dr. Sania Usmani is currently pursuing her Post-Doctoral Fellowship from Universiti Sains Malaysia and holds a PhD degree in Business Management and an MBA in Finance and Supply Chain Management from Iqra University. She is currently working as an Assistant Professor in at IoBM. She has a Teaching experience of 11 years. She has been associated with Iqra University from 2013-2020 and then joined IoBM in 2020. She has worked with Total Atlas, Royal bank of Scotland and Dawlance Ltd. She has completed Certification in Entrepreneurship from IBA, Certification in Neuromarketing from University of Copenhagen and Certification of Readiness (CoRe) from Harvard University. 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 also presented papers in conferences at IBA Sukkur and LUMS Lahore. 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 and Scopus 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 Seminar in HRM. Her research interest areas are Organizational Behavior, Job satisfaction, Contemporary issues in Management etc.
Dr. Junaid Ansari holds a Ph.D. in Business Management and an MBA in Advertising & Media Management from the Institute of Business Management. He also holds a Bachelor’s Degree in Computer Science & IT from NED University, Karachi. Currently, he is working as an Assistant Professor in Management & HRM Department at IoBM. Dr. Ansari had served the IT sector for more than 12 years as an Entrepreneur and Head of Software Division in a private company. He has contributed his expertise in developing the software for key organizations of Pakistan that include State Bank of Pakistan, Securities & Exchange Commission of Pakistan, Finance Department of Sindh Government, Sindh Revenue Board, ARY, Geo, Abbott, and several other organizations. As an IT professional, he has achieved several awards including P@SHA ICT Awards. As a researcher his several papers have been published in National/International HEC recognized journals. During his PhD, he developed an instrument using the mixed methods research design. He has also been teaching the courses of ‘Technology, Operations, & Innovation’, and ‘Business Analytics for Decision Making’ at IoBM since 2017.

Juveria Baig holds an MBA from Hamdard University, Master’s in Human Resource Management from the University of New South Wales, Sydney, Australia and BSc (Hons) from the Textile Institute of Pakistan. She is currently 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.

Dr. Saba Gulzar holds a Ph.D in Business Management from IoBM. She is currently working as a Senior Lecturer in Management & HR Department. She has 15 years of experience in academics with a specialization in Human Resource Management and Organizational Behaviour. She has expertise in the application of education in the development of students and young adults. The work undertaken involves designing, developing, implementing, and evaluating innovative learning environments for students. She is keen to research the dynamics of employees’ competencies personal and professional.

Dr. Syeda Tayyaba Fasih holds a Ph.D degree in Business Management (specialized in Talent Management) From IOBM. She completed her MSC in HRM and Organizational psychology from IoBM and BBA (HRM) from Bahria University. She is currently working as a Lecturer with IoBM for the last 3.5 years. In research, she had integrated ontological research with business analytics. Her research interests are talent management practices and strategies, human capital, employer branding, and Human Resource Management. She has several research publications in Web of Sciences (WoS) and HEC recognized peer-reviewed journals and conference presentations to her credit. She has also presented his research work at several national and international conferences. She has been teaching courses like Principle of Management (POM), Human Resource Management, Human Capital, and Management & Organization dynamics. Developed academia-industry linkage by arranging guest speaker sessions and involving students in industry-based projects.

Bushra Javed is currently pursuing her Ph.D in Business Management from IoBM. She holds an MPhil in Business Administration from the Air University, Islamabad. Prior to this, she did her MBA in Finance from University of Education. She is working as a Lecturer with IoBM. Her research interests include 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 a distinction in MBA and has been a scholarship holder since her first semester throughout her MBA.
**Marketing**

**Mohammad Ekhalque Ahmed** is currently pursuing his MPhil in Business Management from IoBM. He holds a Master’s in Business Administration from IBA, Karachi. 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 an 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 Gtza 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** holds his PhD in Marketing from Institute of Management Sciences, Peshawar and an MPhil in Marketing and MBA from University of Peshawar. Currently, he is working as an Associate Professor in Marketing Department. He joined teaching in year 2000. He has worked with 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, for the major clients including world bank and British council. He has also provided advertising consultancy for different national and multinational brands.

**Dr. Irfan Hameed** holds his PhD degree in the field of Marketing from Iqra University. He is currently serving as an Associate Professor of Marketing. Besides he is Head of Research at the College of Business Management of Institute of Business Management, Karachi, Pakistan. Earlier he worked as Associate Professor and Registrar of Iqra University and hosted 03 Convocations of the university. He also remained Head of Graduate Studies, Knowledge Unit Leader of Business and Chairperson, Department of Marketing in Faculty of Business Administration, Iqra University, Karachi, Pakistan. He has actively participated in academic societies and committees. He is working as Editor of Pakistan Business Review (HEC Recognized Journal). He 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 50 research papers and a few are under review process. Indexing agencies of journals include WoS/ISI/JCR (Clarivate Analytics), Scopus, HEC recognized “W, X & Y” category. He has been engaged in teaching the courses of Marketing and Research at the university level since January 2011. 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 an Approved Ph.D. Supervisor by Higher Education Commission (HEC) and 03 candidates have completed their PhD dissertations under his supervision. He also supervised numerous M.Phil/MBA level theses. His areas of research interest include; advertising, consumer behavior, sustainable consumption, entrepreneurship education, social media and human behavior.
Dr. Muhammad Adnan Bashir holds 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 currently working as an Assistant Professor with IoBM. He has over seven 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. , 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 AKEESP in the field of Education Research in Pakistan, and was part of the team that developed evaluating and monitoring instruments for the project QUAID (Quality Advancement through Institutional Development). She has 10 years of teaching experience at university level; and has supported 100 plus students in their research projects which were based on diverse topics with focus on Management and Marketing.

Syed Muhammad Fahim is a PhD scholar at IoBM and holds his MS in Management Sciences from Institute of Business and Technology (IBT). He is currently working as Assistant Professor with IoBM. 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 working as 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. She also contributes as a reviewer to a few journals such as Pakistan business review and Journal of Islamic Marketing. Her teaching areas include Marketing Management, Consumer Behaviour, Digital Marketing and Neuro-Marketing. Her articles have been published in peer reviewed journals.

Mukhtar Ahmed has completed his MPhil course work in Business Management from IOBM while thesis work is underway. He holds a Master’s degree in Business Management from “The Institute of Management Sciences” Lahore and Bachelor’s degree in Pharmacy from “University of Sindh”. He is working as a Senior Fellow in the Marketing Department. From 2016 to 2018, he was associated with Institute of Business Management (IoBM) Karachi, Institute of Business Management (IBM) Lahore, and Superior University Lahore as a visiting faculty. He has attended the European Leadership Program from Germany organized by Schering AG. He is a well-rounded professional hailing from Pharmaceutical industry; with a diverse experience of over 30 years in the corporate circuit. He spent his entire career in multinational organizations with responsibilities of sales and marketing. He has worked in various positions from Sales Executive, Product Manager, Sales and Marketing head, and to Business Unit Head. From 2012 to 2015, additionally he was also responsible for the Srilanka business of Bayer Pharma. He was in a leadership role for over 20 years.

Fariha Raza is currently pursuing PhD in Management Sciences from SZABIST, holds an MS in Management Sciences from SZABIST and an MBA from IBA. 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 is currently pursuing M.Phil leading to PhD program, received his MBA from Institute of Business Administration (IBA) and M.Sc Applied Physics from University of Karachi. He is currently serving as Senior Lecturer in Marketing Department. He is a seasoned professional with outstanding marketing & sales management, brand management, corporate management, business excellence, demand management, demand planning execution and monitoring skills with the ability to support multiple business projects in a matrix organizational structure. He is result-oriented, integrity-driven, and high-performing. 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 as a visiting faculty member for more than four years. His areas of interest include Brand management, Consumer Behavior, Sales Management, Demand Management, Business Excellence and diversifying learning strategies.

Dr. Muhammad Tabish holds his PhD in the field of marketing from Institute of Business Management in 2022. He is serving as an Assistant Professor in the Marketing Department. He has extensively eight year experience of industry and six year experience of academia as a permanent faculty. He has served at Shabir Tiles, Getz Pharmaceuticals, Sami Pharmaceuticals and different national and multinational companies. He has also conducted different academic researches in the field of marketing. He is currently connected with different industries and being a part academia and industry bridge.

Syeda Dur-e-Afshan Ali holds a Master Degree in Business Management with Majors in Marketing from IoBM. She also completed 6 weeks certificate course from INSEAD on Marketing and Sales Excellency. She is currently associated with IoBM as a Lecturer. Prior to that she has been associated with different organizations in the role of marketing and communication and holds 15 years experience. BLITZ DBB, Manhattan Communications, Syngenta Pakistan are some big names she has worked with. I have also served as external trainer for National Bank of Pakistan. Before joining as permanent faculty I have taught at IU, PAK KIET, Karachi university and IOBM as visiting faculty for 6 years. My area of interest is motivational speaking, trainings, learning and observing change and shifts in marketing landscape.

Nida Shaukat is currently pursuing her PHD in Marketing from IoBM. She holds A BBA from IBA and an MBA from Institute of Business Management with a Gold Medal with specialization in Marketing. She is working as a Senior Lecturer in the department of Marketing at IoBM. She started her corporate sector career as a Project Trainee Vaccine Department for Glaxosmithkline and later worked as a copy writer for Headline advertising, Marketing executive exhibitions for Dawn Media Group and Assistant Manager Distribution for K Electric. Miss Nida started her career in academia with IOBM as a Lecturer in the Marketing department. Internationally she taught in dubai for 6 years as a Senior lecturer marketing department at Murdoch University Australia (Dubai Campus). Currently she is serving as a Senior lecturer in the marketing department at IoBM.

Asma Rehman, is currently enrolled in a PhD in Business Management at IoBM and is specializing in Marketing. She holds her MBA in 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.
Logistics and Supply Chain Management

Dr. Muhammad Junaid has completed his PhD in the field of Management Science and Engineering (Supply Chain Management) from Taiyuan University of Technology, China, and holds a Master’s degree in Business Administration from Bahauddin Zakariya University, Multan. He is currently working as Acting HoD Assistant Professor at IoBM. He has seven years of teaching, research, and administrative experience. His key academic and professional achievements include receiving a Chinese government scholarship for PhD, working as an editorial board member of Journal of Business Management Studies (JBMS), working as head of the department Operations and Information Systems Management and director PhD Management Science Program at Mohammad Ali Jinnah University (MAUJ), winning an excellent research paper award at ICMESS-2018, Japan, and several publications in the prestigious scientific journals indexed/ranked in SCI/SSCI, Scopus, ABDC. His research interests include supply chain risk management, supply chain digitization, supply chain mapping, sustainability, circular economy, and smart manufacturing.

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-CISCOM, CSCA, MCIPS, DGLP has completed his Masters in Supply Chain Management from Coventry University Main Campus; United Kingdom in 2018 and Bachelors in Business Administration from Iqra University. He is currently working as Lecturer, Logistics & Supply Chain Management at IoBM. Along with his MSc. SCM Sajid Nazir joined the Coventry University Global Leadership Program and holds a Diploma in Global Leadership from UK as well. As a part of Global leader program he has been to different countries for presentations and leadership trainings. Before Joining IoBM, Sajid has worked in corporate sector on national as well as on international level such as Banking, Aviation, Pharmaceutical and other service industries as a supply chain professional. He also has done the research analysis on the impact of China Pakistan Economic Corridor (CPEC) on transit routes from China to overseas markets.

Musawir Ali Soomro completed his MBA (Logistics and Supply Chain Management) and BBA (Hons.) from IoBM. He is currently serving as a Lecturer in the Logistics and Supply Chain Management Department at IoBM. Prior to working at IoBM, he has worked at TCS as an Operations Coordinator. Because of his passion for teaching, he started his career in academia as a Research Associate at IoBM, and in light of that he has published articles pertaining to solid waste management, reverse logistics, forecasting practices in well-known journal.

Dr. Zeeshan Asim has a PhD in Technology Management from Universiti Malaysia Pahang. He also did his Masters from Coventry University, England. He obtained his BS in Electronic Engineering from Sir Syed University of Engineering and Technology. 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.
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.

Dr. Kashif Nisar holds his Ph.D. from the Universiti Teknologi Petronas, Malaysia with a major in Computer Science and Information Technology. Dr. Nisar has a Post-Doctoral from Auckland University of Technology, Auckland, New Zealand. He is currently working as Associate Dean at IoBM. Dr. Nisar served as an Associate Professor at the Faculty of Computing and Informatics at University Malaysia Sabah, KK, Sabah, Malaysia. In 2014, He served as a Guest Professor at Fernuniversität Hagen, Germany, fully funded by DAAD. Dr. Nisar has published over 150+ research papers in many high-impact journals and well-reputed international conference proceedings in the area of Computer Science. His research interests include Future Internet (FI), Information-Centric Network (ICN), Content-Centric Networking (CCN), Named data networking (NDN), Software-Defined Networking (SDN), Internet of Things (IoT), Internet of Everything (IoE), industrial internet of things (IIoT), Fourth Industrial Revolution (IR 4.0), Quantum Network, Information Security & Privacy, Network/Cyber Security, Digital Forensics, Applied Cryptography, Vehicular Clouds, Cloud & Edge Computing, and Blockchain. Currently, He is working on machine and deep learning for IoT security and API security and he is also working closely with Industry. He is a member of many professional organizations from academia and industry including Senior Member of IEEE (IEEE Vice-Chair, Subsection, Malaysia), Member of ACM, ACM-SIGMOBILE, ISOC, Engineers Australia, IAENG, Park Lab, etc. and a fellow of APAN and ITU. Dr. Nisar is serving as an editorial board member for various high-impact factor journals including Computer Communications Elsevier, Kybernetes an International Journal Emerald UK, and International Journal of Wireless Personal communication Springer. Additionally, he is serving as a reviewer for most of the IEEE transactions, IEEE Access, IEEE Internet Initiative, Internet Technology Letters, Wiley, Springer, and Elsevier Journals. Furthermore, he is serving as Steering Committee Member, PC Chair, Track Chair, Technical Program Committee (TPC) member of over 100+ international conferences as IEEE GLOBECOM, IEEE R10 TENCOM, IEEE TrustCom, IEEE ICC, IEEE VTC, IEEE VNC, IEEE ICCVE, ICCCN, and so on. He has delivered keynote talks at international conferences and universities. Also, Dr. Nisar is serving as a guest editor for more than a dozen special issues in journals and magazines such as IEEE, Elsevier, Springer, and Wiley.
Ayesha Hameed holds an MPhil degree in Business Management from IOBM. Prior to this, she completed her MBA (HR) from IQRA University. Currently, she is working as a Lecturer at IoBM. Her research interests are in Stress testing modeling, Quiet life hypothesis, Intuitional Investment, International financial reporting and standards. She brings with her a lot of experience in the teaching arena with varied schools of thought have given her in-depth and insight into the youth mindset, dreams, goals and concerns with comprehensive research on Behavioral Finance Like Prospect Theory and Mental Accounting theories that add value to her credit. Previously, she was working as the visiting faculty at IQRA university main campus. Besides teaching experience, she has an extensive experience of working as a Recruitment specialist in the premier executive research & HR consultancy. Ayesha is a spiritualist, deeply connected with self, passionate and self-motivated individual. Her spiritual approach towards life helps her in connecting with people with ease and positivity, which encourages trust and openness in promoting growth. Ayesha deeply believes in self-awareness and self-development. She believes in immense human potential and developing her own as she helps others develop theirs. Her deep-rooted belief in transforming lives inspired her towards her current role.

Dr. S. M. Aqil Burney holds a PhD (Mathematics) from Strathclyde University with specialization in Statistics, Glasgow-UK, MSc (Statistics), MPhil (Risk Theory and Insurance -Statistics) from University of Karachi (UoK). He has done 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 Mathematics, Statistics and Actuarial Science & Risk Management Departments and member BASR and Academic Council of 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 for 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 and founding Director of UBIT University of Karachi and also project Director of UBIT 2002 -2008 till completion., prior to joining at IoBM. He has published more than 250 research papers and 7 books nationally and internationally in ICTand 2 books in process, 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 2900+ 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 PQSCA- 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 journal of Neural Computing And Applications (NCAA) and Journal of Soft Computing, Springerand also for some time of Communication in Statistics of Publisher Johnson and Francis. and many other journals. Presently, two PhD scholars and many MS (CS) /MS (Statistics & SC) MS (Actuarial Science & Computational Finance) are working under his supervision at CcSIS-IoBM. Dr. Aqil Burney is also a member of BoS and Boards of many universities. Presently, Dr. Burney is actively working in neural computing and deep learning and Convolution Neural Networks, Fuzzy Time Series Models and SCM in Health and Textile Industry with modeling and inference for renewable energy of Pakistan, developed data science program and also taught Machine learning, AI, soft computing with concentration on time series and econometric modeling using machine learning and adoptable fuzzy neural networks especially for energy studies and technologies of human centric computing. Currently Dr Burney is working on Statistics and Scientific computing with focus on Econometric Modeling and Inference,Actuarial Statistics with Machine Learning and soft computing, Business analytics and health systems modeling and inference and Design of Sampling for Surveys.
Mathematics and Statistics

Dr. Abdul Hanan Sheikh holds PhD degree in Applied Mathematics from Delft University of Technology, The Netherlands. He is working as an Associate Professor in Mathematics and Head of Department, Mathematics & Statistics. He started teaching as Lecturer at NED University Karachi. He has been engaged in many institution and organizations like TU Delft, Netherlands, QUEST, Sindh and Royal Dutch Shell. Dr. Hanan’s research interests include numerical analysis, history of Mathematics and teaching Mathematics as minor. He has authored more than 30 research articles in various international and local journals, in collaboration with Berlin University of Technology, Germany and Pennsylvania State University, USA. He has presented at conferences in countries including USA, Belgium, Denmark, France, Netherlands, Pakistan. He has supervised 2 PhD and 11 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.

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 include Computational Finance, Application of Methods from Financial Mathematics in Insurance, Interest Rate Modeling.

Dr. Sami Ullah holds a Ph.D in Applied Statistics from Universiti Teknologi Petronas, Malaysia. He was a Post-Doctoral Researcher at Universiti Teknologi PETRONAS, Malaysia. He is currently working as an Assistant Professor in Mathematics and Statistics Department.

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 Ph. D. degree in applied mathematics in the field of fluid dynamics from University of Karachi. She is currently serving as Assistant professor of Mathematics in IoBM. She has almost 18+ international publications on her credits. She had been the presenter in some National and international conferences and Workshops. She has almost 7 years of experience in teaching at different levels and at different universities, she has served as a lecturer at Indus University, visiting lecturer at FAST University, and a research assistant at Karachi University.
Rizwan Ahmed is currently pursuing PhD in Economics from IoBM. He holds his MSc in Statistics and MPA (Finance) from the University of Karachi, MAS (Applied Economics) from Applied Economics Research Center, University of Karachi and MS (Economics) degree from IoBM. He is associated with IoBM since September 2006 and currently working as an Assistant Professor in the Department of Mathematics & Statistics. He has Nine research publications in his credit out of which three in Pakistan Business Review (‘X’ category Journal) published by IoBM, two publications in research journals indexed by Scopus and one publication in a ‘W’ category research journal with 3.633 impact factor. He also have completed an online certificate course on “Online Teaching” from University of New South Wales, Australia. His areas of interest are Quantitative Analysis for Business and Management, Statistical Inference, Econometrics, Macroeconomics, Mathematical Economics and Financial Econometrics.

Hina Samreen is currently enrolled in PhD program at IoBM. She is an MS Economics from Institute of Business Management (IoBM) and M.Sc. Mathematics from University of Karachi. She is currently working as an Assistant Professor in the Mathematics and Statistics Department. 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. Zahid Ahmed holds his PhD in Mathematics from Quaid i Azam University Islamabad. He is working as an Assistant Professor at IoBM. He is an HEC approved PhD supervisor 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.

Muhammad Wajahat Ali is enrolled in MS (Statistics & Scientific Computing) from IoBM and holds an MSc (Statistics) from the University of Karachi. He is currently working as a Senior Lecturer at IoBM. He has been involved in research and teaching in Mathematics and Statistics. He has almost twenty-seven 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 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. He has organized Foreign Faculty Guest Speaker sessions for last twelve years. He is a good motivational speaker and involved in different sessions along with the industrial panel. He is associated in the project designing and its market at different levels. He has published many research papers in national and international Journals.

Attra Ali holds an MS degree in Mathematics & Scientific Computing with research work from IoBM, an M.Sc and B.Sc(H) in mathematics from Federal Urdu University. She received 03 Gold Medals in M.Sc convocation for 03 positions including Departmental, Science faculty and Topper of the University. She has taught Mathematics courses in NUST-PNEC Karachi. She is doing research work as well, has been published research work in fields of Mathematics, Engineering, and Computer Science.

Muhammad Arshad holds an MS degree in Applied and Computational Mathematics (ACM) from Florida State University (FSU). Before going to US, he did double Masters; first one from University of Karachi in pure Mathematics and second from LUMS in pure and applied Mathematics. He is an Assistant Professor-in-Practice at IoBM. He is a recipient of Fulbright Scholarship, FSU graduate Scholarship and LUMS Scholarship. He was position holder in his graduate studies. He has vast experience of teaching Mathematics in different universities like Bharia University Karachi, DHA Suffa University Karachi and IoBM. His research interests are in Number Theory, Set Theory, Discrete Mathematics and Logic.
Muhammad Bilal holds an 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 Bahria 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.

Jahangir Baig is currently pursuing his PhD in Statistics from University of Karachi. He holds an MPhil in Statistics, MSc in Statistics and a B.S in Computer Science from University of Karachi. He is working as a Senior Lecturer at IoBM. His areas of interest are Predictive Modeling, Statistical Inference, Data Mining, Sampling Designs. He has taught at University of Karachi, NED University, BBSUL Karachi, prior to joining IoBM.

Computer Science

Dr. Tariq Rahim Soomro, See Profile on Page No. 178.

Dr. Ehsan Rehman holds a PhD in Computer Science in Artificial Intelligence from the National University of Singapore (NUS). He completed his master’s from National University of Singapore, and bachelor’s from GIK institute. He is currently working as an Assistant Professor and HoD of the Computer Science Department at IoBM. He has worked at Afiniti as the Program Manager of the AI department. He has also worked at Microsoft Seattle, and at the IT department of ABN AMRO Bank. His academic experience includes being a full-time teaching staff at the National University of Singapore, and the HoD of Computer Science department at Karachi Institute of Technology and Entrepreneurship (KITE). His research interests include Robot Motion Planning, Artificial Intelligence, Machine Learning, Graph Algorithms, Probabilistic Algorithms and Blockchain Technology. He has published in top conferences and journals and has supervised various student projects. He has taught various courses of Computer Science and Mathematics, including among many others, Data Structures, Algorithms, Discrete Mathematics, and programming courses in C, C++, Java, and Python.

Engr. Muhammad Asghar Khan 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 (Australia), an MS in Computer Software Engineering from NUST, and BS Computer Engineering from Sir Syed University. Currently, he is working as an Assistant Professor with IoBM. He has twelve years of teaching and industrial experience at various national and international organizations such as Clearswift Limited, Geo TV, London Institute of Management and Technology, Sir Syed Case Institute of Technology, and Efroze Chemical Industries Limited. His areas of interest are Blockchain, Cyber Security; Machine Learning, Cloud Computing, Open Source Systems, 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. Engr. Khan is also serving as a Course Coordinator of the Computer Science and MIS Department.

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 Ex. Com, IEEE Computer Society, IEEE Industrial Electronics Society and Rapid Miner Community. Currently working on Natural Language Processing and its applications in Urdu Language. Author of local and international research publications, 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 especially 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 23 years of experience working in Teaching, Mentoring, Education Management (IoBM) and Industry (Dawlance / Pakistan Petroleum Limited). He possesses practical IT 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.
Muhammad Ayoub Kamal Kaimkhani, pursing PhD in Information Technology from the Malaysian Institute of Information Technology University Kuala Lumpur, Kuala Lumpur, Malaysia. He received his Master of Engineering degree in Information Technology and Bachelor of Engineering degree in Computer System Engineering from Mehran University of engineering and Technology in 2015 and 2012 respectively. He is working with IoBM as a Lecturer in Computer Science department. Prior to joining IoBM, he worked as a Lecturer at ILMA University. He has published 9 research articles in national and international research journals including 1 HEC W category research article. His areas of research are Low-power wide area network (LPWAN), fifth generation communication (5G), internet of things (IoT), machine to machine communication (M2M), machine learning (ML) and artificial intelligence (AI).

Afsheen Maroof is currently pursuing her PhD in Computer Science from Muhammad Ali Jinnah University. She holds an MS in Computer Science from Muhammad Ali Jinnah University and a BS in Computer Science from University of Azad Kashmir. She is currently working as Lecturer at IoBM. Her areas of interests are Natural Language Processing, Linguistics Deep Learning and Machine Learning. She has worked as part time teacher in University of Poonch Rawalakot prior to joining IoBM.

Ujala Rehan hold a BS in Software Engineering from Ilma University and is a certified Web Engineer and SEO Expert from NED university. She is working as a Lab Supervisor at the Institute of Business Management. Her areas of interest are SEO, Web engineering, WordPress, and digital marketing. She has taught at Aptech prior to joining IoBM.

Syed Farhan Mazhar is pursuing his PhD in Canada. He completed his MPhil course work from Department of ISPA, University of Karachi and 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 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, Ed monton, Canada .His areas of interest are Software Engineering, Semantic Web, Data Mining, ERP, Database Management System and Project Management.

Najmus Saher Shah is currently pursuing her PhD in Computer Science from Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad. She holds 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.

Engr. Muhammad Waqar Khan is a PhD Scholar in the area of Machine Learning from Hamdard University. He has earned his Master in the area of Telecommunication Engineering, Post Graduate Diploma in Computer and Information Sciences, Master in Computer Sciences from Karachi University and Bachelor in Electrical Engineering from NED University of Engineering and Technology, Pakistan. He is currently working as a Senior Lecturer at IoBM. He is an eminent scholar and a renowned academician. Mr. Khan has been associated with academics for over 25 years at University Level. Likewise, he made a significant contribution to the industry as a consultant. Mr. Khan has been an active and an eminent member of various academic, regulatory and professional bodies. Moreover, Mr. Khan has played a key role at both national and multinational industries like Pakistan Telecommunication Company Limited (PTCL), Pakistan Electronic Media Regulatory Authority (PEMRA), Wateen Telecom Pvt Ltd, Comstar ISA Ltd etc. He has also served in Pakistan Navy Engineering College (PNEC), A campus of National University of Science and Technology (NUST), Aligarh Institute of Technology (AIT / SSUET), Bahria College, Sir Adamjee Institute of Technology etc. He is also a permanent professional member of Pakistan Engineering Council (PEC). He has executed and supervised various projects of industrial standards in Sindh, Punjab and Baluchistan.
Asim Iftikhar is pursuing PhD in 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 is currently enrolled in an MS program leading to PhD in Mathematics from KU. She holds an MSC in pure Mathematics and BSC Honors in Mathematics from the University of Karachi. 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.

Engr. Urooj Yousuf Khan is currently pursuing her PhD in Computer Science at IoBM and holds a BE Degree in Computer and Information Systems Engineering from NEDUET. She is the Gold Medalist in MSCS Computer Science from SZABIST, DUBAI. She is a Cisco Certified Network Professional holding CCNA(RS) and CCNP(RS) certifications. She is working at IoBM (CCSIS) as a Lecturer. Previously, she worked as a lecturer and IT-Administrator at Pakistan Islamia Higher Secondary School Sharjah and AlNawal Computers, UAE. She has a number of publications in various reputed international journals. Her research interests include Computer Networks, Internet of Things and Fog Computing.

Saadia Karim is currently pursuing her Ph.D. in Computer Science from UoK, holds an MS in Computer Science from Muhammad Ali Jinnah University and a Bachelor (Hons) degree in Computer and Information Systems Engineering from Sir Syed University of Engineering & Technology. She is working as a Lecturer at IoBM. She taught different CS, MIS, and DS courses like Programming Fundamentals, Data Mining, Computer Organization & Assembly Language, Big Data Analytics, Intro to ERP, etc. In addition to her experience, she has 7 years of working in the cooperate world as an IT professional. Her areas of interest are Data Science, Machine Learning, Big Data, and Fuzzy Set Theory. Her research work is published in national and International Journals.

Kanwal holds a Master in Computer Science from Muhammad Ali Jinnah University, Karachi in 2021 and Bachelor’s degree from “University of Sindh” Jamshoro in 2017. She is currently working with IoBM as a Lecturer in the Computer Science Department. Prior to joining IoBM, she has worked as a Lecturer at Indus University Karachi, Computer Instructor at the Modern Institute of Science and Technology, and Computer Instructor at the Renaissance Learning Academy. My areas of interest are software engineering, Data Structure, Operating System, agile project management.

Muhammad Ramzan holds a Master’s in Computer Science from Muhammad Ali Jinnah University, Karachi in 2021 and Bachelor’s degree from “University of Sindh” Jamshoro in 2017. Currently, he is working with IoBM as a Lecturer in the Computer Science Department. Prior to joining IoBM, he has worked as a Junior Lecturer at Indus University Karachi, and Computer Instructor at the Modern Institute of Science and Technology. My areas of interest are Machine Learning and Deep Learning.
College of Engineering and Sciences (CES)

Electrical Engineering and Engineering Management

Dr. Seema Ansari earned her Ph.D. in Telecommunication Engineering at the University of Malaga, Spain in September 2018. She did her MS-CS/Telco from University of Missouri Kansas City, USA and B.E. in Electronics from NED-UET Karachi, Pakistan. She is HEC approved PhD supervisor for Engineering and Technology. Currently, she is the Advisor to the Rector at IoBM. Prior to this she was Associate Dean of College of Engineering & Sciences and Assoc. Professor at the Institute of Business Management. Dr. Seema Ansari brings to academia 39 years of a successful academic and top management career with the local and foreign universities including Staffordshire University in the United Kingdom, APIIT-Malaysia and top engineering universities of Pakistan, DUET and NEDUET in the field of Engineering, Information Technology and Sciences. She was the Director of Asia Pacific Institute of Information Technology Karachi Campus. She has the credit of getting the HEC recognition for APIIT, under “Foreign Universities/Institutions allowed under collaborative degree programs in Pakistan” on 21.05.2003 to run B.Sc. (Hons.) in Computing program in collaboration with the Asia Pacific Institute of Information Technology (APIIT), Malaysia and Staffordshire University, UK. She has over 70 publications in international/local (HEC recognized) Journals and conferences. Her PhD research includes three publications in JCR Journals with Impact Factor 1.200. She also contributed in international journals & Conferences and book chapters. She contributed chapters in books published by Springer and IGI-Global-USA. She is a member of the Instituto de Ingeniería Oceánica “The Oceanic Engineering Research Institute” of University of Malaga (UMA) Spain and the research group, ETSI Telecommunication, UMA, Spain. 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).

Dr. Muhammad Imran Majid holds 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 Bene-FACT Consulting Group. Most recently Dr. Majid was appointed Honorary Research Fellow, School of Engineering, University of Warwick, UK.

Dr. Syed Fayaz Ahmad holds a Ph.D. in Engineering Management from Gomal University and an MS in Telecommunication Engineering Management from the 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 also a Certified Project Director from GAQM, UK and Certified Professional in Engineering Management from The American Society for Engineering Management, USA. He is working as an Assistant Professor and MS Engineering Management Coordinator at IoBM. His Ph.D. thesis is focused on Knowledge Management Systems and is titled, “Knowledge Management as a Tool for Strategically Suitable Decision Making in Telecom Sector in Pakistan”. He has vast experience in research and conducted many types of research in Public and Private Sector organizations of Pakistan. Up to now, he has published more than fifty research papers in peer-reviewed national and international journals. His research interest areas include but are not limited to Technology Management, Project Management and Strategic Management. Currently is also a joint Post Doctorate researcher of IoBM and the University of Kuala Lumpur, Malaysia, where he works on Artificial Intelligence Applications in Education. In addition to his academic life, Dr. Fayaz is a literary person also. He writes in English and Pashto, having two poetry published books in his favor and two others are also completed and will be published soon.
Dr. Irfanullah Khan holds a Ph.D. in Industrial Engineering Management from Hanyang University, South Korea, ME in Mechatronics Engineering and BE in Industrial and Management Engineering from Mehran UET Jamshoro. He is working as an Assistant Professor in the Department of Engineering Management. He is a Professional Engineer registered with the Pakistan Engineering council. His current research interests lie in the area of Supply Chain Management Optimization, Inventory Management, Production Management, and Data Science. He has published three research articles in prestigious international journals and two conference papers.

Rashid Qutub holds 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 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 medal in Mechanical Engineering 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 is a PhD scholar at University of Engineering & Technology Taxila, Pakistan. She received her MS Degree in Engineering Management from Institute of Business Management, Karachi Pakistan and B.E in Electronics degree from Pakistan Air Force Karachi Institute of Economics & Technology (P.A.F KIET). Currently, she is Lecturer & Research Associate in the Electrical Engineering Department. She has been associated with the automotive industry of Pakistan for five years where her major area was product development. Her areas of research are Climate Change assessments, Waste Management, Pollution Control and Management and Environmental issues.
Tahniyat Aslam is a PhD scholar in Electronic Engineering from NED University of Engineering and Technology, Karachi, Pakistan. She holds an 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 IoBM. Her research interest includes antenna and microwave systems network security, Internet of Things (IoT) and its applications.

Fatima Maqbool is a PhD scholar in Computing at Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Karachi, Pakistan. She received her MS Degree in Engineering Management from Institute of Business Management, Karachi Pakistan and B.E in Electronics degree from Pakistan Air Force Karachi Institute of Economics & Technology (P.A.F KIET). She has been awarded “Best Achiever Award” from PAFKiet and awarded merit certificate, based on her academic excellence from IoBM. Currently, she is working as a Lecturer in the Electrical Engineering Department at IoBM. Her research area includes Artificial Intelligence, Machine Learning, Signal Processing, and Business Process Reengineering (BPR), Project Management, Automation and Robotics, Embedded Systems and Designs; Navigation, Guidance and Control.

Rabia Zaman holds an M.E degree in “Telecommunication Engineering” from NED University of Engineering and Technology and B.E degree in “Telecommunication Engineering” from Mehran University of Engineering & Technology Jamshoro. She is currently serving as a Lecturer in the Electrical Engineering Department at IoBM. Her research interests include Fiber Communication, Wireless Communication and Electrical circuits.

Kubra Bashir holds an M.E Degree in “Telecommunication Engineering” and B.E in “Telecommunication Engineering” from NED University of Engineering & Technology. She has worked as a Visiting Teacher in NED University of Engineering and Technology for 2 years and as Physics Lecturer in Excellence Intermediate College for 3 years. She is currently working as a Lecturer in Electrical Engineering Department of IoBM. Her area of interest is Optical Fibers, Signals & Systems and Electrical Circuits.

Industrial Engineering & Management

Dr. Shahzeb Malik holds a 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 organizations 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.

Dr. Fahad Bin Abdullah is an Assistant Professor with a PhD from the Institute of Business Management. His research articles in the fields of energy policy and analysis have been published in impact factor journals. He also has a BE Mechanical Engineering degree from NED University and an MSc in Mechanical Engineering and Management from London South Bank University. Production, operations, manufacturing techniques, energy efficiency, and energy management are among his teaching interests.

Dr. Falak Shad holds a PhD in Energy and Environment Management, MBA in Finance from IoBM and Bachelors of Engineering in Industrial & Manufacturing Engineering from NEDUET. Currently, she is working as Assistant Professor at IoBM. Dr. Falak has published her work in national and international journals and She also has presented her research articles in various international conferences. Her research interest focuses on environmental issues, climate change supply chain management and quality management. She also contributes in prestigious 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 Azam is currently pursuing her Ph.D. in the domain of Industrial Risk Management. She has completed her Master’s degree in Industrial Management and Bachelor’s degree in Industrial and Manufacturing Engineering from NED University. She is currently working as a Lecturer with IoBM. Before joining IoBM, she has worked 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 published a number of articles in international journals and has two book chapters to her credit as well.
College of Economics and Social Development (CESD)

The Dean

Prof. Dr. Shahida Wizarat holds her PhD in Economics from the University of East Anglia on a British Council scholarship and Masters from Vanderbilt University, Nashville, Tennessee, USA on Graduate Fellowship by the Rotary Foundation of Rotary International. Currently, she is working as Dean, College of Economics and Social Development (CESD) at IoBM. Dr. Wizarat’s areas of interest are industrial productivity; profitability; concentration; economic policies; international financial institutions; debt management; privatisation and liberalisation; food security; political economy; natural resources, conflict and growth. She has authored three books, The Rise and Fall of Industrial Productivity in Pakistan (OUP), Fighting Dependence: Proclaiming Sovereignty for an Enslaved Pakistan (LAP) and Fighting Imperialism: Liberating Pakistan (CRS). She has authored more than 70 research papers published in international and national journals and newspapers. Dr Wizarat has been visiting faculty at the Naval Staff College formerly at Karachi, Air War College Karachi, Command and Staff College and Southern Command Quetta and National Defence University, Islamabad. She has served as editor of the Pakistan Journal of Applied Economics and Professor, Director of the Applied Economics Research Centre (AERC), Chief Editor Pakistan Business Review and Director Research IOBM. She has also served on the board of directors of the Karachi Stock Exchange. She is member editorial board, Journal of the the Institute of Far East - Russian Academy of Sciences. She is member and Past President Rotary Club Karachi East. She is a member of the Technical Oversight Committee of the Population Council.

Commercial and Professional Studies

Muhammad AsadUllah is pursuing his PhD in Business Management from IoBM. He is a Senior Lecturer and the Acting Head of the Department of Professional and Commercial Studies at the IoBM. Prior to this, he has worked at various Business Schools as a visiting lecturer and as a trainer at EMEC, IoBM. His teaching area of interests are Accounting, Taxation and Business Law. Muhammad AsadUllah has published 28 research papers in reputed SCOPUS, Web of Sciences and HEC indexed journals. He has also presented numerous research papers in International conferences. He has research expertise in FinTech, Forecasting, Panel Data Analysis and Finance. He is also a member of Editorial Board International Journal of Smart Business and Technology (IJSBT).

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). Currently, she is working as a Lecturer at IoBM. 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). 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. 207.)

Dr. Mirza Aqeel Baig holds a PhD in Economics, an MPhil in Economics from IoBM, an MAS in Applied Economics from AERC, University of Karachi and Master in International Relations. 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 re- search 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.

Dr. Muhammad Ajaz Rasheed holds a PhD in Economics at IoBM. He 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 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 got his PhD in Economics from the University of Malaya, Kuala Lumpur, Malaysia, in 2018 in the field of Development Economics, focusing on international remittances, household development, and poverty. He has been working as Assistant Professor at the Department of Economics at IoBM since 2018. He is involved in research and teaching. He has more than sixteen articles on his credit that have been published in journals of international repute in Pakistan and abroad. Dr. Imran has been attending several international research conferences. He has been serving at the University of Malaya, Kuala Lumpur, the Institute of Business Management, Karachi, Ilma University (formerly Institute of Business and Technology), Karachi, and Applied Economics Research Center, Karachi.

Dr. Muhammad Usman holds a Ph.D. from the University of Malaya, Kuala Lumpur, Malaysia. He has secured his MAS (Master of Applied Sciences in Applied Economics) from Applied Economics Research Center (AERC), University of Karachi. Since 2020, 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 the University of Malaya. His areas of interest are social and behavioral sciences including not-for-profit organizations, 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.
**Dr. Hira Mujahid** holds a PhD in Economics from University of Karachi 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 (PIAE, AEFR) and international journals (GLER, EER), some others are in the pipeline. In addition, she writes in newspapers on current issues. In fact, she has participated and presented papers in several international conferences. Previously, she has served at National Centre of Maritime Policy and Research, Bahria University, Karachi Campus as a Research Associate where she organized numerous seminars and international conferences. She was a sub-editor of Maritime News Digest. Other than that she had been associated with multiple organizations like KASBIT, Manzil Pakistan and Maritime Training Institute.

**Ch. Sohail Ahmed** holds an MSc in Statistics from KU, MPA from IBA, and an MAS in Economics from the Applied Economics Research Center, Karachi. He also holds a PGD (Computer Science) from the University of Karachi. He is currently 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 30 years at various public and private institutions.

**Muhammad Zubair** is currently pursuing his PhD in Economics from IoBM. He holds MS Economics from IoBM and Master Degree in Economics & Finance from the University of Karachi. Currently, he is working as Assistant Professor at IoBM. He has also secured his post graduate diploma in Economics & Finance from the University of Karachi. Prior to joining the IoBM he has worked with University of Karachi as a visiting faculty. He has experience of 4 years of Broadcasting with Radio Pakistan in the capacity of Business anchor and reporter covering economic policy, trade and industry and etc. Mr. Zubair is also engaged in research and he has participated in various international conferences within and outside the Pakistan.

**Sadia Mansoor** She received an MSc degree in Economics from Quaid- e-Azam University, Islamabad. She holds her MAS Economics in the Applied Economics Research Center from University of Karachi. 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** holds his Masters in Economics from the University of Karachi and MAS (Applied Economics) from Applied Economics Research Center, University of Karachi. He is currently working as a Senior lecturer at the Department of Economics at IoBM. He has eleven years of teaching experience at various institutes. His areas of interest are Quantitative Analysis, Macroeconomics, Microeconomics, Development Economics and Business Finance. He has published more than twenty research articles in reputed local and international journals and three conference proceedings in the field of Social Sciences. He is a member of the Board of studies Economics department and coordinator BS (Economics and Finance) program. He also remained part of two international research projects completed by IoBM namely, Valuation of Mangroves in PQA Indus Delta: An Econometric Approach; in Collaboration with International Union for Conservation of Nature (IUCN) and Fisher Improvement Program (FIP) and Marine Stewardship Council certification (MSC) of Yellow Fin Tuna; in Collaboration with World Wide Fund for nature (WWF).
**Zia Ullah** holds an MAS degree in economics from the Applied Economics Research Centre University of Karachi and an MSc degree in economics from the Quaid-i-Azam University Islamabad. He is currently working as a Senior Lecturer at the department of economics. He is associated with the department of economics since July 2012. He has published various research papers in reputed journals of Pakistan. He has also contributed in various projects sponsored by the Institute of Business Management.

**Yousuf Aboya** is a Ph.D. scholar in Economics at IoBM, has an M.Phil in Economics from IoBM and M.A in Economics from the University of Karachi. 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 PhD in Education from the Institute of Business Management, Karachi. She is currently working as an Associate Professor at the Department of Education. She is also the Chief Editor of the Journal of Education and Educational Development, a biannual Y category, HEC recognized journal published by the Department of Education, IoBM. She has a teaching experience of 17 years and has been associated with IoBM since 2010, prior to which, she was a part of Defence Authority College for Women, Phase VIII.

**Prof. Dr. Nasreen Hussain** holds a PhD in Education from Hamdard University. Currently, she is the Advisor to the President and is working on a mega project on revising the curriculum across the board. Dr Hussain also teaches in the Department of Education. She brings to academia over thirty-five years of diverse teaching, administrative, research, and consultancy experience. She has edited books as well as written articles and book chapters. Dr. Hussain is the external moderator for the University of Cambridge and has received British Council, Hornby Trust, USIS, USAID, Aga Khan University, and Aga Khan Development awards for recognition of her distinguished academic career and research projects at national as well as international levels in diversified areas. Her forte is qualitative research methods with a special focus on field research. Her specialization includes teacher education, strategic planning / educational planning, leadership development, and organizational learning.

**Dr. Zehra Habib** holds a PhD in Education from George Mason University, USA. She is currently working as a Senior Fellow at the Department of Education and is also an Associate Editor of the Journal of Education and Educational Development, a biannual Y category, HEC recognized journal, published by the Department of Education, IoBM. She has over two decades of teaching experience and has been associated with IoBM since 2017. Prior to that she was a visiting faculty at SZABIST, Karachi and has also served St. Josephs’ College for Women Karachi in the capacity of Professor, Department of English, for over 15 years.
Dr. Samra Javed received PhD in Education from IoBM, being the first researcher in Pakistan on Experiential Learning. She holds her Master’s degree in English Literature from Government College, Lahore, an MPhil in Social Sciences (with specialization in English Language Teaching) and Post Doctorate Fellowship in Entrepreneurship from IoBM. In addition, she has completed In-Service Certification in English Language Teaching (International TESOL certification), Cambridge University, UK conducted by SPERT with merit in Teacher’s Language and Methodology. She is working as an Assistant Professor, currently serving as Head of the Office of Research Innovation & Commercialization (ORIC), Head of Entrepreneurship & Management Excellence Center (EMEC), and Advisor to the Office of the President at IoBM. She is a trainer in Business Writing, Interpersonal Skills Communication Skills and IELTS Master Trainer trained by 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, Pakistan Petroleum Limited, Webotics, Government of Sindh and other HEI’s in the Country. She has also been contributing to 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 Lead Researcher at Transparency International.

Amna Shahid is pursuing her Ph.D. in Education from IoBM. She holds an MBA in Educational Management and Bachelor in Professional Psychology from the Institute of Professional Psychology (IPP), Bahria University. She is working as a Senior Lecturer at the Education Department of IoBM. Her research interests lie in the domains of early childhood education, educational psychology, personality development through education, and making education enjoyable for the students. Her experience covers teaching children of three years to educating and training students up to post-graduate level. Ms. Amna is an active advocate of a humanistic approach to teaching for healthy emotional development. Apart from being a revolutionary educationist, she is also an entrepreneur and enjoys venturing into different creative tasks. She has been engaged with several conferences, seminars, training, and workshops as an organizer and a facilitator.

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 Chemistry from University of Karachi. He is working as a Senior Fellow 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 a 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 a 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 the International Education Faculty Achievement Award from the International Association of University Presidents for 2014 and HEC Best University Teacher Award for 2011. She 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 and HoD department of Business Psychology at IoBM. He has been teaching psychology for 12 years as regular faculty; first at Karachi University and now at IoBM; and the rest of 7 years as visiting faculty at different institutions. He has been a practicing psychotherapist for 19+ years. He is a professional software designer as well, with a number of published software and applications at Google Play. His primary interest in research is around brain-computer-interface (BCI) and non-invasive emotion detection. Other areas of research interest are; personality, perception, emotion, cognitive impact of social and ecological interactions. He has been providing research consultation to national and international clients like; UNICEF, UNDP, UNODC, Bayer France, Crop-Sciences Switzerland, Syngenta France-Pakistan, Italian Trade Commission; for instance. He is an active member of APA – American Psychological Association.

Dr. Asad Shahzad holds a PhD and MS in Economics from Institute of Business Management. He earned his MA in English Literature from the University of Karachi. Currently, he is working as an Assistant Professor and Acting HoD of Center for Policy and Area Studies. He has taught at several reputable educational institutes. He has also written articles for newspapers. He has presented papers at national and international conferences. His paper “Incoherences in Konrad Lorenz’s Concept of Aggression” has been cited in Jai Galliott’s Commercial Space Exploration: Ethics Policy and Governance. His paper “Iqbal’s Ideal 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 received 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). He composes poetry in Urdu and has published a collection of his poetic works by the title, Saboocha. His research works address significant contemporary economic, political, and moral issues with reference to pre-modern, modern and postmodern philosophy.
Media Studies

Ejaz Wasay holds an MBA from IBA. He is working as an Senior Fellow and Head of the Department of Media Studies at IoBM. Prior to joining IoBM on January 1, 2011, he had been teaching here as a Visiting Faculty since 2005. His industry experience spans over 37 years, primarily in the fields of Marketing, Corporate Communication, 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 articles 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 its President in 2005. He has also been a Jury Member of PAS Awards since its inception in 2011 until 2018, before joining the Effie Awards Steering Committee following Pakistan Advertisers’ Society’s affiliation with Effie Worldwide.

Taqi Shaheen holds a Masters in Arts (MA) from National College of Arts, Lahore. He is currently working as an Associate Professor of Practice. As a film-maker, educator and media artist, his work crosses mediums and defies genre distinctions to fashion 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 alternate experiences of learning. He has presented his research in the US, Europe, and the Middle East at various academic conferences including International Symposium of Electronic Arts (ISEA). His publications include Subjective Atlas of Pakistan (Oxford University Press, 2020), and as a director and curator, his 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 holds 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’s degree in Mass Communication. He is currently working as a Senior Lecturer with IoBM. He is a professional screenwriter, story writer, translator, researcher and a poet, and has over six years experience in teaching screenwriting at IoBM, and over fifteen years of script writing & research for various media groups including CNBC, JAAG Broadcasting System, Total Media Network and others. Currently working as a Senior Lecturer at IoBM he is leading a longer-term project focused on archiving and publication of acclaimed Urdu Screenplays.
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MBA, IBA
ADMINISTRATION
ADMINISTRATION

The administrative staff of IoBM is highly skilled and qualified to perform multifarious tasks, vital for the smooth running of the Institute. The administration implements the policies formulated by the Governing Board and the Academic Council. It is responsible for organizing academic programs, ensuring student progress, providing adequate support facilities to the faculty and students, and liaison with business and industry to arrange internships, ensure career development and placement of students on the completion of their degree. It is also responsible for the organization and supervision of examinations.

Members of the Administration

Mr. Talib S. Karim, President, Institute of Business Management, holds a Bachelor’s degree in Systems Engineering and a Master’s degree in Economics with specialization in International Trade, both from the University of Arizona, USA. He has worked for a financial institution for ten years before joining the Institute full-time in 1997. He has also taught Economics at the University of Arizona, USA and IoBM. He also attended the Oxford Advanced Management & Leadership Program at Oxford University. He is an Executive Council member of the Management Association of Pakistan and the President of Marketing Association of Pakistan and represents the Institute in various Associations nationally and internationally.

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Executive Director
Administration, Admissions and Finance
BBA, University of Arizona, USA
MS, US International University, Nairobi, Kenya

Dr. Imran Batada
CTO
PhD

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)
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
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<tbody>
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<td>Muhammad Misbahuddin</td>
<td>Advisor to ED-Admin HR, Purchase &amp; General Administration MBA, LLB</td>
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<td>Aslam Kurban Ali</td>
<td>Senior Manager Finance ACMA 92</td>
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<td>Dr. Samra Javed</td>
<td>Head of EMEC &amp; ORIC, Advisor to Office of the President &amp; Assistant Professor of Education PhD Marketing</td>
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<td>Kausar Saeed</td>
<td>Senior Manager &amp; HoD Internship MS</td>
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<td>Dr. Muhammad Arif</td>
<td>Director Research and Assistant Professor PhD</td>
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<td>Dr. Amber Raza</td>
<td>HoD Academics and Coordinator MBA Program PhD Marketing</td>
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<td>Manager and HoD Admissions MBA, LLB</td>
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<td>Riaz Akbar Contractor</td>
<td>Manager Sports &amp; Student Affairs, SAC &amp; Housekeeping BCom</td>
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<td>Asim Farooq</td>
<td>Manager and Head of Development MSc ERP, BCS, BCCI FAST</td>
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<td>Nadeem Ahmed Khan</td>
<td>Manager Internal Audit MBA, CIMA Finalist (England) Chartered/Corporate Sec. FCIS (Pak/England)</td>
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<td>Syed Adnan Faisal</td>
<td>Manager, Maintenance BE, Electrical Engineering</td>
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<td>Malik Barolia</td>
<td>Manager, Salary &amp; Compensation MBA MAU</td>
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<td>Shaikh Muhammad Sharif Nasir</td>
<td>Librarian MLIS, KU</td>
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<td>Fesal Bin Naseem</td>
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<td>Anjum Aziz</td>
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<td>Head of Shahjehan Syed Karim (SSK)-Business Incubation Center (BIC) MBA</td>
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<tr>
<td>Name</td>
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<tr>
<td>Abid Ali</td>
<td>Assistant Manager</td>
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<td>Lecturer and Assistant Manager</td>
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<td>Assistant Manager</td>
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<td>Syed Mustafa Hussain</td>
<td>Assistant Manager</td>
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<td>Assistant Manager</td>
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<td>Muhammad Omar Iftikhar</td>
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<tr>
<td>Ali Masood Jadoon</td>
<td>Assistant Manager, ORIC</td>
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</tr>
<tr>
<td>Mohammad Arif Shaikh</td>
<td>Senior Maintenance Officer</td>
</tr>
<tr>
<td>Abdul Sajid Khan</td>
<td>Oracle Database Administrator</td>
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<td>Rashid Aqeel</td>
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<td>Muhammad Kamran</td>
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<td>Senior Accounts Officer</td>
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<td>Shahzeb Khan</td>
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<td>Admission Officer I</td>
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<td>Umair Saeed Kirmani</td>
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<td>Mir Saeed Bangash</td>
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</tr>
<tr>
<td>Sumaiya Mithani</td>
<td>Alumni Officer</td>
</tr>
<tr>
<td>Sheroonia Zameer</td>
<td>Admission Officer</td>
</tr>
<tr>
<td>Bushra Mairaj</td>
<td>Editorial Officer</td>
</tr>
<tr>
<td>Amna Khalil</td>
<td>HR Officer</td>
</tr>
<tr>
<td>Zohaib Ali</td>
<td>Analyst Programmer / Officer</td>
</tr>
<tr>
<td>Aamir Khan</td>
<td>Officer Salary &amp; Compensations</td>
</tr>
<tr>
<td>Afsahan Gul Khan</td>
<td>Capstone Officer Marketing</td>
</tr>
<tr>
<td>Sana Shakil</td>
<td>Senior Secretary cum Teaching Associate</td>
</tr>
<tr>
<td>Humaira Kanwal</td>
<td>Officer ORIC</td>
</tr>
<tr>
<td>Maira Gul Rind</td>
<td>Officer, Case Study Cell</td>
</tr>
<tr>
<td>Madiha Khan</td>
<td>Officer and Senior Secretary to CTO</td>
</tr>
<tr>
<td>Arsalan Khan</td>
<td>Registrar's Officer</td>
</tr>
<tr>
<td>Moonis un Nisa</td>
<td>Secretary</td>
</tr>
<tr>
<td>Kanwal Hussain</td>
<td>Officer</td>
</tr>
<tr>
<td>Muhammad Humayoun</td>
<td>Editorial Officer</td>
</tr>
<tr>
<td>Moin Akhtar</td>
<td>Officer I</td>
</tr>
<tr>
<td>Neha Arshad</td>
<td>Capstone Officer</td>
</tr>
<tr>
<td>Samreen Naz</td>
<td>Officer, Internship, Placement and International Office</td>
</tr>
<tr>
<td>Sana Tariq</td>
<td>Officer</td>
</tr>
<tr>
<td>Ali Asghar Shabir</td>
<td>Videographer &amp; Editor, Media Studies</td>
</tr>
<tr>
<td>Iqra Bukhari</td>
<td>Media Coordinator</td>
</tr>
<tr>
<td>Mehak Hammed</td>
<td>Department Officer I</td>
</tr>
<tr>
<td>Abeera Jamil</td>
<td>Officer, H&amp;HM</td>
</tr>
<tr>
<td>Muhammad Raheel</td>
<td>Officer, SSK-BIC</td>
</tr>
<tr>
<td>Kashif Hussain</td>
<td>Officer, Internal Audit</td>
</tr>
<tr>
<td>Ali Ahmed Farooqi</td>
<td>Officer HR</td>
</tr>
<tr>
<td>Rabia Alvi</td>
<td>Officer</td>
</tr>
<tr>
<td>Asim Ahmed Khan Yousfi</td>
<td>Assistant Registration Officer II &amp; Catalog Composer</td>
</tr>
</tbody>
</table>
ACADEMIC CALENDAR
FALL 2022

<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>Tuesday, August 23, 2022 Onwards</td>
</tr>
<tr>
<td>Orientation for newly admitted students</td>
<td>Saturday, September 3, 2022</td>
</tr>
<tr>
<td>Commencement of Classes</td>
<td>Saturday, September 10, 2022</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Thursday, October 27, 2022</td>
</tr>
<tr>
<td>Eid-e-Milad-un-Nabi (SAW)*</td>
<td>Friday October 7, 2022</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Thursday, November 24, 2022</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Saturday, December 24 to Thursday, December 29, 2022</td>
</tr>
<tr>
<td>Quaid-e-Azam’s Birthday</td>
<td>Sunday, December 25, 2022</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Saturday, December 31, 2022 to Thursday, January 12, 2023</td>
</tr>
<tr>
<td>Classes End</td>
<td>Thursday January 12, 2023</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>15/10/2022 to 20/10/2022</td>
</tr>
<tr>
<td>11th</td>
<td>2nd Hourly</td>
<td>19/11/2022 to 24/11/2022</td>
</tr>
<tr>
<td>17th &amp; 18th</td>
<td>Final</td>
<td>31/12/2022 to 12/01/2023</td>
</tr>
</tbody>
</table>

* Subject to the appearance of moon.

**Note:**
*Due to Quaid-e-Azam’s Birthday on 25th December, exam is scheduled from Friday December 23, 2023.*

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 2023

<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, December 12, 2022 Onwards</td>
</tr>
<tr>
<td>Orientation for newly admitted students</td>
<td>Saturday, January 14, 2023</td>
</tr>
<tr>
<td>Commencement of Classes</td>
<td>Saturday, January 21 2023</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Saturday, March 04, 2023</td>
</tr>
<tr>
<td>Pakistan Day</td>
<td>Thursday, March 23, 2023</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Saturday, April 08, 2023</td>
</tr>
<tr>
<td>Labor Day</td>
<td>Monday, May 01, 2023</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Saturday, May 06, 2023 to Thursday, May 11, 2023</td>
</tr>
<tr>
<td>Eid-ul-Fitr*</td>
<td>Friday, April 21, 2023 to Sunday, April 23, 2023</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Saturday, May 13, 2023 to Thursday, May 25, 2023</td>
</tr>
<tr>
<td>Classes End</td>
<td>Thursday, May 25, 2023</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>25/02/2023 to 02/03/2023</td>
</tr>
<tr>
<td>11th</td>
<td>2nd Hourly</td>
<td>01/04/2023 to 06/04/2023</td>
</tr>
<tr>
<td>17th &amp; 18th</td>
<td>Final</td>
<td>13/05/2023 to 25/05/2023</td>
</tr>
</tbody>
</table>

* Subject to the appearance of moon.

**Note:**

*Due to Labor Day on 1st May, exam is scheduled from Friday April 28, 2023.*

All dates are subject to change. Students will be informed of the changes well in advance.

For details of examination please visit the website.
SUMMER CRASH 2023

<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>Saturday, April 22, 2023 Onwards</td>
</tr>
<tr>
<td>Commencement of Classes</td>
<td>Saturday, June 10, 2023</td>
</tr>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Saturday, July 8, 2023</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Saturday, August 5, 2023</td>
</tr>
<tr>
<td>Eid-ul-Azha*</td>
<td>Wednesday, June 28, 2023 to Friday, June 30, 2023</td>
</tr>
<tr>
<td>Independence Day</td>
<td>Monday, August 14, 2023</td>
</tr>
<tr>
<td>Revision and Presentation Week</td>
<td>Saturday, August 19, 2023 to Thursday, August 24, 2023</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Saturday, August 26, 2023 to Thursday, August 31, 2023</td>
</tr>
<tr>
<td>Classes End</td>
<td>Thursday, August 31, 2023</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>Mid-Term</td>
<td>15/07/2023 to 20/07/2023</td>
</tr>
<tr>
<td>12th</td>
<td>Final</td>
<td>26/08/2023 to 31/08/2023</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.
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