Institute of Business Management

Catalog 2014-2015
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
FROM THE CHANCELLOR

Warmth and affection emanating from association with my students is natural and spontaneous indeed. It is with this feeling that new students to the IoBM family are happily welcomed and regarded in such a promising and practical manner that they naturally develop a sense of belonging to IoBM.

IoBM graduates, who have earned degrees through academic and career commitment are well-placed in national and multinational organizations. They continue to have mutually rewarding union with a cherished alumni card, participating in IoBM functions and activities and thus guiding students and hitting the media and corporate headlines with the IoBM brand.

IoBM is rated highly due to students’ level of responsibility and highly knowledgeable and meticulous faculty. Students’ level of responsibility rises from a highly demanding academic routine of attendance, punctuality, lectures, projects, assignments, reports, quizzes and exams. The faculty is truly committed to teach and the management is readily available as and when needed. Allow me to value the efforts and hard work of Mr. Shahjehan S. Karim for achieving the existing status of IoBM.

IoBM’s harmonious blend of quality education, top-of-the-line career-orientation, state-of-the art facilities, purpose built campus and well-defined discipline and decorum, grooming and caring will be the key to success in academic and career excellence.

Illahi Buksh Soomro
Chancellor
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WELCOME TO IoBM
FROM THE PRESIDENT

We welcome warmly our new students to the Institute of Business Management (IoBM), with its constituent college, the College of Business Management (CBM) ranked as one of Pakistan’s leading business schools.

The origins of IoBM go back to 1994 when Foundation for Higher Education established by a group of dedicated citizens of Karachi, initiated its maiden project; College of Business Management later becoming IoBM’s first constituent college. It was followed by setting up of Institute of Business Management in 1998, having presently its four constituent colleges with more than four thousand students and strong alumni risen to senior positions in the corporate sector.

Today, we are an internationally renowned Business School because of our vision to become a world class educational institute with a mission to foster environment where students are motivated to make learning a life-long process. We have thus developed an exemplary reputation among students, their parents and faculty. We encourage our alumni to setup their own business to bring positive impact on our economy.

IoBM’s affiliation with universities abroad and participation in international conventions have raised its status where no other national institute can match our track record. It is a matter of great encouragement that Eduniversal, an international academic ranking organization with Headquarters in Paris, have adjudged a number of our Masters and MBA as one of the best programs.

We have signed Memorandum of Understanding which includes exchange of students and faculty with leading universities in Asia and Europe. We are probably the only institution in Pakistan that regularly sends its students to spend a semester to partner universities. Similarly, we receive international students to spend a semester at IoBM.

IoBM has placed increased attention on Quality Assurance and improving teaching and learning environment. To meet this challenge IoBM has established Quality Enhancement Cell (QEC) which has been recently awarded a very high score by the Higher Education Commission for successful implementation of QEC policies.

Our 2014 development plan includes construction of a new state-of-the-art seven floor Entrepreneurship and Management Excellence Center. In addition, three new Computer Labs have been established in the College of Computer Science and Information System. IoBM’s newly established City Center is well on its way to become an outstanding facility for the students and corporate sector interested in evening academic programs.

Recently, we have enlarged academic repertoire to include a four year BS (Hons) program in Media Studies, BS program in Actuarial Science & Risk Management and MBA in Finance & Risk Management. We have also included Islamic Banking and Finance in the ongoing BS (Finance & Accounting) Program which will certainly improve the employment prospects of our graduates.

Looking forward to interact with you during your stay at IoBM and wishing you a wonderful IoBM experience.

Shahjehan S. Karim
President
AN INTRODUCTION TO THE INSTITUTE OF BUSINESS MANAGEMENT

This catalog will give you the most up to date and vital information about the courses and programs of study that most interest you. Essential information about fees, facilities and student services is also available here to help you to be well-versed with life at IoBM.

Beginning with a prolog to the Institute, the catalog proceeds to introduce life at IoBM and culminates in course descriptions. The catalog also describes undergraduate and graduate degree programs offered at IoBM; its teaching methods; academic and research programs and assessment procedures; its computer and library resources; student support services and information on application procedures.

Administrative and financial information including opportunities for financial assistance and stipends are also included in the catalog. The catalog introduces you to the academic and administrative personnel at IoBM and its faculty. A detailed description of all courses taught at IoBM is also given. Every effort has been made to keep the catalog up-to-date and to ensure that courses are offered as described. However, circumstances beyond IoBM’s control may sometimes make this impossible. Changes in the curriculum may be necessary to keep abreast of professional developments. For that reason, the Institute reserves the right to make unavoidable alterations in courses offered, and in the structure.

IoBM: 1994 - 2014

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 dissemination of quality education. Its first project was setting up a management university 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 its 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. During end 2010, we have been honored with prestigious awards of EDUNIVERSAL Palms for meritorious evaluation and certification of educational institutions around the world. The Institute is a member of the International Association of Universities (IAU), Association to Advance Collegiate Schools of Business (AACSB) and other international and national organizations.
The Governor of Sindh is an ex-officio Patron and Mr. Illahi Buksh Soomro, former Speaker National Assembly, is the Chairman of the Board of Governors of the Institute and also its Chancellor. The other members of the Board are:

- Chairman, Higher Education Commission
- Mr. Justice ® Ataur Rehman
- President, Federation of Pakistan Chamber of Commerce & Industry
- President, Karachi Chamber of Commerce & Industry
- President, Karachi Stock Exchange (Guarantee) Ltd
- Secretary, Government of Sindh, Education & Literacy Department
- Mr. Shahjehan S. Karim, President IoBM
- Mr. Basheer Janmohammad
- Mr. Jahangir Siddiqui
- Mr. S. M. Muneer
- Mr. Muhammad Ali Tabba
- Mr. Salahuddin Qureshi
- Mr. Muhammad Shareef
- Dr. Zafar Saied Saifee
- Mr. Masood Hashmi
- Mr. Talib S. Karim, Rector IoBM
- Mr. M. W. Jahangir, Secretary BOG

The Institute, through its College of Business Management (CBM), offers a four year BBA (Honors) and a two/three year MBA degree program with specialization in Marketing, Finance, Human Resource Management and Management Information Systems, Health & Hospital Management, Pharmaceutical Administration, Media Management, Advertising & Communication Management, Industrial Management and Telecommunication Management. A research degree, an MPhil leading to PhD, is also 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 is offered through the College of Computer Science & Information Systems (CCSIS).

The Institute emphasizes on research and publishes HEC and internationally recognized Pakistan’s first business policy and research journal, Pakistan Business Review. Students and faculty contribute regularly to its pages. A research seminar is organized on a weekly basis. The Institute is the only business school where foreign language courses, Arabic, French, Spanish, Italian or Chinese are compulsory subjects in the BBA and BCS programs. The Institute has a competent and dedicated faculty with the majority holding foreign degrees. One 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 by UK and graduate programs of US Universities. It has extensive links with a number of North American and British universities. Professors from these universities have served as Chief Academic Officers of the Institute.

Since 1998, more than 7,000 students have graduated from the Institute. Most of them are placed in 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 several provincial and federal government agencies. 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.

The Entrepreneurship & Management Excellence Center (EMEC) of the Institute organizes professional education, training and research programs for 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 1995. There are over 4000 students on our campus which is large and purpose-built at Korangi Creek on a 10 acre site, comprising the Business College building, Administration and Entrepreneurship & Management Excellence Center building, CCSIS building, a Convocation Center, Student Activity Center, a five-storeyed library building, Industrial Engineering and Management building, a mosque and CESD building.

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 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 at this convocation. 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 at this convocation. 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 of the Institute 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 and over 700 degrees were awarded to students at this convocation. Syed Qaim Ali Shah, Chief Minister of Sindh and Mr. Nisar Ahmed Khuhro, Speaker Sindh Assembly attended the twelfth convocation of the Institute, held on December 05, 2009. The keynote Speaker was Mr. Shaharyar Muhammad Khan, former Foreign Secretary and former Chairman of the Pakistan Cricket Board. As many as 927 graduates were awarded degrees. The thirteenth convocation was held on December 4, 2010. The chief guests on the occasion were 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 at this convocation. 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 at this convocation. The keynote speaker was Mr. Shahid Aziz Siddiqi, Chairman and CEO, State Life Insurance Corporation of Pakistan.

The Sixteenth convocation was held on December 07, 2013. Over 850 degrees were awarded to students at this convocation. The chief guest was Mr. Nisar Ahmed Khuhro, Senior Minister for Education, Govt. of Sindh, 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 in this convocation.

**City Center**

The IoBM City Center is established to serve as a bridge between business organizations and business school. The City Center offers the highly popular MBA (Evening) program in two streams (two years for those with 16 years education and three years for others).
WHY CHOOSE IoBM?

For the last four years, IoBM has been rated as one of the top universities in the private sector, both by the Higher Education Commission of the Federal Government and the Provincial Government of Sindh. Eduniversal, during its international conventions of Deans of Business Colleges from over sixty countries, held in 2008 at Paris, France and in 2009 at Cape Town, South Africa awarded IoBM 2 Palms as one of the two best Business Schools in Pakistan. The Institute has been an active member of the International Association of Universities (IAU), International Association of University Presidents (IAUP), Association to Advance Collegiate Schools of Business (AACSB), Association of Commonwealth Universities (ACU) and is also associated with several other international academic organizations.

IoBM has established linkages and earned credibility with reputed foreign business schools and leading international institutes, associations and organizations pertaining to sharing and contributing ideas and insight in business education and research.

The programs we offer include executive MBA and MBA (Evening) in diverse fields, held on weekends placing special emphasis on the needs of busy executives and those who, having finished one career, wish to go for a new one. IoBM offers programs in Health and Hospital Management, Finance & Risk Management, Industrial Management, Telecommunication Management, Environment & Energy Management, Education Management, Organizational Psychology, Economics and many other disciplines. IoBM faculties excel in their respective fields. They pass on their expertise in research and scholarship to students enabling them to have an enhanced understanding of their respective disciplines.

Students have access to excellent facilities and learning resources as IoBM continually invests in the University’s infrastructure: library, gym, sports, computer equipment, Wi-Fi facility, video conferencing, state-of-the-art campus building and subsidized transport facilities. IoBM has earned its reputation through an excellent internship and graduate employment record. The rigorous academic degree courses enable graduates to acquire breadth and depth in their chosen subjects and, therefore, enter a wide range of careers. A large number of its graduates join top business schools in Europe, USA and Canada.

Research is a core competence at IoBM. All members of the IoBM community are actively engaged in disseminating knowledge, pursuing research in a diverse range of themes. The Institute publishes the country’s first research quarterly journal, Pakistan Business Review (PBR), which is recognized by the Higher Education Commission (HEC) and ECONLIT, Journal of Economic Literature, USA. An annually held HEC financed international conference provides a platform for the presentation of research undertaken at IoBM.

IoBM is now connected with PERN2, a high speed dedicated National Research & Education Network (NREN) for the universities/institutes and other academic sectors 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
President
Institute of Business Management
LIFE AT IoBM
RESOURCES AND FACILITIES

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 74,000 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 they 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 20,000 sq.ft. was completed in 2001. Another centrally air-conditioned building with a covered area of 50,000 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. 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 on 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 the faculty and students. The College of Computer Science and Information Systems building includes a number of computer laboratories with over two hundred 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 the 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 30,000 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 engages in numerous projects to expand access to its physical and digital collections. Skills development sessions are conducted for students and faculty from time to time. The library projects on the horizon include development of a portal of web links, just a click away, on the desktops of faculty and students.
STUDENT ACTIVITIES

Exciting and eventful as always, last year at IoBM has been no exception. Following are some examples to give you a glimpse of life at IoBM in general:

Student life at IoBM is not just about presentations, reports, midterms and finals. In fact, there is a whole range of student-organized entertainment and events that take place throughout the year. Students on campus are genuinely interested in cultural vibrancy and a sense of community. In between the busy academic schedule there are seminars, talk shows, guest speakers, fund raiser bake sales, the Event Management class food and fun stalls, CBMUN, Green Day, Drama festival and so much more. One can never get enough of it.

To cater to the individual student’s choice, there are a number of societies for like-minded people such as:

Literary and Public Speaking; Finance; Mathematics; Entrepreneurs; Club IT; CBM Society for Health Managers; Egalitarians- Economics; Youth Enhancement; Enlighterz; Industrial Engineering & Management; Dialogue; Marketing; Strategic & Human Resource; Entertainment Plus; Vanguard and the Sports Society; Mentor; SWAT. Each society is headed by a faculty advisor who is a senior member of the faculty or management and a team of student office bearers. These societies are diverse in their activities, organizing university-wide forums for students to talk about and debate social, economic, and political issues; organize seminars & workshops where they invite well known personalities from the business, government and corporate world. This provides them with an opportunity to exchange ideas and opinions with market leaders. Our students participate in various events organized by other universities / institutes locally, as well as, nationally and have won laurels for their Institute. Social care is a regular feature of these societies. Every year in the month of Ramzan donations in cash and kind are collected and, along with the Management’s major contribution, distributed to the needy in various hospitals of the city. Among other regular features is blood donation camps put up from time to time.
STUDENT ACTIVITIES

Recent Events

Dialogue Society

- A Talk by a Peace TV speaker Shaikh Hussain Yee, on January 17, 2013
- A lecture by Shujauddin Shaikh, on January, 28 at the IoBM auditorium, about our Beloved Prophet Muhammad (peace be upon him) & about his Sunnah in the lecture ‘The Sealed Nectar’.
- A Talk on Love for Allah! on March 9, 2013 by Warda Siraj
- A guest speaker lecture session on ‘Preparing for Ramadan’ by Shaykh Moiz Hasan on June 26, 2013
- Dialogue Society in collaboration with Marketing Society invited IoBMers to attend a talk by Omer Mukhtar Ahmed in June 2013
- A talk on “Spiritual Qualities of a Leader”! on November 2, 2013 by Kamran Kiyani
- Anger Management by Warda Siraj on November 5, 2013 in CBM GCR (Girls only)
- Becoming a True Believer on October 3, 2013 (For Males only)
- A lecture on Arrogance and Qibr by Shaykh Kamaluddin on November 26, 2013
- Lecture session on ‘Youth with Spiritual Energy-Future Leaders’ by Dr. Nasar Shahid on December 9, 2013
- “The Legacy of Muslims”! at IoBM Auditorium on February 24, 2014 by Br. Adnan Rashid

CBM Society of Health Managers (CSHM)

- World Health Day 2014 – CPR Training by Aman Foundation, April 2013
- Health Management Syndicate Meeting Bridging the Gap with the Industry, August 2013
- Industry Academic Bridge’ with more than 25 industry experts and the Higher Education Commission.
- 9th Health Asia – Pharma Summit, September, 2013
- MHM Convention – Poster Presentation, December, 2013
- IoBM Health Assessment Camp and Seminar on Organ Donation by Dr. Adib ul Hassan Rizvi, March, 2014
Entertainment Plus Society (EPS)

- Milad: In a world of losing hope and shaking faith, EPS brought Milad to reconstruct and polish the good faith with soothing recitations in praise of Allah and the Holy Prophet (P.B.U.H)
- Welcome Night: with the pour in of a new batch of students every fall, EPS builds on bonds, erases hesitation, celebrates their interweaving in the system
- Youm-e-Hussain: EPS fills the gaps of religious diversity and pays respect to Youm-e-Hussain
- Jashn-e-Baharaan: with the aroma of spring penetrating the air of Karachi, EPS floods joy among CBMers with the celebration of bahar with the utmost element of colors, scents, music and beyond all the inauguration of new beginnings

Finance Society

- Open House was held in February, 2013
- Seminar on “Importance of Savings and Investments for Students”, April, 2013
- The Finance Society of IoBM in collaboration with CFA Society Pakistan organized Seminar & Career Counseling Session. The seminar included a Webcast Session on: The Great Convergence: Asia, the West, and the Logic of One World by Kishore Mahbubani, Dean & Professor, National University Singapore, June 2013
- Possibilities 2013: Investment, Inspire and Innovate, October, 2013

Sports Society

- 1st PTV T20 Cricket Championship 2013, June, 2013
- Inter Society Sports Festival 2013, November, 2013
- HEC Intervarsity Table Tennis Championship Zone “G” 2013-14, December, 2013
- HEC Intervarsity Volleyball Championship Zone “G”, March 2014
- Aga Khan Inter University Football Tournament, April, 2014
- Aga Khan Inter University Basketball Tournament, April, 2014

The Strategic Human Resource Society (SHRS)

- Open House was held in September, 2013
- Zenith Leadership & Development Conference ZLDC), January 17-19, 2014
Literary and Public Speaking Society (LPSS)

- Open House: The Literary and Public Speaking Society - LPSS conducted its recruitment drive in October, 2013
- College of Business Management Debating Championship (CBMDC), November, 2013
- College of Business Management Model United Nations (CBMUN), February, 2014

PR and Media Management Society

- Ambassadors of Goodwill, March 02, 2013
- Social Media Entrepreneurs, June 15, 2013
- New Media Vision for Pakistan, August 18, 2013
- An interactive Session with JANG GROUP, September 29, 2013
- An interactive Session with DAWN (Economic and Business Review), October 05, 2013
- Risk Management of Rains and floods in Sindh, October 26, 2013
- An interactive session with THE NEWS and THE NATION, November 23, 2013
- IoBM Convocation 2013: Students of Media Management and Public Relations familiarize and acclimatize with many print and electronic media personnel from leading media organizations covering and reporting this mega event, December 07, 2013
- Interactive Session: “Sharing trickle down benefits of higher education at the grassroots level”, March 01, 2014
- Special Children’s Exclusive at Jashn-e-Baharaan, April 11, 2014

Mathematics Society

- The Seventh Mathematics Colloquium 2013 was conducted by the IoBM Society of Mathematics in collaboration with the society of Actuarial Sciences and CLUB IT in March, 2013

The Rotaract Club

- The open house had musical performances by IoBM house bands and the renowned performers Young Stunners as well
- To raise funds for the under privileged. To date Rs. 40,000 have been collected.
• Visit to Thatta. Around 300 warm clothes and 22 Kgs of Biryani in the regions of Makli and Haleji were distributed.

**Social Welfare And Trust (SWAT)**

• Winter cloth distribution, 180 blankets distributed among Temporary and Permanent non management staff of IoBM in January, 2013

• Blood donation drive at IOBM; Students donated 124 units of blood Indus Blood Center, Indus Hospital in February, 2013

• Winter cloth distribution, 200 blankets distributed in D’silva colony in February, 2013

• Positive effects of blood donation on human health, a session with Dr. Saba Jamal of Indus Hospital in February, 2013

• SWAT School Project for under privileged students, 44 students were admitted at Creek High School in August, 2013

• Meat distribution in Ibrahim Hyderi, Landhi & D’silva town; 5,200 K.g meat was distributed in October, 2013

• Winter Cloth distribution, 450 blankets were distributed in Neelum Colony along with a package which included sweaters/Jackets and socks in December 2013.

**Media Society**

• Ethics of Media: Seminar and panel discussion held in February, 2012

• IoBM Media Festival held in March, 2013

• Preview screening for film “Josh”: The Media Society hosted the preview screening of Pakistani film Josh in July, 2013

• 2nd IoBM Media Festival, held in October, 2013

• Screening for documentary-film Unmanned: America’s Drone War, November, 2013

• Drama Mania: Three theatrical performances held in collaboration with the The Nautanki Gang in February, 2012 and April, 2014

• IoBM Film Festival (IFF), April, 2014
In December, 2013, IoBM held its sixteenth Convocation, awarding degrees to 252 MBA (Regular), 77 MBA (Executive), 32 MBA (Health and Hospital Management), 40 MBA (Industrial Management), 10 MBA (Media Management), 04 MBA (Advertising and Communication Management), 17 MBA (Finance and Risk Management), 05 MBA (Telecommunication Management), 02 MBA (Educational Management), 03 MS (Economics & Finance), 06 MSC (HRM), 07 MPhil, 290 BBA (Honors), 65 BS (Joint Honors) and 15 BS (Actuarial Science & Risk Management), 17 BS (Commerce) and 5 BS (Industrial Engineering & Management).

The chief guest was Mr. Nisar Ahmed Khuhro, Senior Minister for Education, Govt. of Sindh, 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 in this convocation.

Gold Medals were awarded to the following students:

Noor-ul-Huda Arif Nagaria  
BBA (Honors)  
Shan Foods  
Gold Medal

Sanaiya Piyarali  
MBA (Regular)  
Adamjee Foundation  
Gold Medal

Shoaib Rizvi  
BS (AS & RM)  
S. H. Hashmi Memorial  
Gold Medal

Shoaib Rizvi  
BS (AS & RM)  
S. H. Hashmi Memorial  
Gold Medal

Fareeha Zulqarnain  
MBA (TCM)  
Janmohammad Dawood  
Gold Medal

Urooj Amanullah  
MBA (Finance)  
Razzak Tabba Memorial  
Gold Medal

Ayena Maqbool  
MBA (HRM)  
Imam Ali Kazi Memorial  
Gold Medal

Hina Rahman  
MBA (Regular)  
Halima-Fatima Memorial  
Gold Medal

Sidra  
MBA (MHM)  
Imam Ali Kazi Memorial  
Gold Medal
GLOBAL LINKAGES

International Relations Department

Institute of Business Management (IoBM) has its International Relations Department that works under the supervision of the President of IoBM. The Department is successfully managing execution of international relations on bilateral and multilateral terms with a large number of universities in Europe, Asia and U.S.A.

Eduniversal Ranking

Eduniversal, based in Paris, France, is a worldwide academic institutions ranking organization which ranks the 4,000 best academic institutions from around the world. The expertise of IoBM is distinguished in the 2014 Eduniversal Best Masters Ranking with the following programs:

Top 200 Best Masters Programs:

- MBA Advertising and Communication Management - Ranked 2
- MBA Human Resource Management - Ranked 6
- MBA Industrial Management - Ranked 6
- MSc Economics - Ranked 6
- MBA Marketing - Ranked 7
- MBA Finance and Accounting - Ranked 7
- MBA Executive - Ranked 8
- MBA Full Time - Ranked 15

Top 100 Best Masters Programs:

- MBA Finance and Risk Management
- MBA Health and Hospital Management
- MBA Environment and Energy Management
- MBA Logistics and Supply Chain Management
Erasmus Mundus (EM)

Erasmus Mundus is a cooperation and mobility Program of the European Union in the field of higher education. IoBM is participating in the EM Project as the Joint Coordinator to develop institutional cooperation by promoting linkages between leading Asian and European Universities, in the form of student, faculty and staff mobilities. This Program also enables Undergraduate, Master, Ph.D and Post Doctorate students of Asian partner countries to benefit educationally, linguistically and culturally from studying at Partner Universities. Further, the Project also provides opportunity to IoBM faculty members and staff to get training at Partner Higher Educational Institutions, which will upgrade their knowledge, skills and orientation through different training programs.

List of the members of our EM Consortium 2014 is as follows:

**European Union Partners:**

- Spain         University of Malaga (Coordinating Institution)
- Lithuania     Vytautas Magnus University
- Germany       Erfurt University of Applied Sciences
- Greece        University of Peloponnesse
- Italy         University of Florence
- Portugal      Institute of Politecnico de Castelo Branco
- France        University of Montpellier 2
- Poland        Wroclaw University of Technology
- Slovakia      Technical University of Kosice
- Finland       Haaga-Helia University of Applied Sciences
- France        IPAC

**Asian Partners:**

- Pakistan      Institute of Business Management (Joint Coordinating Institution)
- Bangladesh    American International University
- Bhutan        Gaeddu College of Business Studies
- Nepal         Kathmandu University
- Sri Lanka     University of Peradeniya
- Sri Lanka     University of Kelaniya
- Thailand      Chiang Mai University
- Malaysia      University of Kuala Lumpur
Bilateral Agreements

IoBM has bilateral agreements under formally signed Memorandum of Understanding (MoU) with following universities, which provides exchange of students, faculty and staff and promote joint research and consultancy.

1. Eqrem Cabej Universities, Albania
2. American International University, Dhaka, Bangladesh
3. University of Chittagong, Bangladesh
4. Gaeddu College of Business Studies, Bhutan
5. International Burch University, Bosnia
6. Guangxi University of Finance and Economics, China
7. Guangxi University of Technology (GXUT), China
8. Guilin University of Technology, China
9. University of Florence, Italy
10. Hanyang University, South Korea
11. National University of Mongolia
12. University of Kuala Lumpur, Malaysia
13. Kathmandu University, Nepal
14. Pokhara University, Nepal
15. Girne University, North Cyprus
16. Institute of Politecnico de Castelo Branco, Portugal
17. University of Malaga, Spain
18. Erfurt University of Applied Sciences, Germany
19. University of Georgia, Tbilisi
20. Dongseo University, Busan, South Korea
21. SIAS International University, Henan, China
22. Zehngzhou Institute of Science & Technology, China
23. Zhengzhou University of Science and Technology, Henan, China
24. William V.S. Tubman University (TU), Republic of Liberia
25. University of Kuala Lumpur, Malaysia
26. Caucasus University, Tbilisi, Georgia
27. IIC University of Technology Phnom Penh, Cambodia
28. Universidad Autonoma de Guadalajara, Mexico
29. University of Kelaniya, Sri Lanka
30. Michigan Technological University, USA
31. Bilkent University, Turkey
32. University of Peradeniya, Sri Lanka
33. Mykolas Romeris University, Lithuania
34. Vytautas Magnus University, Lithuania
35. Siam University, Thailand
36. Koc University, Istanbul, Turkey
37. Istanbul Kemerburgaz University, Turkey
38. Naresuan University, Thailand
39. Vietnam National University, Vietnam
40. VNU university of science, Vietnam
Student and Faculty Exchange Program

IoBM’s students have gone to the following Universities on Student Exchange Programs:

- Bilkent University, Turkey
- International Burch University, Bosnia
- Guilin University of Technology, China
- Erfurt University of Applied Sciences, Germany
- University of Florence, Italy
- Hanyang University, South Korea
- Vytautas Magnus University, Lithuania

IoBM has entered into an understanding with these universities for exchange of students on waiver of university tuition and in some cases provision of free hostel facilities. Our students going to Erfurt University of Applied Sciences for undergraduate studies for a semester also work with leading German Companies as internees and thus gain practical experience. IoBM also welcomes students from our 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 to 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 with a number of universities all over the world.

Senior Expert Services

A German NGO, Senior Expert Services (SES) has been sending technical experts and faculty to IoBM for giving 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.

IAU LEADHER Program 2014

The LEADHER program offers opportunities for learning partnerships and collaboration among IAU Member Institutions in Good Standing and enables participating institutions to tap into the wealth of experiences around the world. Institute of Business Management (IoBM) in collaboration with Caucasus University, Georgia (CU) has been selected for funding a project on Strengthening research capacity and research management in universities for the International Association of Universities (IAU) Leadership for Higher Education Reform (LEADHER) Program 2014.

Memberships of Professional Bodies

IoBM is also 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), (Member, Executive Council)
8. Marketing Association of Pakistan (Member, Executive Council)
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)
COLLEGE OF BUSINESS MANAGEMENT
BBA (HONORS)

BBA (Honors) Program is a professional and comprehensive management degree providing conceptual knowledge and in-depth exposure to functional areas in business management including accounting, marketing, finance, management, entrepreneurship and MIS along with special emphasis on leadership, social awareness, creativity and innovation. The program employs 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 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 by the industry.

The Bachelor of Business Administration (Honors) is a four-year program. It requires completion of 144 credit hours of course work and 2 credit hours of internship in a firm approved by the College. A student is required to complete 48 courses of 3 credit hours each in order to meet the degree requirements. Six credit hours are structured into the program for a foreign language course. Students must maintain a CGPA of 2.5 for the conferment of the BBA (Honors) degree.

Students are provided with general business courses as part of their studies and select electives from the following specializations:

- Accounting
- Finance and Banking
- Human Resource Management
- Industrial Management
- Management Information Systems
- Marketing
- Advertising and Media Management
- Management
- Logistics and Supply Chain Management

Courses are divided into Foundation, Core and Electives.

**Foundation Courses**

**Communication**

COM107  Academic English
COM102  Business Communication I
COM202  Business and Professional Speech
COM205  Persuasive and Analytical Writing for Business Communication
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| **3 = Intermediate Spanish | **4 = Intermediate German |
| **5 = Intermediate Japanese | **6 = Intermediate Italian |
| **7 = Intermediate Russian | **8 = Intermediate Chinese |

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Human Resource Management
HRM502 Industrial Relations and Labor Laws
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management
HRM520 Event Management
HRM602 Staffing Organizations
HRM603 HR Training and Development
HRM604 Negotiation, Bargaining and Advocacy
HRM605 Compensation Management

Management
MAN305 International Relations
MAN410 Introduction to Industrial Management
MAN501 Total Quality Management
MAN502 Business Process Re-engineering
EEM601 Environmental Management and Green Technology

Management Information Systems
MIS509 Software Project Management
MIS522 Business Information Systems
MIS524 Decision Support Systems
MIS525 Enterprise Systems
MIS526 Enterprise Resource Planning Systems
MIS527 Information Security
MIS528 Advanced Information Security
MIS530 Information Systems Research
MIS532 New Perspectives on Organizations and Information Systems

Marketing
MKT405 Marketing Research
MKT504 Advertising
MKT506 International Marketing
MKT507 Services Marketing
MKT508 Personal Selling
MKT510 Direct and Digital Marketing
MKT517 Media Marketing
MKT520 Merchandising and Sales Promotion
MKT521 Distribution and Channel Management
MKT530 New Product Development
MKT531 Retail Management
MKT607 Islamic Marketing
MKT608 Small Business Marketing
EEM602 Green Marketing Strategy: A challenge for a New Era
Logistics and Supply Chain Management
SCM302 Quantitative Methods in Production and Logistics
SCM306 IT Applications in Logistics
SCM309 Packaging Design and Environmental Aspects
SCM501 Supply Chain Management
SCM504 Procurement and Inventory Management
SCM506 Transportation Techniques and Management

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. In order to obtain the BBA (Honors) degree in four years, they need to complete twelve courses in a year. Full load of six courses can be taken each in the Fall and Spring semesters with an option for fewer courses in the latter and making up the shortfall in the summer session.

Course Structure

<table>
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<th>Semester One</th>
<th>Semester Two</th>
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<td>Principles of Microeconomics</td>
<td>Business Communication I</td>
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<td>Introduction to Psychology</td>
<td>Principles of Marketing</td>
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<td>College Algebra</td>
<td>Calculus for Business Decisions</td>
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<tr>
<td>Islamic Studies</td>
<td>Pakistan Studies</td>
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<td>Intermediate Financial Accounting</td>
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<td>Introduction to ERP Systems</td>
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<td>Financial Institutions</td>
<td>Foreign Language II</td>
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<td>Foreign Language I*</td>
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<td>Human Resource Management</td>
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<td>Methods in Business Research</td>
<td>Consumer Behavior</td>
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<td>Seminar in Economic Policy</td>
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<td>Analysis of Pakistani Industries</td>
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<td>Elective III</td>
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<td>Internship (2 credit hours)</td>
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* Six units of a foreign language course complete the language sequence.
BS (HONORS) ECONOMICS AND FINANCE

The BS (Honors) is designed to instill in students academic skills necessary for a professional career in Finance and Economics. It requires completion of 144 credit hours of course work and 2 credit hours of internship of at least six weeks in a firm approved by the College. Students graduating with a CGPA of 2.5 automatically qualify for MBA program offered by CBM. Students must take a minimum load of twelve credit hours (four courses) or a maximum load of eighteen credit ours (six courses) in a semester. In order to obtain the BS degree in 4 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.

Required Courses

Accounting
ACC101  Introduction to Financial Accounting
ACC201  Intermediate Financial Accounting
ACC503  Taxation

Communication
COM107  Academic English
COM202  Business and Professional Speech
COM203  Methods in Business Writing

Economics
ECO101  Principles of Microeconomics
ECO102  Principles of Macroeconomics
ECO103  Intermediate Microeconomics
ECO105  Intermediate Macroeconomics
ECO301  Managerial Economics
ECO302  International Trade
ECO303  Financial Economics
ECO304  Introduction to Econometrics
ECO305  Topics in Microeconomics
ECO306  Topics in Macroeconomics
ECO307  Monetary Theory and Policy
ECO402  Pakistan Economic Policy
ECO406  Money and Banking

Finance and Banking
FIN201  Introduction to Business Finance
FIN202  Financial Management
FIN301  Financial Institutions
FIN305  Internet Banking and EPS
FIN503  Corporate Finance
FIN504  International Finance
FIN505  Treasury and Fund Management
FIN506  Investment Banking and Security Analysis
FIN507  Portfolio Management
FIN509  Financial Derivatives
FIN512  Money and Capital Markets
FIN513  Project Appraisal

Human Resource Management
HRM301  Human Resource Management

Language
LAN 10*  Foreign Language I
LAN 20** Foreign Language II
  *1 = Introduction to Arabic
  *2 = Introduction to French
  *3 = Introduction to Spanish
  *4 = Introduction to German
  *5 = Introduction to Japanese
  *6 = Introduction to Italian
  *7 = Introduction to Russian
  *8 = Introduction to Chinese

  **1 = Intermediate Arabic
  **2 = Intermediate French
  **3 = Intermediate Spanish
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  **5 = Intermediate Japanese
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  **7 = Intermediate Russian
  **8 = Intermediate Chinese

Law
LAW401  Business Law

Management
MAN101  Principles of Management
MAN302  Organizational Behavior

Management Information Systems
MIS402  Computer Concepts and Applications

Marketing
MKT301  Principles of Marketing
MKT404  Methods in Business Research

Mathematics
MTH101  College Algebra
MTH103  Calculus for Business Decisions

Political Sciences
PSC301  Pakistan Studies

Religious Studies
REL101  Islamic Studies

Social Sciences
SSC101  Introduction to Psychology
SSC201  Policy Studies*
SSC202  Environmental Studies*

*Students can either opt for the two foreign language courses or Policy Studies and Environmental Studies. However, they will not be allowed to take one Foreign Language and Policy Studies or Environmental Studies.
Statistics
STA203 Probability Theory and Statistics
STA301 Model and Inference
STA302 Methods of Data Analysis

Course Structure

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<tr>
<th>Semester One</th>
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<td>Computer Concepts and</td>
<td>Environmental Studies</td>
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<td>College Algebra</td>
<td>Intermediate Microeconomics</td>
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<td>Introduction to Business Finance</td>
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<td>Speech</td>
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<td>Probability Theory and</td>
<td>Pakistan Studies</td>
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<td>Introduction to Psychology</td>
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<tr>
<td>International Trade</td>
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<td>Introduction to Econometrics</td>
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<th>Semester Seven</th>
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<tr>
<td>Taxation</td>
<td>Topics in Macroeconomics</td>
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<td>Topics in Microeconomics</td>
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<td>Monetary Theory and Policy</td>
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<td>International Finance</td>
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BS (HONORS) ACCOUNTING AND FINANCE

BS (Honors) in Accounting and Finance prepares graduates for careers in accounting and finance professions, such as banking and corporate finance. It requires completion of 144 credit hours of course work and 2 credit hours of internship of at least six weeks in a firm approved by the College. Students graduating with a CGPA of 2.5 automatically qualify for the MBA program offered by CBM. Students obtaining the BS (Accounting and Finance) degree have been granted exemption from seven ACCA examination papers by ACCA, UK. 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. In order to obtain the BS degree in 4 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.

Required Courses

**Accounting**
- ACC101 Introduction to Financial Accounting
- ACC201 Intermediate Financial Accounting
- ACC301 Cost Accounting
- ACC302 Accounting and Financial Information System
- ACC405 Internal Auditing and EDP Accounting
- ACC501 Advanced Financial Accounting
- ACC502 Advanced Managerial Accounting
- ACC503 Taxation
- ACC505 Auditing

**Communications**
- COM107 Academic English
- COM202 Business and Professional Speech
- COM203 Methods in Business Writing

**Economics**
- ECO101 Principles of Microeconomics
- ECO102 Principles of Macroeconomics
- ECO301 Managerial Economics
- ECO402 Pakistan Economic Policy
- ECO406 Money and Banking

**Finance and Banking**
- FIN201 Introduction to Business Finance
- FIN202 Financial Management
- FIN301 Financial Institutions
- FIN305 Internet Banking and EPS
- FIN403 Islamic Banking and Finance
- FIN503 Corporate Finance
- FIN504 International Finance
FIN505    Treasury and Fund Management
FIN506    Investment Banking and Security Analysis
FIN507    Portfolio Management
FIN509    Financial Derivatives
FIN511    Analysis of Financial Statements
FIN513    Project Appraisal

**Human Resource Management**
HRM301    Human Resource Management

**Language**
LAN 10*    Foreign Language I
LAN 20**    Foreign Language II
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**Law**
LAW401    Business Law

**Management**
MAN101    Principles of Management
MAN302    Organizational Behavior
MAN403    Entrepreneurship and Small Business Management

**Management Information Systems**
MIS402    Computer Concepts and Applications

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SSC101    Introduction to Psychology
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### Statistics
- STA203 Probability Theory and Statistics
- STA301 Model and Inference
- STA302 Methods of Data Analysis

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<td>Cost Accounting</td>
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<td>Corporate Finance</td>
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<td>Auditing</td>
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<td>Internship (2 credit hours)</td>
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### Semester Eight
- Auditing
- Taxation
- Pakistan Economic Policy
- Investment Banking & Security Analysis
- Financial Derivatives
- Project Appraisal
- Internship (2 credit hours)
MBA AFTER BBA (HONORS), BS JOINT (HONORS) AND BS (HONORS) ACCOUNTANCY
MANAGEMENT & LAW

MBA Program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares students for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

This Program consists of 36-credit hours of rigorous MBA level courses dealing with strategy and business transformation and includes a Capstone Project. For students who have obtained their BBA and BS Joint (Honors) degree from CBM, the foundation stage (of 36 credit hours) are exempted from the regular 72 credit hour MBA Program. An MBA student is required to take 10 courses, a Capstone Project of 6 credit hours and clear a comprehensive examination in order to complete the degree requirements. Students must maintain a 3.0 CGPA for conferment of the degree. Minimum duration of this program is 1.5 years.

The Capstone Project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty.

MBA students can specialize in the following areas:

- Marketing
- Finance
- Human Resource Management
- Logistics and Supply Chain Management

Required Course

Finance
FIN601 Strategic Financial Analysis and Design

Human Resource Management
HRM601 Transformational and Ethical Leadership

Management
MAN603 Technology, Innovation and Strategy
MAN604 Management Strategies and Emerging Organizations
MAN605 Seminar in Business Policy

Marketing
MKT601 Marketing Strategies and Value Innovation

My two years at IoBM not only taught me the Management subjects, but also helped me grow as a person suitable for the corporate world. After joining IoBM, I had to go through a rigorous process of academics and training on self-improvement which installed confidence in me. My MBA in marketing at IoBM helped me to understand the nuances of Sales & Marketing, besides helping me to improve my communication and personality, which is helping me a lot at my job now. Acquiring Degree from IoBM has helped me in joining companies like PTC, Engro Foods & Hilal Foods. I would like to thank all my mentors for making a difference in my life.

Ghazanfar Farooq
Alumnus
Trade Marketing Manager
Hilal Foods Pvt. Ltd.
Capstone Project
BPR601 Capstone Project I
BPR602 Capstone Project II

Business Elective Courses

Students may choose 4 elective courses from the following specializations:

Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

Majors in Finance and Banking
FIN513 Project Appraisal
FIN602 Behavioral Finance
FIN603 Entrepreneurial Finance
FIN604 Debt and Equity Markets
FIN531 Financial Derivatives and Risk Management
FIN605 Financial Modeling for Investment Decisions
FIN606 SME and Micro-Financing
FRM514 Takaful and Risk Management in Islamic Products

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management
EEM601 Environmental Management and Green Technology

Majors in Management Information Systems
MIS509 Software Project Management
MIS523 Decision Systems
MIS524 Decision Support Systems
MIS525 Enterprise Systems
MIS526 Enterprise Resource Planning Systems
MIS527 Information Security
MIS528 Advanced Information Security
MIS530 Information Systems Research
MIS532 New Perspectives on Organization Information Systems
MIS533 Big Data and Business Analytics
Majors in Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN508 Corporate Management

Majors in Marketing
MKT405 Marketing Research
MKT504 Advertising
MKT505 Industrial Marketing
MKT506 International Marketing
MKT511 Brand Management
MKT517 Media Marketing
MKT519 Marketing of Financial Services
MKT521 Distribution and Channel Management
MKT527 Integrated Marketing Communications
MKT530 New Product Development
MKT534 Social Marketing
MKT602 Marketing Analytics
MKT603 International Branding
MKT604 Seminar in Marketing
MKT605 Pricing Models and Strategies
MKT606 Non-Profit Marketing
MKT607 Islamic Marketing
MKT608 Small Business Marketing
EEM602 Green Marketing Strategy: A Challenge for a New Era

Majors in Logistics and Supply Chain Management
SCM302 Quantitative Methods in Production and Logistics
SCM305 Business Process Management in Supply Chain and Logistics
SCM306 IT Applications in Logistics
SCM501 Supply Chain Management
SCM502 ERP Systems Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management
SCM505 Storage and Warehouse Techniques
SCM506 Transportation Techniques and Management
SCM514 Sustainability and Environmental Aspects in Managing Supply Chains
SCM515 Risk Management in Supply Networks
SCM516 Innovation Management in Supply Chain and Logistics
SCM517 Corporate Consultancy Project in Logistics

Course Structure

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<th>Semester Two</th>
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<tbody>
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<td>Management Strategies and Emerging</td>
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<td>Seminar in Business Policy</td>
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<td>Capstone I</td>
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</table>
The BBA (Honors) programs are the route to Master in Advertising and Media Management. For those students who have obtained their BBA (Honors) degree from CBM, the MBA program is of a shorter duration. Exemption is offered for a number of courses and the required course load of a two-year regular MBA is reduced from a 78 credit hour program to a 36 credit hour program, to be completed in two regular semesters. A student is required to take 12 courses of 3 credit hours each and clear the comprehensive examination in order to complete the degree requirements. Students must maintain a CGPA of 3.0 for the conferment of the degree.

**Required Courses**

**Accounting**
ACC501 Advanced Financial Accounting

**Advertising**
ADV504 Advertising Management and Strategy
ADV505 Creative Planning and Development

**Law**
LAW405 Media Law and Business Ethics

**Management**
MAN501 Total Quality Management
MAN508 Comparative Management

**Marketing**
MKT501 Strategic Marketing and Planning
MKT507 Services Marketing
MKT511 Brand Management
MKT526 Public Relations and Event Management
MKT527 Integrated Marketing Communication

**Media**
MMM423 Specialized Communication Skills
MMM429 Digital Media
MMM434 Media Planning
MMM435 Print Media
MMM436 Electronic Media
MMM437 Role of Media in World Affairs
MMM438 Introduction to Media in Pakistan
MMM439 Media Research and Public Opinion
### Course Structure for MBA Advertising Management

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<tr>
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<td>Comparative Management</td>
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<td>Services Marketing</td>
<td>Strategic Marketing and Planning</td>
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<td>Media Planning</td>
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### Course Structure for MBA Media Management

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<tbody>
<tr>
<td>Introduction to Media in Pakistan</td>
<td>Public Relations and Event Management</td>
</tr>
<tr>
<td>Print Media</td>
<td>Media Research and Public Opinion</td>
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<tr>
<td>Electronic Media</td>
<td>Specialized Communication Skills</td>
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<tr>
<td>Brand Management</td>
<td>Digital Media</td>
</tr>
<tr>
<td>Comparative Management</td>
<td>Media Law and Business Ethics</td>
</tr>
<tr>
<td>Advertising Management and Strategy</td>
<td>Role of Media in World Affairs</td>
</tr>
</tbody>
</table>
MBA AFTER BS COMPUTER SCIENCE

This degree program is offered to students who have completed their BS (Computer Science) four-year program and want to decide on a career in the area of Business Administration. It requires a completion of 15 courses of 3 credit hours each and the comprehensive examination in order to complete the degree requirements. Students are required to maintain a minimum CGPA of 3.0 for the conferment of the degree.

Foundation Courses

Communication
COM402 Business Communication

Law
LAW401 Business Law

Social Sciences
SSC401 Business Ethics

Core Business Courses

Accounting
ACC401 Introduction to Managerial and Cost Accounting

Finance
FIN404 Financial Management

Management
MAN402 Organizational Behavior
MAN403 Entrepreneurship and Small Business Management
MAN405 Strategic Management
MAN501 Total Quality Management

Marketing
MKT402 Marketing Management
MKT404 Methods in Business Research

Business Elective Courses

Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC504 Accounting Information Systems
ACC505 Auditing
Majors in Finance and Banking
FIN403 Islamic Banking and Finance
FIN502 Strategic Financial Management
FIN503 Corporate Finance
FIN504 International Finance
FIN505 Treasury and Fund Management
FIN506 Investment Banking and Security Analysis
FIN507 Portfolio Management
FIN508 Risk Management
FIN509 Financial Derivatives
FIN510 Investment Analysis
FIN511 Analysis of Financial Statements
FIN512 Money and Capital Markets
FIN513 Project Appraisal
FIN514 Asset Liability Management
FRM514 Takaful and Risk Management in Islamic Products

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change & Development
HRM506 Strategic HRM
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM510 Personnel Development
HRM511 Performance Appraisal and Management

Majors in Management
MAN502* Business Process Re-engineering
MAN504 Business Balanced Scorecard
MAN507 Business Etiquette
MAN508 Comparative Management
* Accepted as elective under all disciplines.

Majors in Management Information Systems
MIS502 Electronic Commerce
MIS504 Oracle/Developer 2000
MIS507 Relational Database Management Systems
MIS509 Software Project Management
MIS521 Record Management
MIS522 Business Information Systems
MIS523 Decision Systems
MIS524 Decision Support Systems
MIS525 Enterprise Systems
MIS526 Enterprise Resource Planning Systems
Majors in Marketing
MKT501 Strategic Marketing and Planning
MKT502 Graphic Designing
MKT503 Packaging and Printing
MKT504 Advertising
MKT505 Industrial Marketing
MKT506 International Marketing
MKT507 Services Marketing
MKT508 Personal Selling
MKT509 Consumer Behavior
MKT510 Direct and Digital Marketing
MKT511 Brand Management
MKT512 Export Marketing
MKT519 Marketing of Financial Services
MKT520 Merchandising and Sales Promotion
MKT521 Distribution and Channel Management
MKT526 Public Relations and Event Management
MKT527 Integrated Marketing Communication

Majors in Logistics and Supply Chain Management
SCM501 Supply Chain Management
SCM502 ERP Systems Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management
SCM505 Storage and Warehouse Techniques
SCM506 Transportation Techniques and Management

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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</thead>
<tbody>
<tr>
<td>Intro. to Managerial &amp; Cost Accounting</td>
<td>Financial Management</td>
</tr>
<tr>
<td>Business Communication</td>
<td>Business Law</td>
</tr>
<tr>
<td>Organizational Behavior</td>
<td>Entrep. &amp; Small Business Management</td>
</tr>
<tr>
<td>Total Quality Management</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Marketing Management</td>
<td>Methods in Business Research</td>
</tr>
<tr>
<td>Business Ethics</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
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</thead>
<tbody>
<tr>
<td>Elective I</td>
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<tr>
<td>Elective II</td>
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<tr>
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</tr>
<tr>
<td>Elective IV</td>
</tr>
</tbody>
</table>

The course structure of the program is based on internationally recognized curricula and is being run with strong collaboration of German experts. The added feature of the program is training on SAP® ERP system. There are tremendous job opportunities in the field of supply chain and logistics. MBA graduates can take any four elective courses offered in areas of Supply Chain & Logistics Management.
MBA Finance and Risk Management, requires completion of 36 credit hours of course work comprising 12 courses (3 credit hours each). Students require maintaining 3.0 CGPA on a scale of 4 for the conferment of the degree.

**Required Courses**

**Economics**
ECO408  Applied Financial Economics

**Finance**
FIN511  Analysis of Financial Statements

**Finance and Risk Management**
FRM401  Principles of Risk Management
FRM402  Computational Methods in Risk
FRM403  Introduction to Financial Risk Management
FRM404  Risk Financing Techniques
FRM405  Advanced Financial Risk Management
FRM503  Corporate Risk Management
FRM505  Corporate Treasury and Risk Management
FRM506  Financial Regulation for Risk Management
FRM507  Risk Financing Techniques
FRM508  Financial Market Issues and Crisis
FRM509  Energy Risk Management
FRM510  Project Risk Management
FRM511  Takaful and Risk Management in Islamic Products
FRM512  International Risk & Financial Reporting
FRM513  International Finance Reporting and Standards
FRM514  Property Risk Management
FRM515  Management of Insurance Institutions

**Mathematics**
MTH409  Financial Mathematics I
MTH410  Financial Mathematics II

**Social Sciences**
SSC405  Business Ethics & Financial Responsibility

**Elective Courses**

**Finance and Banking**
FIN403  Islamic Banking and Finance

**Finance and Risk Management**
FRM504  Theory of Risk and Insurance
FRM506  Financial Regulation for Risk Management
FRM507  Risk Financing Techniques
FRM508  Financial Market Issues and Crisis
FRM509  Energy Risk Management
FRM510  Project Risk Management
FRM511  Takaful and Risk Management in Islamic Products
FRM512  International Risk & Financial Reporting
FRM513  International Finance Reporting and Standards
FRM514  Property Risk Management
FRM515  Management of Insurance Institutions

### Semester One
- Financial Mathematics I
- Principles of Risk Management
- Computational Methods in Risk
- Business Ethics and Fin. Responsibility

### Semester Two
- Introduction to Financial Risk Mgmt.
- Financial Mathematics II
- Applied Financial Economics
- Elective I

### Semester Three
- Risk Financing Techniques
- Advanced Financial Risk Management
- Analysis of Financial Statements
- Elective II
MBA program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

This MBA program is designed for students having a minimum of 16 years of education with degrees in a wide range of disciplines such as business, commerce, engineering, law, science, medicine, arts and pharmacy. The 72 credit hours MBA program is divided into a foundation stage of 36 credit hours followed by the 36-credit hours of rigorous MBA level courses/project dealing with strategy and business transformation. The foundation stage consists of preparatory course work necessary for the higher level MBA courses. The students are also expected to complete 2 credit hours of internship of at least six weeks in an approved firm and the comprehensive examination. Students must maintain a 3.0 CGPA for MBA level courses and project for the conferment of the degree. The program may be completed in a minimum of two years depending upon the relevant preparation. Students who are weak in English and Communication Skills are required to take an additional “Business English” course to enhance their knowledge of the language.

The capstone project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty.

MBA students can specialize in the following areas by taking four electives:

- Marketing
- Finance
- Human Resource Management
- Logistics and Supply Chain Management
- Management Information Systems

### Required Courses

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<th>Communications</th>
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<tr>
<td>COM402 Business Communication</td>
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<th>Finance</th>
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<tbody>
<tr>
<td>ECO401 Micro and Macroeconomics</td>
<td>FIN404 Financial Management</td>
</tr>
<tr>
<td>FIN601* Strategic Financial Analysis and Design</td>
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</tr>
</tbody>
</table>
Human Resource Management
HRM401 Human Resource Management
HRM601*Transformational and Ethical Leadership

Marketing
MKT402 Marketing Management
MKT404 Methods in Business Research
MKT509 Consumer Behavior
MKT601* Marketing Strategies and Value Innovation

Statistics
STA403 Statistics and Mathematics

*Indicates MBA level courses

Specialized Courses

MBA students have a choice of four electives from the following disciplines:

Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

Majors in Marketing
MKT405 Marketing Research
MKT504 Advertising
MKT505 Industrial Marketing
MKT506 International Marketing
MKT511 Brand Management
MKT517 Media Marketing
MKT519 Marketing of Financial Services
MKT521 Distribution and Channel Management
MKT527 Integrated Marketing Communications
MKT530 New Product Development
MKT534 Social Marketing
MKT602 Marketing Analytics
MKT603 International Branding
MKT604 Seminar in Marketing
MKT605 Pricing Models and Strategies
MKT606 Non-Profit Marketing
MKT607 Islamic Marketing
MKT608 Small Business Marketing

Majors in Finance and Banking
FIN513 Project Appraisal
FIN602 Behavioral Finance
FIN603 Entrepreneurial Finance
FIN604 Debt and Equity Markets
FIN531 Financial Derivatives and Risk Management
FIN606 SME and Micro-Financing
FRM514 Takaful and Risk Management in Islamic Products

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management

Majors in Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN508 Comparative Management
EEM401 Environmental Issues and Management

Law
LAW409 Corporate and Business Law

Management
MAN401 Principles of Management
MAN406 Production and Operations Management
MAN603*Technology, Innovation and Strategy
MAN604*Management Strategies and Emerging Organizations
MAN605*Seminar in Business Policy

Capstone Project
BPR601* Capstone Project I
BPR602* Capstone Project II
Majors in Logistics and Supply Chain Management
SCM302 Quantitative Methods in Production and Logistics
SCM305 Business Process Management in Supply Chain and Logistics
SCM306 IT Applications in Logistics
SCM309 Packaging Design and Environmental Aspects
SCM501 Supply Chain Management
SCM502 ERP Systems Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management
SCM505 Storage and Warehouse Techniques
SCM506 Transportation Techniques and Management
SCM514 Sustainability and Environmental Aspects in Managing Supply Chains
SCM515 Risk Management in Supply Networks
SCM516 Innovation Management in Supply Chain and Logistics
SCM517 Corporate Consultancy Project in Logistics

Majors in Management Information Systems
MIS509 Software Project Management
MIS523 Decision Systems
MIS524 Decision Support Systems
MIS525 Enterprise Systems
MIS526 Enterprise Resource Planning Systems
MIS527 Information Security
MIS528 Advanced Information Security
MIS530 Information Systems Research
MIS532 New Perspectives on Organization Information Systems
MIS533 Big Data and Business Analytics

Course Structure

<table>
<thead>
<tr>
<th>Foundation Stage</th>
<th>Semester Two</th>
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<tbody>
<tr>
<td>Semester One</td>
<td>Methods in Business Research</td>
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<tr>
<td>Principles of Management</td>
<td>Financial Management</td>
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<tr>
<td>Consumer Behavior</td>
<td>Human Resource Management</td>
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<tr>
<td>Introduction to Financial Accounting</td>
<td>Production and Operations Management</td>
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<tr>
<td>Statistics and Mathematics</td>
<td>Marketing Management</td>
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<tr>
<td>Micro and Macroeconomics</td>
<td>Corporate and Business Law</td>
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<tr>
<td>Business Communication</td>
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<table>
<thead>
<tr>
<th>MBA Stage</th>
<th>Semester Four</th>
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</thead>
<tbody>
<tr>
<td>Semester Three</td>
<td>Technology, Innovation and Strategy</td>
</tr>
<tr>
<td>Management Strategies and Emerging Organizations</td>
<td>Strategic Financial Analysis and Design</td>
</tr>
<tr>
<td>Marketing Strategies and Value Innovation</td>
<td>Elective III</td>
</tr>
<tr>
<td>Elective I</td>
<td>Capstone I</td>
</tr>
<tr>
<td>Elective II</td>
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</tbody>
</table>

| Semester Five | |
|---------------||
| Seminar in Business Policy | |
| Transformational and Ethical Leadership | |
| Elective IV | |
| Capstone II | |
MBA PROGRAM FOR STUDENTS WITH 14 YEARS EDUCATION

MBA program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

This MBA program is designed for students having 14 years of education with degrees in a wide range of disciplines such as business, commerce, law, science, and arts. The 108 credit hours MBA program is divided into a foundation stage of 72 credit hours followed by the 36-credit hours of rigorous MBA level courses and a capstone project dealing with strategy and business transformation. The foundation stage consists of preparatory course work necessary for the higher level MBA courses. The students are also expected to complete 2 credit hours of internship of at least six weeks in an approved firm and the comprehensive examination. Students completing 72 credit hours of the foundation stage are also eligible for the grant of Bachelor of Business Studies (BBS) degree as per HEC recommendations. Students must maintain a 3.0 CGPA for MBA level courses and project for the conferment of the degree. The program may be completed in a minimum of 3.5 years depending upon the relevant preparation. Students who are weak in English and Communication Skills are required to take an additional “Business English” course to enhance their knowledge of the language.

The capstone project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty.

MBA students can specialize in the following areas by taking four electives:

- Marketing
- Finance
- Human Resource Management
- Logistics and Supply Chain Management
- Management Information Systems

**Required Courses**

**Accounting**
ACC401 Introduction to Managerial and Cost Accounting
ACC402 Introduction to Financial Accounting

**Communications**
COM401 Business English
COM205 Persuasive and Analytical Writing for Business Communication
COM402 Business Communication

*For less proficient students*
**Economics**  
ECO401 Micro and Macroeconomics  
ECO405 Seminar in Economic Policy  

**Human Resource Management**  
HRM401 Human Resource Management  
HRM601* Transformational and Ethical Leadership  

**Management**  
MAN401 Principles of Management  
MAN402 Organizational Behavior  
MAN406 Production and Operations Management  
MAN415 Entrepreneurial Leadership and Motivation  
MAN603* Technology, Innovation and Strategy  
MAN604* Management Strategies and Emerging Organizations  
MAN605* Seminar in Business Policy  

**Management Information Systems**  
MIS526 Enterprise Resource Planning Systems  

**Social Sciences**  
SSC101 Introduction to Psychology  
SSC401 Business Ethics  

*Indicates MBA level courses  

**Specialized Courses**  

MBA students have a choice of four electives from the following disciplines:  

**Majors in Accounting**  
ACC501 Advanced Financial Accounting  
ACC502 Advanced Managerial Accounting  
ACC505 Auditing  
ACC506 Analysis of Financial Statements  

**Majors in Human Resource Management**  
HRM501 Recruitment and Selection  
HRM502 Industrial Relations and Labour Laws  
HRM503 Employee Training and Development  
HRM504 Negotiation Skills and CB  
HRM505 Organizational Change and Development  
HRM506 Strategic Human Resource Management  
HRM507 Public Relations and Event Management  
HRM508 Salary and Compensation  
HRM509 Leadership Studies  
HRM511 Performance Appraisal and Management  

**Majors in Management**  
MAN411 Project Management  
MAN413 Corporate Social Responsibility  
MAN416 Corporate Governance  
MAN508 Comparative Management  
EEM401 Environmental Issues and Management  

**Finance**  
FIN201 Introduction to Business Finance  
FIN404 Financial Management  
FIN601* Strategic Financial Analysis and Design  

**Law**  
LAW409 Corporate and Business Law  

**Marketing**  
MKT401 Principles of Marketing  
MKT402 Marketing Management  
MKT403 Sales Management  
MKT404 Methods in Business Research  
MKT509 Consumer Behavior  
MKT601* Marketing Strategies and Value Innovation  

**Statistics**  
STA202 Quantitative Skills and Managerial Statistics  
STA403 Statistics and Mathematics  

**Capstone Project**  
BPR601* Capstone Project I  
BPR602* Capstone Project II  

**Majors in Finance and Banking**  
FIN513 Project Appraisal  
FIN531 Financial Derivatives and Risk Management  
FIN602 Behavioral Finance  
FIN603 Entrepreneurial Finance  
FIN604 Debt and Equity Markets  
FIN606 SME and Micro-Financing  
FRM514 Takaful and Risk Management in Islamic Products  

**Majors in Logistics and Supply Chain Management**  
SCM302 Quantitative Methods in Production and Logistics  
SCM305 Business Process Mgmt. in Supply Chain & Logistics  
SCM306 IT Applications in Logistics  
SCM309 Packaging Design and Environmental Aspects  
SCM501 Supply Chain Management  
SCM502 ERP Systems Design and Implementation  
SCM503 Strategic Supply Chain Management  
SCM504 Procurement and Inventory Management  
SCM505 Storage and Warehouse Techniques  
SCM506 Transportation Techniques and Management  
SCM514 Sustainability & Env. Aspects in Managing Supply Chains  
SCM515 Risk Management in Supply Networks  
SCM516 Innovation Management in Supply Chain and Logistics  
SCM517 Corporate Consultancy Project in Logistics
Majors in Marketing
MKT405 Marketing Research
MKT504 Advertising
MKT505 Industrial Marketing
MKT506 International Marketing
MKT511 Brand Management
MKT517 Media Marketing
MKT519 Marketing of Financial Services
MKT521 Distribution and Channel Management
MKT527 Integrated Marketing Communications
MKT530 New Product Development
MKT534 Social Marketing
MKT602 Marketing Analytics
MKT603 International Branding
MKT604 Seminar in Marketing
MKT605 Pricing Models and Strategies
MKT606 Non-Profit Marketing
MKT607 Islamic Marketing
MKT608 Small Business Marketing

Majors in Management Information Systems
MIS504 Oracle/Developer 2000
MIS509 Software Project Management
MIS523 Decision Systems
MIS524 Decision Support Systems
MIS525 Enterprise Systems
MIS526 Enterprise Resource Planning Systems
MIS527 Information Security
MIS528 Advanced Information Security
MIS530 Information Systems Research
MIS532 New Perspectives on Org. Information Systems
MIS533 Big Data and Business Analytics

Course Structure

Foundation Stage
Semester One
Principles of Management
Business Communication I
Principles of Marketing
Introduction to Financial Accounting
Statistics and Mathematics
Introduction to Psychology

Semester Two
Persuasive and Analytical Writing for Business Communication
Entrepreneurial Leadership and Motivation
Sales Management
Quantitative Skills & Managerial Statistics
Introduction to Managerial & Cost Accounting
Micro and Macroeconomics

Semester Three
Intro to Business Finance
Business Ethics
Organizational Behavior
Introduction to Enterprise Resource Planning Systems
Methods in Business Research
Consumer Behavior

Semester Four
Financial Management
Human Resource Management
Production and Operations Management
Marketing Management
Seminar in Economic Policy
Corporate and Business Law

MBA Stage
Semester Five
Management Strategies and Emerging Organizations
Marketing Strategies and Value Innovation
Elective I
Elective II

Semester Six
Strategic Financial Analysis and Design
Technology, Innovation and Strategy
Elective III
Capstone I

Semester Seven
Seminar in Business Policy
Transformational and Ethical Leadership
Elective IV
Capstone II

Course Structure

Foundation Stage
Semester One
Principles of Management
Business Communication I
Principles of Marketing
Introduction to Financial Accounting
Statistics and Mathematics
Introduction to Psychology

Semester Two
Persuasive and Analytical Writing for Business Communication
Entrepreneurial Leadership and Motivation
Sales Management
Quantitative Skills & Managerial Statistics
Introduction to Managerial & Cost Accounting
Micro and Macroeconomics

Semester Three
Intro to Business Finance
Business Ethics
Organizational Behavior
Introduction to Enterprise Resource Planning Systems
Methods in Business Research
Consumer Behavior

Semester Four
Financial Management
Human Resource Management
Production and Operations Management
Marketing Management
Seminar in Economic Policy
Corporate and Business Law

MBA Stage
Semester Five
Management Strategies and Emerging Organizations
Marketing Strategies and Value Innovation
Elective I
Elective II

Semester Six
Strategic Financial Analysis and Design
Technology, Innovation and Strategy
Elective III
Capstone I

Semester Seven
Seminar in Business Policy
Transformational and Ethical Leadership
Elective IV
Capstone II
MBA program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

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The capstone project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty.

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- Finance
- Human Resource Management
- Logistics and Supply Chain Management
- Management Information Systems

**Required Courses**

**Accounting**
ACC402 Introduction to Financial Accounting

**Economics**
ECO401 Micro and Macroeconomics

**Finance**
FIN404 Financial Management
FIN601* Strategic Financial Analysis and Design

**Communications**
COM401*Business English
COM402 Business Communication

*For less proficient students

**Human Resource Management**
HRM401 Human Resource Management
HRM601*Transformational and Ethical Leadership
Law
LAW409 Corporate and Business Law

Marketing
MKT402 Marketing Management
MKT404 Methods in Business Research
MKT509 Consumer Behavior
MKT601* Marketing Strategies and Value Innovation

Statistics
STA403 Statistics and Mathematics

*Indicates MBA level courses

Specialized Courses

MBA students have a choice of four electives from the following disciplines:

Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

Majors in Marketing
MKT405 Marketing Research
MKT504 Advertising
MKT505 Industrial Marketing
MKT506 International Marketing
MKT511 Brand Management
MKT517 Media Marketing
MKT519 Marketing of Financial Services
MKT521 Distribution and Channel Management
MKT527 Integrated Marketing Communications
MKT530 New Product Development
MKT534 Social Marketing
MKT602 Marketing Analytics
MKT603 International Branding
MKT604 Seminar in Marketing
MKT605 Pricing Models and Strategies
MKT606 Non-Profit Marketing
MKT607 Islamic Marketing
MKT608 Small Business Marketing

Majors in Finance and Banking
FIN513 Project Appraisal
FIN602 Behavioral Finance
FIN603 Entrepreneurial Finance
FIN604 Debt and Equity Markets
FIN531 Financial Derivatives and Risk Management
FIN606 SME and Micro-Financing
FRM514 Takaful and Risk Management in Islamic Products

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management

Majors in Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN508 Comparative Management
EEM401 Environmental Issues and Management
Majors in Logistics and Supply Chain Management
SCM302 Quantitative Methods in Production and Logistics
SCM305 Business Process Management in Supply Chain and Logistics
SCM306 IT Applications in Logistics
SCM309 Packaging Design and Environmental Aspects
SCM501 Supply Chain Management
SCM502 ERP Systems Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management
SCM505 Storage and Warehouse Techniques
SCM506 Transportation Techniques and Management
SCM514 Sustainability and Environmental Aspects in Managing Supply Chains
SCM515 Risk Management in Supply Networks
SCM516 Innovation Management in Supply Chain and Logistics
SCM517 Corporate Consultancy Project in Logistics

Majors in Management Information Systems
MIS509 Software Project Management
MIS523 Decision Systems
MIS524 Decision Support Systems
MIS525 Enterprise Systems
MIS526 Enterprise Resource Planning Systems
MIS527 Information Security
MIS528 Advanced Information Security
MIS530 Information Systems Research
MIS532 New Perspectives on Organization Information Systems
MIS533 Big Data and Business Analytics

Course Structure

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<tr>
<th>Foundation Stage</th>
<th>Semester One</th>
<th>Principles of Management</th>
<th>Consumer Behavior</th>
<th>Introduction to Financial Accounting</th>
<th>Statistics and Mathematics</th>
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<td>Financial Management</td>
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MBA program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

This MBA program is designed for students having 14 years of education with degrees in a wide range of disciplines such as business, commerce, law, science, and arts. The 108 credit hours MBA program is divided into a foundation stage of 72 credit hours followed by the 36-credit hours of rigorous MBA level courses and a capstone project dealing with strategy and business transformation. The foundation stage consists of preparatory course work necessary for the higher level MBA courses. Students must pass a comprehensive examination. Students completing 72 credit hours of the foundation stage are also eligible for the grant of Bachelor of Business Studies (BBS) degree as per HEC recommendations. Students must maintain a 3.0 CGPA for MBA level courses and project for the conferment of the degree. The program may be completed in a minimum of 9 semesters depending upon the relevant preparation. Students who are weak in English and Communication Skills are required to take an additional “Business English” course to enhance their knowledge of the language.

The capstone project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty.

MBA students can specialize in the following areas by taking four electives:

- Marketing
- Finance
- Human Resource Management
- Logistics and Supply Chain Management
- Management Information Systems

**Required Courses**

**Accounting**
ACC401 Introduction to Managerial and Cost Accounting
ACC402 Introduction to Financial Accounting

**Communications**
COM401* Business English
COM205 Persuasive and Analytical Writing for Business Communication
COM402 Business Communication

*For less proficient students
Economics
ECO401 Micro and Macroeconomics
ECO405 Seminar in Economic Policy

Human Resource Management
HRM401 Human Resource Management
HRM601*Transformational and Ethical Leadership

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN406 Production and Operations Management
MAN415 Entrepreneurial Leadership and Motivation
MAN603*Technology, Innovation and Strategy
MAN604*Management Strategies and Emerging Organizations
MAN605*Seminar in Business Policy

Management Information Systems
MIS526 Enterprise Resource Planning Systems

Social Sciences
SSC101 Introduction to Psychology
SSC401 Business Ethics

*Indicates MBA level courses

Specialized Courses

MBA students have a choice of four electives from the following disciplines:

Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management

Majors in Finance and Banking
FIN401 Introduction to Business Finance
FIN404 Financial Management
FIN601* Strategic Financial Analysis and Design

LAW409 Corporate and Business Law

Majors in Marketing
MKT401 Principles of Marketing
MKT402 Marketing Management
MKT403 Sales Management
MKT404 Methods in Business Research
MKT509 Consumer Behavior
MKT601* Marketing Strategies and Value Innovation

Majors in Statistics
STA202 Quantitative Skills and Managerial Statistics
STA403 Statistics and Mathematics

Majors in Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN508 Comparative Management
EEM401 Environmental Issues and Management

Majors in Logistics and Supply Chain Management
SCM302 Quantitative Methods in Production and Logistics
SCM305 Business Process Mgmt. in Supply Chain & Logistics
SCM306 IT Applications in Logistics
SCM309 Packaging Design and Environmental Aspects
SCM501 Supply Chain Management
SCM502 ERP Systems Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management
SCM505 Storage and Warehouse Techniques
SCM506 Transportation Techniques and Management
SCM514 Sustainability & Env. Aspects in Managing Supply Chains
SCM515 Risk Management in Supply Networks
SCM516 Innovation Management in Supply Chain and Logistics
SCM517 Corporate Consultancy Project in Logistics
## Majors in Marketing
- MKT405  Marketing Research
- MKT504  Advertising
- MKT505  Industrial Marketing
- MKT506  International Marketing
- MKT511  Brand Management
- MKT517  Media Marketing
- MKT519  Marketing of Financial Services
- MKT521  Distribution and Channel Management
- MKT527  Integrated Marketing Communications
- MKT530  New Product Development
- MKT534  Social Marketing
- MKT602  Marketing Analytics
- MKT603  International Branding
- MKT604  Seminar in Marketing
- MKT605  Pricing Models and Strategies
- MKT606  Non-Profit Marketing
- MKT607  Islamic Marketing
- MKT608  Small Business Marketing

## Majors in Management Information Systems
- MIS504  Oracle/Developer 2000
- MIS509  Software Project Management
- MIS523  Decision Systems
- MIS524  Decision Support Systems
- MIS525  Enterprise Systems
- MIS526  Enterprise Resource Planning Systems
- MIS527  Information Security
- MIS528  Advanced Information Security
- MIS530  Information Systems Research
- MIS532  New Perspectives on Org. Information Systems
- MIS533  Big Data and Business Analytics

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<td><strong>Semester Seven</strong></td>
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MBA Evening Program for Students with 16 Years Education

MBA Evening program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

This MBA Evening program is designed for students having a minimum of 16 years of education with degrees in a wide range of disciplines such as business, commerce, engineering, law, science, medicine, arts and pharmacy. The 72 credit hours MBA program is divided into a foundation stage of 36 credit hours followed by the 36 credit hours of rigorous MBA level courses/project dealing with strategy and business transformation. The foundation stage consists of preparatory course work necessary for the higher level MBA courses. Students must pass a comprehensive examination and maintain a 3.0 CGPA for MBA level courses and project for the conferment of the degree. Students who are weak in English and Communication Skills are required to take an additional “Business English” course to enhance their knowledge of the language.

The capstone project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty. The classes of this program will be held at IoBM City Center from 6:00 PM to 9:00 PM for each course.

MBA students can specialize in the following areas by taking four electives:

- Marketing
- Finance
- Human Resource Management
- Logistics and Supply Chain Management
- Management Information Systems

Required Courses

**Accounting**
ACC402 Introduction to Financial Accounting

**Economics**
ECO401 Micro and Macroeconomics

**Finance**
FIN404 Financial Management
FIN601* Strategic Financial Analysis and Design

**Communications**
COM401*Business English
COM402 Business Communication
*For less proficient students

**Human Resource Management**
HRM401 Human Resource Management
HRM601*Transformational and Ethical Leadership
**Law**
LAW409  Corporate and Business Law

**Marketing**
MKT402  Marketing Management
MKT404  Methods in Business Research
MKT509  Consumer Behavior
MKT601* Marketing Strategies and Value Innovation

**Statistics**
STA403  Statistics and Mathematics

*Indicates MBA level courses

**Specialized Courses**

MBA students have a choice of four electives from the following disciplines:

**Majors in Accounting**
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

**Majors in Marketing**
MKT405 Marketing Research
MKT504 Advertising
MKT505 Industrial Marketing
MKT506 International Marketing
MKT511 Brand Management
MKT517 Media Marketing
MKT519 Marketing of Financial Services
MKT521 Distribution and Channel Management
MKT527 Integrated Marketing Communications
MKT530 New Product Development
MKT534 Social Marketing
MKT602 Marketing Analytics
MKT603 International Branding
MKT604 Seminar in Marketing
MKT605 Pricing Models and Strategies
MKT606 Non-Profit Marketing
MKT607 Islamic Marketing
MKT608 Small Business Marketing

**Majors in Finance and Banking**
FIN513 Project Appraisal
FIN602 Behavioral Finance
FIN603 Entrepreneurial Finance
FIN604 Debt and Equity Markets
FIN531 Financial Derivatives and Risk Management
FIN606 SME and Micro-Financing
FRM514 Takaful and Risk Management in Islamic Products

**Majors in Human Resource Management**
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management

**Majors in Management**
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN508 Comparative Management
EEM401 Environmental Issues and Management
**Majors in Logistics and Supply Chain Management**

SCM302  Quantitative Methods in Production and Logistics
SCM305 Business Process Management in Supply Chain and Logistics
SCM306  IT Applications in Logistics
SCM309  Packaging Design and Environmental Aspects
SCM501  Supply Chain Management
SCM502  ERP Systems Design and Implementation
SCM503  Strategic Supply Chain Management
SCM504  Procurement and Inventory Management
SCM505  Storage and Warehouse Techniques
SCM506  Transportation Techniques and Management
SCM514 Sustainability and Environmental Aspects in Managing Supply Chains
SCM515  Risk Management in Supply Networks
SCM516  Innovation Management in Supply Chain and Logistics
SCM517  Corporate Consultancy Project in Logistics

**Majors in Management Information Systems**

MIS509  Software Project Management
MIS523  Decision Systems
MIS524  Decision Support Systems
MIS525  Enterprise Systems
MIS526  Enterprise Resource Planning Systems
MIS527  Information Security
MIS528  Advanced Information Security
MIS530  Information Systems Research
MIS532  New Perspectives on Organization Information Systems
MIS533 Big Data and Business Analytics

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MBA EVENING PROGRAM FOR STUDENTS WITH 14 YEARS EDUCATION

MBA Evening program is designed to produce transformational and ethical leadership for businesses and industry through integrated curriculum and experiential learning and prepares for business challenges emerging from globalization, technology driven innovation, and interconnectivity.

This MBA Evening program is designed for students having 14 years of education with degrees in a wide range of disciplines such as business, commerce, law, science, and arts. The 108 credit hours MBA program is divided into a foundation stage of 72 credit hours followed by the 36-credit hours of rigorous MBA level courses and a capstone project dealing with strategy and business transformation. The foundation stage consists of preparatory course work necessary for the higher level MBA courses. Students must pass a comprehensive examination. Students completing 72 credit hours of the foundation stage are also eligible for the grant of Bachelor of Business Studies (BBS) degree as per HEC recommendations. Students must maintain a 3.0 CGPA for MBA level courses and project for the conferment of the degree. The program may be completed in a minimum of 9 semesters depending upon the relevant preparation. Students who are weak in English and Communication Skills are required to take an additional “Business English” course to enhance their knowledge of the language.

The capstone project which is divided into two 3-credit hour components provides the student with an opportunity to engage with real world complexities, enhance individual competencies and develop lasting skills most particularly in thinking, research, communication, information management and decision making. Students undertake an individual project that addresses a specific and real management challenge or business issue. In doing so, they have the opportunity to develop and demonstrate their capacity for high value thinking and effective decision making. The project is supervised by an assigned faculty member and an industry mentor and is evaluated in an open exhibition by executives and faculty. The classes of this program will be held at IoBM City Center from 6:00 PM to 9:00 PM for each course.

MBA students can specialize in the following areas by taking four electives:

- Marketing
- Finance
- Human Resource Management
- Logistics and Supply Chain Management
- Management Information Systems

**Required Courses**

**Accounting**
- ACC401 Introduction to Managerial and Cost Accounting
- ACC402 Introduction to Financial Accounting

**Communications**
- COM401 Business English
- COM205 Persuasive and Analytical Writing for Business Communication
- COM402 Business Communication

*For less proficient students*
Economics
ECO401 Micro and Macroeconomics
ECO405 Seminar in Economic Policy

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN406 Production and Operations Management
MAN415 Entrepreneurial Leadership and Motivation
MAN603 Technology, Innovation and Strategy
MAN604 Management Strategies and Emerging Organizations
MAN605 Seminar in Business Policy

Human Resource Management
HRM401 Human Resource Management
HRM601 Transformational and Ethical Leadership

Law
LAW409 Corporate and Business Law

Marketing
MKT401 Principles of Marketing
MKT402 Marketing Management
MKT403 Sales Management
MKT404 Methods in Business Research
MKT509 Consumer Behavior
MKT601 Marketing Strategies and Value Innovation

Management Information Systems
MIS526 Enterprise Resource Planning Systems

Statistics
STA202 Quantitative Skills and Managerial Statistics
STA403 Statistics and Mathematics

Specialized Courses

MBA students have a choice of four electives from the following disciplines:

Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM511 Performance Appraisal and Management

Majors in Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN508 Comparative Management
EEM401 Environmental Issues and Management

Majors in Finance and Banking
FIN513 Project Appraisal
FIN602 Behavioral Finance
FIN603 Entrepreneurial Finance
FIN604 Debt and Equity Markets
FIN531 Financial Derivatives and Risk Management
FIN606 SME and Micro-Financing
FRM514 Takaful and Risk Management in Islamic Products

Majors in Logistics and Supply Chain Management
SCM302 Quantitative Methods in Production and Logistics
SCM305 Business Process Mgmt. in Supply Chain & Logistics
SCM306 IT Applications in Logistics
SCM309 Packaging Design and Environmental Aspects
SCM501 Supply Chain Management
SCM502 ERP Systems Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management
SCM505 Storage and Warehouse Techniques
SCM506 Transportation Techniques and Management
SCM514 Sustainability & Env. Aspects in Managing Supply Chains
SCM515 Risk Management in Supply Networks
SCM516 Innovation Management in Supply Chain and Logistics
SCM517 Corporate Consultancy Project in Logistics

*Indicates MBA level courses
### Majors in Marketing
- MKT405  Marketing Research
- MKT504  Advertising
- MKT505  Industrial Marketing
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- MKT606  Non-Profit Marketing
- MKT607  Islamic Marketing
- MKT608  Small Business Marketing

### Majors in Management Information Systems
- MIS504  Oracle/Developer 2000
- MIS509  Software Project Management
- MIS523  Decision Systems
- MIS524  Decision Support Systems
- MIS525  Enterprise Systems
- MIS526  Enterprise Resource Planning Systems
- MIS527  Information Security
- MIS528  Advanced Information Security
- MIS530  Information Systems Research
- MIS532  New Perspectives on Org. Information Systems
- MIS533  Big Data and Business Analytics

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MBA HEALTH AND HOSPITAL MANAGEMENT

Mission Statement

“The mission of the MBA Health and Hospital Management program is to promote an environment of continual learning and development of health and managerial expertise of its students and faculty keeping in consideration the needs, demands and behavior of target population and stake holders in the healthcare industry. We are highly committed to build a competent brand of health managers who excel in creative and critical thinking, decision making, team building and technical mixed with strong communication and enterprising skills to generate research driven results. Our program institutes best teaching methodologies delivered by dedicated faculty who cater to the capacity building of future healthcare leaders, sensitive to the needs of the society to disseminate applied knowledge, promote the understanding and ethical practice of health care business in turn serving the community and the Nation”.

The program is geared to professionals who aspire to be health care managers. This is a specialized program that integrates technical knowledge with managerial skills specializing in marketing, finance, accounting, interpersonal communication, human resource management, and various disciplines of the health management field which are relevant to those working within the private and government health care sectors. The program has a multidisciplinary approach in preparing graduates for the provision of necessary expertise to manage health services most effectively and develop technically competent and socially sensitive managers for leadership roles in global health systems hospitals, NGO sector, pharmaceutical industries and population programs.

MBA-Health and Hospital Management Program is designed to provide students with ten business core courses and an opportunity to select three business electives. The business core courses provide students with a sound management base, while the business base is complemented by six core health management courses and four health elective courses (amongst a choice of twenty six listed health electives). Another core requirement of the program is to complete a supervised Capstone Project of six credit hours, which provides students with an opportunity to apply curricular concepts and hand-on skills to provide solutions to the problems that occur in any healthcare organizational setting. The semester structure integrates health core and elective courses providing a concentrated approach that gives students an opportunity to relate and draw parallels between health and business courses.

The Program

The two-year MBA Health and Hospital Management program is offered on weekends. Students are required to complete 25 courses (23 courses of 3 credit hours and one Capstone project of 6 credit hours) in order to fulfill the degree requirements. Students must maintain a 3.0 CGPA for the conferment of the degree.

The courses are divided into four modules:

1. Health Services Management
2. Hospital Administration
3. Pharmaceutical Administration
4. Population Management
Core Business Courses

Accounting
ACC401 Introduction to Managerial and Cost Accounting
ACC402 Introduction to Financial Accounting

Communication
COM402 Business Communication

Economics
ECO401 Micro and Macroeconomics

Finance
FIN404 Financial Management

Human Resource Management
HRM401 Human Resource Management

Management
MAN401 Principles of Management
MAN402 Organizational Behavior

Management Information Systems
MIS401 Computer Applications

Marketing
MKT401 Principles of Marketing

Elective Business Courses*
*Refer to Page No. 84.

Core Health Courses

MHM401 Introduction to Health Policy, Planning & Management
MHM403 Health Management Information Systems
MHM405 Pharmaceutical Management
MHM517 Capstone Project (6 credit hours)

Elective Health Courses

MHM501 Pharmaceutical Branding
MHM503 Financial Management of Health Services
MHM505 Concepts of Primary Health Care
MHM507 Introduction to Epidemiology
MHM509 Marketing of Health Services
MHM511 Population and Health
MHM513 Managing Physicians
MHM516 Health Program Evaluation
MHM519 Financial Applications in Pharmaceutical Marketing
MHM521 Pharmaceutical Sales Management
MHM523 Health Ethics
MHM525 Management issues in Health Psychology
MHM527 Supply Chain & Production Mgmt. in Pharma. Industries

MHM402 Quantitative Analysis
MHM404 Research and Survey Methodology
MHM515 Hospital Administration

MHM502 Health Economics
MHM504 Strategic Mgmt. of Health Services
MHM506 Managing Professional Health Care Organizations
MHM508 Pharmaceutical Marketing and Quality Assurance
MHM510 Introduction to Demography Methods
MHM512 Economics & Management of Pharma. Industry
MHM514 Environmental Health Assessment & Management
MHM518 Regulatory Affairs at Healthcare Industries
MHM520 Product Management
MHM522 Project Management of Health Services
MHM524 Healthcare Human Resource Management
MHM526 Healthcare Leadership
MHM528 Quality Management in Health Care

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Health Policy, Planning &amp; Mgmt.</td>
<td>Micro and Macroeconomics</td>
<td>Introduction to Financial Accounting</td>
</tr>
<tr>
<td>Business Communication</td>
<td>Quantitative Analysis</td>
<td>Health Mgmt. Information Systems</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Principles of Marketing</td>
<td>Hospital Administration</td>
</tr>
<tr>
<td>Computer Applications</td>
<td>Research and Survey Methodology</td>
<td>Pharmaceutical Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Four</td>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Intro. to Managerial &amp; Cost Accounting</td>
<td>Financial Management</td>
<td>Business Electives II</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>Business Elective I</td>
<td>Business Elective III</td>
</tr>
<tr>
<td>Organizational Behavior</td>
<td>Health Elective I</td>
<td>Health Elective III</td>
</tr>
<tr>
<td>Capstone Project (Part one)</td>
<td>Health Elective II</td>
<td>Health Elective IV</td>
</tr>
<tr>
<td></td>
<td>Capstone Project (Part two)</td>
<td></td>
</tr>
</tbody>
</table>
MBA ADVERTISING AND MEDIA MANAGEMENT

What makes the two programs common is that students of both Advertising Management and Media Management take 16 courses out of 24 courses together. The difference between the two programs is that of choosing one out of the two sets of electives. Those who take additional eight courses pertaining to electives of Media Management may be eligible for MBA Media Management and those who take eight elective courses related to the Advertising group may become eligible for MBA Advertising Management.

**Accounting**
ACC402 Introduction to Financial Accounting

**Communication**
COM402 Business Communication

**Economics**
ECO401 Micro and Macroeconomics

**Finance**
FIN404 Financial Management

**Human Resource Management**
HRM401 Human Resource Management

**Management**
MAN401 Principles of Management
MAN402 Organizational Behavior

**Management Information Systems**
MIS401 Computer Applications

**Marketing**
MKT401 Principles of Marketing
MKT404 Methods in Business Research
MKT509 Consumer Behavior
MKT532 Principles of Advertising

**Media**
MMM435 Print Media
MMM436 Electronic Media
MMM438 Introduction to Media in Pakistan

**Statistics**
STA403 Statistics and Mathematics
## Elective Courses

### Advertising
- ADV403 International Advertising and Promotions
- ADV504 Advertising Management and Strategy
- ADV505 Creative Planning and Development

### Law
- LAW405 Media Law and Business Ethics

### Management Information Systems
- MIS511 E-Commerce and Graphic Designing

### Marketing
- MKT511 Brand Management
- MKT526 Public Relations and Event Management
- MKT527 Integrated Marketing Communication

### Media Management
- MMM427 Citizen Journalism
- MMM429 Digital Media
- MMM434 Media Planning
- MMM439 Media Research and Public Opinion
- MMM428 Script Writing
- MMM430 Time, Priorities and Conflict Management
- MMM437 Role of Media in World Affairs
- MMM511 Multimedia and Film Production

## Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Communication</td>
<td>Organizational Behavior</td>
<td>Introduction to Financial Accounting</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Principles of Marketing</td>
<td>Micro and Macroeconomics</td>
</tr>
<tr>
<td>Computer Applications</td>
<td>Principles of Advertising</td>
<td>Methods in Business Research</td>
</tr>
<tr>
<td>Introduction to Media in Pakistan</td>
<td>Statistics and Mathematics</td>
<td>Electronic Media</td>
</tr>
</tbody>
</table>

### Elective Courses for MBA Advertising Management

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Advertising &amp; Promotions</td>
<td>Creative Planning and Development</td>
</tr>
<tr>
<td>Advertising Management and Strategy</td>
<td>Brand Management</td>
</tr>
<tr>
<td>Public Relations and Event Management</td>
<td>Media Planning</td>
</tr>
<tr>
<td>Digital Media</td>
<td>Integrated Marketing Communication</td>
</tr>
</tbody>
</table>

### Elective Courses for MBA Media Management

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimedia and Film Production</td>
<td>Media Law and Business Ethics</td>
</tr>
<tr>
<td>Media Research and Public Opinion</td>
<td>E-Commerce and Graphic Designing</td>
</tr>
<tr>
<td>Citizen Journalism</td>
<td>Role of Media in World Affairs</td>
</tr>
<tr>
<td>Script Writing</td>
<td>Time, Priorities and Conflict Mgmt.</td>
</tr>
</tbody>
</table>

Students who wish to do bi-majors in Marketing after completing MBA in Advertising and Media Management can opt for any Marketing Electives other than ‘Strategic Marketing and Planning’.

*(Marketing Management is a Pre-requisite for SMP)*
Financial Managers are expected to have knowledge of principles and practices of Financial Risk Management. Therefore, MBA in Finance and Risk Management program is designed to cover all dimensions of Risk Management and Finance including recent development in Corporate Risk Management, Sustainable Risk and Risk Financing techniques. Students will learn how to choose alternative techniques to reduce exposure and risks and implement a risk-assessment tool to evaluate future risks. They will also learn implementation and monitoring of selected techniques. The Master’s Program requires completion of 72 credit hours of course work comprising 24 courses. Students require maintaining 3.0 CGPA on a scale of 4 for the conferment of degree.

**Required Courses**

**Accounting**
ACC401  Introduction to Managerial and Cost Accounting  
ACC402  Introduction to Financial Accounting

**Communication**
COM402  Business Communication

**Economics**
ECO401  Micro and Macroeconomics  
ECO408  Applied Financial Economics

**Finance**
FIN404  Financial Management  
FIN501  Advanced Financial Management  
FIN511  Analysis of Financial Statements

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

**Human Resource Management**
HRM401  Human Resource Management

**Law**
LAW403  Business and Insurance Law

**Management**
MAN401  Principles of Management  
MAN405  Strategic Management
Marketing
MKT401 Principles of Marketing

Mathematics
MTH409 Financial Mathematics I
MTH410 Financial Mathematics II

Social Sciences
SSC405 Business Ethics and Financial Responsibility

Statistics
STA402 Model and Inferences

Elective Courses

Finance and Banking
FIN403 Islamic Banking and Finance

Finance and Risk Management
FRM503 Corporate Risk Management
FRM504 Theory of Risk and Insurance
FRM505 Corporate Treasury and Risk Management
FRM506 Financial Regulation for Risk Management
FRM508 Financial Market Issues and Crisis
FRM510 Energy Risk Management
FRM512 International Risk and Financial Reporting
FRM513 Project Risk Management
FRM514 Takaful and Risk Management in Islamic Products
FRM516 International Financial Reporting and Standards
FRM517 Property Risk Management
FRM518 Management of Insurance Institutions

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Financial Accounting</td>
<td>Micro and Macroeconomics</td>
</tr>
<tr>
<td>Business Communication</td>
<td>Financial Management</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>Model and Inferences</td>
<td>Financial Mathematics I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Managerial &amp; Cost Accounting</td>
<td>Advanced Financial Management</td>
</tr>
<tr>
<td>Principles of Risk Management</td>
<td>Intro. to Financial Risk Management</td>
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<tr>
<td>Computational Methods in Risk</td>
<td>Business and Insurance Law</td>
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<tr>
<td>Financial Mathematics II</td>
<td>Human Resource Management</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Financial Economics</td>
<td>Risk Financing Techniques</td>
</tr>
<tr>
<td>Business Ethics &amp; Fin. Responsibility</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Elective I</td>
<td>Elective II</td>
</tr>
</tbody>
</table>
 IoBM offers the first of its kind MBA Environment and Energy Management that aims to prepare future decision-makers in companies, government and non-governmental organizations for analyzing and acting in an environmentally proactive way when making decisions about policy, production and resource utilization.

This is a weekend program which requires completion of 72 credit hours of course work, including 24 courses of 3 credit hours each spread over six consecutive semesters (two-years). Students must maintain a CGPA of 3.0 for the conferment of the degree. The course structure is subject to change in compliance with HEC requirements. The course is particularly designed for managers, administrator engaged in the Environment and Energy sector.

**Entry Requirements**

Applicants are required to have a four year Bachelor’s degree in Agriculture, Architecture, Biology, Business Administration, Chemistry, Engineering, Commerce, Medical, Forestry, Geology, Geography, Microbiology, Public health, Liberal Arts and Environment Science.

**Core Business Courses**

**Accounting**
ACC402 Introduction to Financial Accounting

**Communication**
COM402 Business Communication

**Statistics**
STA404 Statistical Inference

**Human Resource Management**
HRM401 Human Resource Management

**Management**
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN405 Strategic Management

**Marketing**
MKT401 Principles of Marketing

**Finance**
FIN404 Financial Management
### Environmental and Energy Management

- EEM401 Environmental Issues and Management
- EEM402 Air and Noise Pollution Management
- EEM403 Energy Sources and Management
- EEM404 Industrial and Municipal Waste Management
- EEM405 Renewable Energy
- EEM406 Coastal Environment and Management
- EEM407 Green Technology and Energy Analysis
- EEM408 Safety, Health and Environmental Management
- EEM409 Risk and Disaster Management
- EEM410 Environmental Impact Assessment
- EEM411 Environmental Rules, Laws and Regulations
- EEM412 Research and Survey Methodology
- EEM520 Project

### Elective Courses

#### Environmental and Energy Management

- EEM501 Climatic Changes and its Impact
- EEM502 Natural Resources Management
- EEM503 Hospital Waste Management
- EEM504 Solid and Hazardous Waste Management
- EEM505 Energy Audit
- EEM506 Energy Conservation
- EEM507 Energy Planning
- EEM508 Environmental Ethics
- EEM509 Public Awareness for Environment and Energy Sector
- EEM510 Economics of Energy Management

#### Management

- MAN411 Project Management
- MAN501 Total Quality Management

### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Issues and Management</td>
<td>Energy Sources and Management</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Industrial &amp; Municipal Waste Mgmt.</td>
</tr>
<tr>
<td>Business Communication</td>
<td>Introduction to Financial Accounting</td>
</tr>
<tr>
<td>Air and Noise Pollution Management</td>
<td>Statistical Inference</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>Semester Three</td>
<td>Semester Four</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>Green Technology and Energy Analysis</td>
</tr>
<tr>
<td>Coastal Environment and Management</td>
<td>Safety Health and Environmental Mgmt.</td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td>Financial Management</td>
</tr>
<tr>
<td>Organizational Behavior</td>
<td>Human Resource Management</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Risk and Disaster Management</td>
<td>Env., Rules, Laws and Regulations</td>
</tr>
<tr>
<td>Environmental Impact Assessment</td>
<td>Research and Survey Methodology</td>
</tr>
<tr>
<td>Strategic Management</td>
<td>Elective II</td>
</tr>
<tr>
<td>Elective 1</td>
<td>Project</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
MBA LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Master of Business Administration in Logistics and Supply Chain Management degree program is solution oriented designed, and addresses strategic economic and process oriented technical problems in industry, administration and commerce. Major subject of the studies are national and international global oriented enterprises in collaboration with national and international partners. The program exercises the latest business oriented thinking and provides international expert knowledge on logistical engineering and technologies as well as application knowledge in process automation, material management and leading software solutions in ERP (enterprise resource planning), process simulation and e-Commerce. In common projects with the local and international industry as well as logistical service provider the theoretical knowledge is applied in realistic problem solving projects.

The MBA program is aimed to develop professionals in management functions like Logistics, supply chain management, enterprise resource planning production planning, controlling, and procurement or material management etc in industrial, manufacturing and service enterprises.

Required Courses

**Accounting**
ACC401  Introduction to Managerial and Cost Accounting
ACC402  Introduction to Financial Accounting

**Human Resource Management**
HRM502  Industrial Relations and Labor Laws

**Economics**
ECO401  Micro and Macroeconomics

**Environment And Energy Management**
EEM709  Trade and Environment

**Management**
MAN405  Strategic Management
MAN406  Production and Operations Management
MAN408  Analysis of Pakistani Industry
MAN502  Business Process Re-engineering
MAN510  International Management

**Management Information Systems**
MIS405  Computer Applications - E-Business

**Law**
LAW401  Business Law
Supply Chain and Logistics Management
- SCM501 Supply Chain Management
- SCM503 Strategic Supply Chain Management
- SCM507 Quantitative Methods for Logistics
- SCM508 Design of Business Processes - Workflow Management
- SCM510 Logistical Projects in ERP - Case Study Development
- SCM511 Risk Management in Supply Networks
- SCM512 Innovation Management in Supply Chains and Logistics
- SCM513 Corporate Consultancy Projects in Logistics

Elective Courses

Communication
- COM402 Business Communication

Statistics
- STA404 Statistical Inference
- STA407 Design of Experiments

Management
- MAN403 Entrepreneurship and Small Business Management
- MAN501 Total Quality Management

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production and Operation Management</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Introduction to Financial Accounting</td>
<td>Introduction to Managerial &amp; Cost Accounting</td>
</tr>
<tr>
<td>Supply Chain Management</td>
<td>Design of Business Processes - Workflow Management</td>
</tr>
<tr>
<td>Innovation Management in Supply Chain Logistics</td>
<td>Quantitative Methods for Logistics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro and Macroeconomics</td>
<td>Total Quality Management</td>
</tr>
<tr>
<td>Logistical Projects in ERP - Case Study Development</td>
<td>Industrial Relations &amp; Labor Law</td>
</tr>
<tr>
<td>Strategic Supply Chain Management</td>
<td>Trade and Environment</td>
</tr>
<tr>
<td>Business Law</td>
<td>Elective I</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Management in Supply Networks</td>
<td>Corporate Consultancy Projects in Logistics</td>
</tr>
<tr>
<td>Analysis of Pakistani Industry</td>
<td>International Management</td>
</tr>
<tr>
<td>Elective II</td>
<td>Computer Applications – E-Business</td>
</tr>
<tr>
<td>Business Process Re-engineering</td>
<td>Elective III</td>
</tr>
</tbody>
</table>

| Semester Six          | |
|-----------------------||
| Corporate Consultancy Projects in Logistics | |
| International Management | |
| Computer Applications – E-Business | |
| Elective III | |
IoBM students who have completed BS (Industrial Engineering and Management) four-year program have the option to complete MBA in Industrial Management in one-year. The students are exempted from core and basic courses and they are required to complete 12 courses, including two elective courses. The course is particularly designed to provide the business expertise essential for senior managers by combining specific management and engineering subjects.

**Core Courses**

**Accounting**
ACC401  Introduction to Managerial and Cost Accounting

**Engineering**
ENG408  Facilities Planning

**Finance**
FIN404  Financial Management

**Management**
MAN405  Strategic Management
MAN410  Introduction to Industrial Management
MAN411  Project Management

**Statistics**
STA404  Statistical Inference

**Elective Courses**

**Engineering**
ENG405  Environmental Impact Assessment & Management
ENG410  Maintenance Management
ENG412  Manufacturing Process and Systems
ENG501  Technology Management

**Management**
MAN408  Analysis of Pakistani Industries
MAN502  Business Process Re-engineering
MAN509  Logistics and Inventory Control

**Finance**
FIN503  Corporate Finance
FIN510  Investment Analysis
FIN513  Project Appraisal

**Marketing**
MKT505  Industrial Marketing

**Human Resource Management**
HRM502  Industrial Relations and Labor Laws

**Logistics and Supply Chain Management**
SCM502  ERP Systems Design and Implementation

**Management Information Systems**
MIS501  Information Systems Management

**Course Structure**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Managerial &amp; Cost Accounting</td>
<td>Facilities Planning</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Introduction to Industrial Management</td>
<td>Financial Management</td>
<td>New Product Development</td>
</tr>
<tr>
<td>ERP Systems Design &amp; Implementation</td>
<td>Industrial Relations and Labor Laws</td>
<td>Elective I</td>
</tr>
<tr>
<td>Statistical Inference</td>
<td>Project Management</td>
<td>Elective II</td>
</tr>
</tbody>
</table>
Master of Business Administration in Industrial Management degree program is designed to address and solve real life problems relating to industrial set-ups. Collaboration with relevant industries and financial institutes is its modus operandi. This course is one of the very few aimed at mid-career professionals who wish to make the move to senior management within industrial and manufacturing organizations. It is designed to provide the business expertise essential for all senior managers by integrating specific engineering subjects with the management of technology and manufacturing systems. The program also examines the latest business thinking and provides expert knowledge on engineering and technology issues and theories. Topics such as finance, marketing, management strategy are integrated with modern industrial issues such as project and quality management, manufacturing effectiveness, advanced manufacturing technology and supply chain management. This combination of subjects has been specifically designed to reflect the challenges faced by traditional manufacturing organizations.

**Required Courses**

**Accounting**
- ACC401 Introduction to Managerial and Cost Accounting
- ACC402 Introduction to Financial Accounting

**Communication**
- COM402 Business Communication

**Economics**
- ECO401 Micro and Macroeconomics

**Engineering**
- ENG405 Environmental Impact Assessment and Management
- ENG408 Facilities Planning

**Finance**
- FIN404 Financial Management
- FIN503 Corporate Finance

**Human Resource Management**
- HRM401 Human Resource Management
- HRM502 Industrial Relations and Labor Laws

**Management**
- MAN401 Principles of Management
- MAN405 Strategic Management
- MAN406 Production and Operations Management
- MAN410 Introduction to Industrial Management
- MAN411 Project Management
- MAN501 Total Quality Management
- MAN502 Business Process Re-engineering
- MAN503 Supply Chain Management
Management Information System
MIS401 Computer Applications

Marketing
MKT401 Principles of Marketing

Statistics
STA404 Statistical Inference
STA407 Design of Experiments

Elective Courses

Engineering
ENG410 Maintenance Management
ENG412 Manufacturing Process and Systems
ENG501 Technology Management

Environmental and Energy Management
EEM404 Industrial and Municipal Waste Management
EEM408 Safety, Health and Environment Management
EEM409 Risk and Disaster Management

Finance
FIN510 Investment Analysis
FIN513 Project Appraisal

Management
MAN403 Entrepreneurship and Small Business Management
MAN509 Logistic and Inventory Control

Marketing
MKT505 Industrial Marketing
MKT507 Services Marketing
MKT530 New Product Development

Supply Chain and Logistics Management
SCM502 ERP System Design and Implementation
SCM503 Strategic Supply Chain Management
SCM504 Procurement and Inventory Management

Course Structure

<table>
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<tr>
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<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Communication</td>
<td>Computer Applications</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>Statistical Inference</td>
<td>Env. Impact Assessment &amp; Management</td>
<td>Facilities Planning</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Introduction to Industrial Management</td>
<td>Intro. to Managerial &amp; Cost Accounting</td>
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<table>
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<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Relations and Labor Laws</td>
<td>Financial Management</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Production &amp; Operations Management</td>
<td>Total Quality Management</td>
<td>Business Process Re-engineering</td>
</tr>
<tr>
<td>Project Management</td>
<td>Supply Chain Management</td>
<td>Elective II</td>
</tr>
<tr>
<td>Design of Experiments</td>
<td>Elective I</td>
<td>Elective III</td>
</tr>
</tbody>
</table>

From the orientation ceremony to the convocation, life at IoBM was a thrilling ride, packed with a myriad of experiences. Although full-load MBA studies with a full-time job seemed daunting at first, I eventually got used to the busy schedule— even began enjoying it! Learning time management, attending interactive classes, dealing with people from diverse academic backgrounds, making new friends, meeting assignment deadlines, preparing for presentations, cramming for the hourlies with friends, holding Skype meetings with fellow group members to discuss term projects, chilling out in the cafeteria on the rare occasion of a class being cancelled, receiving a scholarship and then a gold medal— all are memorable parts of the two most challenging yet exhilarating years of my life! I sincerely thank IoBM for providing me with the opportunity and the confidence to excel.

Fareeha Zulqarnain
Gold Medalist (MBA TCM)
Assistant Manager
Pakistan Space & Upper Atmosphere Research Commission
MS IN BUSINESS MANAGEMENT

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

Eligibility

Candidates with MBA degree satisfying the eligibility criteria on page 165.

Program Structure

MS in Business Management is a 36 credit hours program with 10 courses including 2 electives and one thesis of 6 credit hours. Each of the 10 courses is of 3 credit hours.

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

Course Structure

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

Elective

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

Thesis (06 credit hours)
The MPhil program in Business Management is designed to meet the challenges of the business world and the growing demand for well-qualified and research-oriented scholars in Pakistan. This program has been carefully designed in response to the traditional and emerging trends and to meet the growing market demand for various specialist areas in business management.

**Eligibility**

Candidates with MBA degree fulfilling the eligibility criteria on page 165.

**Program Structure**

The MPhil is a 30 credit hours program with 8 courses and one thesis of 6 credit hours.

After successful completion of the course work, students are required to carry out research study for the thesis under the guidance of a research supervisor assigned by IoBM.

**Course Structure**

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

For Health Professionals, Electives may be selected from the specialization areas of Business Management of MPM700 Series in replacement of any four of the above mentioned courses.

Thesis (06 Credit hours)
Mission of CBM’s 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 thinkers. The outcome of this research program is the production of a real and measurable impact on society and industry through quality research published in impact factor journals and recognized by the industry.

Eligibility

MS/MPhil 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 / M.Phil or equivalent degree from HEC recognized institutions in a relevant discipline. Students with HEC recognized MBA have to do at least four pre-requisite courses
- GRE Subject or GAT test conducted by the NTS. A minimum of 60% (percentage) marks is required
- Pass interview conducted by the Institute
- Meet all other HEC stipulated requirements

Program Requirements

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

- PhD course work requirements consist of six graduate level courses (18 credit hours)
- On completion of dissertation/thesis the student is awarded 12 credits

A PhD student must additionally complete the following requirements:

- Pass Comprehensive Exam
- PhD Proposal/Synopsis Development
- Pass 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
- Publish at least one paper in an ISI indexed or an HEC recognized journal. An official acceptance of the paper is also acceptable
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Meet any other HEC requirement
- Final Dissertation/Thesis Submission to BASR
- Degree Award
Course Structure

Pre-requisites:
MPM601 Advanced Qualitative Research
MPM603 Advanced Quantitative Research
MPM610 Independent Study
MPM616 Econometrics

Semester One
Directed Research Elective I
Directed Research Elective II
Exploratory Research Elective I

Semester Two
Directed Research Elective III
Directed Research Elective IV
Exploratory Research Elective II

Semesters Three to Nine
PBM901 Research Thesis

Graduate Courses:

Directed Research Electives in Area of Specialization
The objective of the directed research electives is to enable the PhD students to link their chosen areas of specialization with the philosophy and methodology of business research and to benchmark their proposed research with quality publications.

PBM701 Philosophy of Business Management
PBM703 Multivariate Analysis
PBM705 Readings in Business Research
PBM707 Replication of Business Research Design and Results

Exploratory Research Electives in the Area of Specialization
PhD students may select the following and/or other PhD level courses from CESD and CSIS on the advice of their supervisors.

PBM801 Marketing Models
PBM803 Marketing Theory
PBM805 Advanced Topics in Marketing
PBM811 Advanced Topics in Strategic Management
PBM813 Advanced Topics in Organization Theory
PBM815 Advanced Topics in Human Behavior in Organization
PBM821 Advanced Topics in Operations Management Research
PBM823 Advanced Research Topics in Operations Management
PBM825 Advanced Research Topics in Management Information Systems
PBM831 Advanced Topics in Finance
PBM841 Advanced Readings in Business Ethics
PBM842 Globalization Discourses of Ethics
PHD IN ENVIRONMENT AND ENERGY MANAGEMENT

The doctoral program in Environment and Energy Management is a rigorous, interdisciplinary and multidisciplinary study. Students will be required to acquire substantial knowledge in primary environment and energy related disciplines with a focus on management and conservation, and sustainable development of resources; develop breadth in specialized fields related environmental and energy; become proficient in advanced research methods and develop expertise in a chosen dissertation topic. Students will be required to write a dissertation that evidences original research and high proficiency in the interpretation, analysis, and explanation of environment and energy related issues and phenomena. The overall objectives of the program are:

To improve understanding of environment and energy related issues and to identify solutions to these problems
To foster collaborative, interdisciplinary and multidisciplinary research amongst researchers from various disciplines

Eligibility

MS/MPhil 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 / M.Phil or equivalent degree from HEC recognized institutions in a relevant discipline
- GRE subject specific or GAT subject test conducted by the NTS, or equivalent in the relevant discipline. A minimum of 60% (percentage) marks is required
- Pass interview conducted by the Institute
- Meet all other HEC stipulated requirements

Program Requirements

PhD requires completion of course work and dissertation/thesis. Minimum duration is 3 years and maximum is 5 years:
- PhD course work requirements consist of six graduate level courses (18 credit hours)
- On completion of dissertation/thesis the student is awarded 12 credits

A PhD student must additionally complete the following requirements:
- Pass Comprehensive Exam
- PhD Proposal/Synopsis Development
- Pass 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
- Publish at least one paper in an ISI indexed or an HEC recognized journal. An official acceptance of the paper is also acceptable
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Meet any other HEC requirement
- Final Dissertation/Thesis Submission to BASR
- Degree Award
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)
EEM705  Advanced Environment Toxicology & Epidemiology
EEM706  Advanced Pollution Control Technologies and Mitigation Options
EEM707  Advances in Green Technology Mechanism
EEM708  Disaster Risk Management and Mitigation Strategies
EEM709  Trade and Environment
EEM710  Sustainability and Conservation of Major Ecosystems

Semester Four to Nine
EEM850 Research Thesis
Majors in Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC504 Accounting Information Systems
ACC505 Auditing

Majors in Finance and Banking
FIN403 Islamic Banking and Finance
FIN502 Strategic Financial Management
FIN503 Corporate Finance
FIN504 International Finance
FIN505 Treasury and Fund Management
FIN506 Investment Banking and Security Analysis
FIN507 Portfolio Management
FIN508 Risk Management
FIN509 Financial Derivatives
FIN510 Investment Analysis
FIN511 Analysis of Financial Statements
FIN512 Money and Capital Markets
FIN513 Project Appraisal
FIN514 Asset Liability Management
FIN515 Foreign Trade and Banking
FRM514 Takaful and Risk Management in Islamic Products

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and CB
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management
HRM507 Public Relations and Event Management
HRM508 Salary and Compensation
HRM509 Leadership Studies
HRM510 Personnel Development
HRM511 Performance Appraisal and Management

Majors in Management
MAN501 Total Quality Management
MAN502 Business Process Re-engineering
MAN507 Business Etiquette
MAN508 Comparative Management
MAN411 Project Management
EEM401 Environmental Issues and Management
EEM402 Air and Noise Pollution Management
EEM408 Safety, Health and Environmental Management
EEM409 Risk and Disaster Management
EEM503 Hospital Waste Management

Since I am in the communication business, I know that confidence is essential for business student to accomplish anything professionally. IoBM provided me the opportunity to interact with different classes of people and learn. If someone sees me presenting in front of the Management of respectable companies they won’t be able to tell how nervous I was the first time I was presenting in my Marketing Class. Kudos to IoBM for providing a foundation to students to nurture and grow, I wouldn’t think twice before sending my daughter one day to this prestigious institution.

Anika Moiz
Head of Corporate Communications
JS Investments Ltd.
**Majors in Management Information Systems**

- **MIS501** Information Systems Management
- **MIS503** System Analysis and Design
- **MIS504** Oracle/Developer 2000
- **MIS505** Software Engineering
- **MIS506** Data Communication & Networking
- **MIS507** Relational Database Mgmt. Systems
- **MIS508** Programming in C ++
- **MIS509** Software Project Management
- **MIS521** Record Management
- **MIS522** Business Information Systems
- **MIS523** Decision Systems
- **MIS524** Decision Support Systems
- **MIS525** Enterprise Systems
- **MIS526** Enterprise Resource Planning Systems
- **MIS527** Information Security
- **MIS528** Advanced Information Security
- **MIS530** Information Systems Research
- **MIS532** New Perspectives on Organizations and Information Systems

**Majors in Supply Chain and Logistics Management**

- **SCM501** Supply Chain Management
- **SCM502** ERP System Design and Implementation
- **SCM503** Strategic Supply Chain Management
- **SCM504** Procurement and Inventory Management
- **SCM505** Storage and Warehouse Techniques
- **SCM506** Transportation Techniques and Management

**Majors in Marketing**

- **MKT402** Marketing Management
- **MKT403** Sales Management
- **MKT501** Strategic Marketing and Planning
- **MKT502** Graphic Design
- **MKT503** Packaging and Printing
- **MKT504** Advertising
- **MKT505** Industrial Marketing
- **MKT506** International Marketing
- **MKT507** Services Marketing
- **MKT508** Personal Selling
- **MKT509** Consumer Behavior
- **MKT510** Direct and Digital Marketing
- **MKT511** Brand Management
- **MKT512** Export Marketing
- **MKT514** Public Relations and Event Management
- **MKT519** Marketing of Financial Services
- **MKT520** Merchandising and Sales Promotion
- **MKT521** Distribution and Channel Management
- **MKT531** Retail Management
- **MKT534** Social Marketing
- **MKT603** International Branding
COLLEGE OF COMPUTER SCIENCE AND INFORMATION SYSTEMS
The program emphasizes the need for an overall development that includes exposure to an integrated series of courses in technology, methodology, social sciences, liberal arts and management. Project-based software development along with research assignments have also been emphasized. These courses seek to impart a broad and deep knowledge of 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 135 credit hours of course work. Students are required to take 45 courses, a live project and comprehensive research assignment in order to complete their degree requirements. Students must maintain a CGPA of 2.5 for the conferment of degree.

**Foundation Courses**

**Accounting**
ACC101  Introduction to Financial Accounting

**Economics**
ECO104  Micro and Macroeconomics

**Management**
MAN101  Principles of Management
MAN414  Project Management

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

*1 = Introduction to Arabic  
*2 = Introduction to French  
*3 = Introduction to Spanish  
*4 = Introduction to German  
*5 = Introduction to Japanese  
*6 = Introduction to Italian  
*7 = Introduction to Russian  
*8 = Introduction to Chinese

**1 = Intermediate Arabic  
**2 = Intermediate French  
**3 = Intermediate Spanish  
**4 = Intermediate German  
**5 = Intermediate Japanese  
**6 = Intermediate Italian  
**7 = Intermediate Russian  
**8 = Intermediate Chinese

**Communication**
COM107  Academic English
COM202  Business and Professional Speech
COM203  Methods in Business Writing

**Engineering**
ENG307  Basic Electronics

**Political Sciences**
PSC301  Pakistan Studies

**Mathematics**
MTH107  Calculus and Analytical Geometry
MTH204  Linear Algebra
MTH215  Differential Equations
MTH222  Discrete Structure
MTH224  Multivariable Calculus
MTH403  Numerical Computing

**Statistics**
STA203  Probability Theory and Statistics

**Religious Studies**
REL101  Islamic Studies
Computing (Core Courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC105</td>
<td>Data Structure and Algorithms</td>
</tr>
<tr>
<td>CSC112</td>
<td>Object Oriented Programming</td>
</tr>
<tr>
<td>CSC213</td>
<td>Computer Communications and Networks</td>
</tr>
<tr>
<td>CSC218</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>CSC317</td>
<td>Introduction to Software Engineering</td>
</tr>
<tr>
<td>CSC320</td>
<td>Human Computer Interaction</td>
</tr>
<tr>
<td>CSC462</td>
<td>Project II</td>
</tr>
<tr>
<td>CSC111</td>
<td>Introduction to Information and Communication Technologies (ICT)</td>
</tr>
<tr>
<td>CSC113</td>
<td>Programming Fundamentals</td>
</tr>
<tr>
<td>CSC217</td>
<td>Digital Logic Design</td>
</tr>
<tr>
<td>CSC220</td>
<td>Introduction to Database Systems</td>
</tr>
<tr>
<td>CSC461</td>
<td>Project I</td>
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</table>

Computer Science (Core Courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CSC205</td>
<td>Computer Architecture and Organization</td>
</tr>
<tr>
<td>CSC315</td>
<td>Theory of Automata &amp; Formal Languages</td>
</tr>
<tr>
<td>CSC410</td>
<td>Data Communication and Networking</td>
</tr>
<tr>
<td>CSC412</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>CSC213</td>
<td>Object Oriented Programming</td>
</tr>
<tr>
<td>CSC218</td>
<td>Discrete Structure</td>
</tr>
<tr>
<td>CSC222</td>
<td>Computer Organization and Assembly Language</td>
</tr>
<tr>
<td>CSC220</td>
<td>Introduction to Database Systems</td>
</tr>
<tr>
<td>CSC411</td>
<td>Compiler Construction</td>
</tr>
</tbody>
</table>

Computer Science (Elective Courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC303</td>
<td>Computer Graphics</td>
</tr>
<tr>
<td>CSC309</td>
<td>Microprocessor and Applications</td>
</tr>
<tr>
<td>CSC428</td>
<td>Web Engineering</td>
</tr>
<tr>
<td>CSC435/574</td>
<td>Distributed Systems</td>
</tr>
<tr>
<td>CSC445</td>
<td>Network Security</td>
</tr>
<tr>
<td>CSC451</td>
<td>Telecommunication Systems</td>
</tr>
<tr>
<td>CSC464</td>
<td>Wireless Network</td>
</tr>
<tr>
<td>CSC468</td>
<td>Neural Network</td>
</tr>
<tr>
<td>CSC305</td>
<td>System Analysis and Design</td>
</tr>
<tr>
<td>CSC345</td>
<td>Digital Image Processing</td>
</tr>
<tr>
<td>CSC434</td>
<td>Software Quality Assurance</td>
</tr>
<tr>
<td>CSC443</td>
<td>Mobile Computing</td>
</tr>
<tr>
<td>CSC448</td>
<td>Digital Signal Processing</td>
</tr>
<tr>
<td>CSC463</td>
<td>Operations Research</td>
</tr>
<tr>
<td>CSC531</td>
<td>Data Warehousing</td>
</tr>
<tr>
<td>CSC583</td>
<td>Fuzzy Systems</td>
</tr>
</tbody>
</table>

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to Info. &amp; Comm. Technology (2+1)</td>
<td>Object Oriented Programming (2+1)</td>
<td>Digital Logic and Design (2+1)</td>
</tr>
<tr>
<td>Programming Fundamentals (2+1)</td>
<td>Discrete Structure (3+0)</td>
<td>Data Structures and Algorithms (2+1)</td>
</tr>
<tr>
<td>Calculus and Analytical Geometry (3+0)</td>
<td>Multivariable Calculus (3+0)</td>
<td>Linear Algebra (3+0)</td>
</tr>
<tr>
<td>Islamic Studies (3+0)</td>
<td>Probability Theory and Statistics (3+0)</td>
<td>Methods in Business Writing (3+0)</td>
</tr>
<tr>
<td>Academic English (3+0)</td>
<td>Business and Professional Speech (3+0)</td>
<td>Numerical Computing (2+1)</td>
</tr>
<tr>
<td>Basic Electronics (2+1)</td>
<td>Micro and Macroeconomics (2+1)</td>
<td>Intro. to Financial Accounting (3+0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Four</td>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Operating Systems (3+0)</td>
<td>Computer Comm. &amp; Networks (2+1)</td>
<td>Artificial Intelligence (3+0)</td>
</tr>
<tr>
<td>Intro. to Database Systems (2+1)</td>
<td>Computer Architecture &amp; Org. (2+1)</td>
<td>Design &amp; Analysis of Algorithms (2+1)</td>
</tr>
<tr>
<td>Data Comm. &amp; Networking (2+1)</td>
<td>Intro. to Software Engineering (2+1)</td>
<td>Digital Signal Processing (2+1)</td>
</tr>
<tr>
<td>Computer Org. &amp; Assembly Lang. (2+1)</td>
<td>Foreign Language II (3+0)</td>
<td>Principles of Management (3+0)</td>
</tr>
<tr>
<td>Foreign Language I (2+1)</td>
<td>Pakistan Studies (3+0)</td>
<td>Human Computer Interaction (2+1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Seven</td>
<td>Semester Eight</td>
<td></td>
</tr>
<tr>
<td>Project I (0+3)</td>
<td>Project II (0+3)</td>
<td></td>
</tr>
<tr>
<td>CS Elective I (2+1)</td>
<td>Wireless Network (2+1)</td>
<td></td>
</tr>
<tr>
<td>Operations Research (3+0)</td>
<td>CS Elective III (2+1)</td>
<td></td>
</tr>
<tr>
<td>CS Elective II (3+0)</td>
<td>CS Elective IV (2+1)</td>
<td></td>
</tr>
<tr>
<td>Compiler Constructions (2+1)</td>
<td>Project Management (3+0)</td>
<td></td>
</tr>
</tbody>
</table>
BS ACTUARIAL SCIENCE AND RISK MANAGEMENT

BS in 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, student will gain a broad business background with an emphasis in 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
COM203 Methods in Business Writing

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

LAW
LAW401 Business Law

Management
MAN101 Principles of Management

Marketing
MKT301 Principles of Marketing
MKT404 Methods in Business Research

Actuarial Science
ARM501 Stochastic Process/Modeling
ARM601 Models of Financial Economics-I
ARM602 Models of Financial Economics - II

Computer Sciences
CSC103 Structured Programming Language

Finance
FIN201 Introduction to Business Finance
FIN406 Financial Econometrics
FIN503 Corporate Finance
FIN507 Portfolio Management
FIN509 Financial Derivatives

Language
LAN 10* Foreign Language I
LAN 20** Foreign Language II
*1 = Introduction to Arabic
*2 = Introduction to French
*3 = Introduction to Spanish
*4 = Introduction to German
*5 = Introduction to Japanese
*6 = Introduction to Italian
*7 = Introduction to Russian
*8 = Introduction to Chinese

**1 = Intermediate Arabic
**2 = Intermediate French
**3 = Intermediate Spanish
**4 = Intermediate German
**5 = Intermediate Japanese
**6 = Intermediate Italian
**7 = Intermediate Russian
**8 = Intermediate Chinese
Mathematics
MTH104 Calculus I
MTH105 Calculus II
MTH204 Linear Algebra
MTH209 Financial Mathematics I
MTH210 Financial Mathematics II
MTH211 Actuarial Mathematics
MTH403 Numerical Computing

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

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic English</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>Foreign Language I</td>
<td>Calculus II</td>
<td>Model and Inferences</td>
</tr>
<tr>
<td>Probability Theory and Statistics</td>
<td>Principles of Macroeconomics</td>
<td>Introduction to Business Finance</td>
</tr>
<tr>
<td>Calculus I</td>
<td>Financial Mathematics I</td>
<td>Methods in Business Writing</td>
</tr>
<tr>
<td>Structured Programming Language</td>
<td>Islamic Studies</td>
<td>Financial Mathematics II</td>
</tr>
</tbody>
</table>

<table>
<thead>
<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>
</tr>
<tr>
<td>Business Law</td>
<td>Actuarial Mathematics</td>
<td>Life and Other Contingencies</td>
</tr>
<tr>
<td>Introduction to Econometrics</td>
<td>Principles of Risk Management</td>
<td>Enterprise Risk Management</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Stochastic Processes</td>
<td>Sampling Theory</td>
</tr>
<tr>
<td>Pakistan Studies</td>
<td>Financial Econometrics</td>
<td>Models in Financial Economics I</td>
</tr>
<tr>
<td>Method of Data Analysis</td>
<td></td>
<td>Methods in Business Research</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Investments</td>
<td>Decision Theory</td>
</tr>
<tr>
<td>Models in Financial Economics II</td>
<td>Loss Models II</td>
</tr>
<tr>
<td>Applied Regression Analysis</td>
<td>Risk Financing Techniques</td>
</tr>
<tr>
<td>Computational Methods in Risk Mgmt.</td>
<td>Time series Analysis &amp;forecasting</td>
</tr>
<tr>
<td>Loss Models I</td>
<td>Project</td>
</tr>
<tr>
<td>Elective I</td>
<td>Elective II</td>
</tr>
</tbody>
</table>

|                            |                                        |
|                            |                                        |

Religious Studies
REL101 Islamic Studies
The Master of Science program in Computer Science provides an 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 in the desired areas of specialization. The program is based on HEC guidelines. The program comprises two year of study over at least 4 semesters. It requires completion of 30 credit hours of course work. Students are required to complete 8 courses and a thesis of 6 credit hours equivalent of 2 courses in order to fulfill their degree requirements. Students must maintain a CGPA of 3.0 for the conferment of the degree.

Eligibility

BS(CS) / MCS / BE in Computer Engineering or are required to make up for the requirement as proposed by the Department Board of Studies. Minimum CGPA of 2.5 on a scale of 4.

MS (Computer Science) program consists of two groups of courses: core and elective.

Core Courses

CSC541 Advanced Research Methodology
CSC543 Advanced Computer Architecture
CSC545 Decision Theory
CSC548 Advanced Analysis of Algorithms

Elective Courses

CSC531 Data Warehousing
CSC562 Object Oriented Software Engineering
CSC564 Software Requirement Engineering
CSC571 Advanced Database Management Systems
CSC574 Distributed Systems
CSC576 Parallel and Distributed Algorithms
CSC581 Neural Networks
CSC583 Fuzzy Systems

CSC561 Advanced Software Engineering
CSC563 Software Quality Assurance
CSC565 Software Testing Strategies
CSC573 Data Mining
CSC575 Parallel and Distributed Computing
CSC578 Communication and Information Policy
CSC582 Pattern Recognition
CSC591/592 Thesis

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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</thead>
<tbody>
<tr>
<td>Advanced Research Methodology</td>
<td>Decision Theory</td>
</tr>
<tr>
<td>Advanced Computer Architecture</td>
<td>Elective I</td>
</tr>
<tr>
<td>Advanced Analysis of Algorithm</td>
<td>Elective II</td>
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<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective III</td>
<td>MS Thesis (6 credit hours)</td>
</tr>
<tr>
<td>Elective IV</td>
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</table>

| Semester Four                  |                                 |
|--------------------------------|                                 |
The MS programs in Mathematics & Scientific Computing and in Statistics & Scientific Computing prepare students for careers in research, applications, and teaching. Students choose courses from two areas of concentration for their course work: Mathematics and Computations or Statistics and Computations. Students are required to successfully qualify eight courses (4 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 interest and on the availability of the faculty. Students will be required to qualify Final (Comprehensive) Examination, as well as write and defend a thesis. The MS Program takes usually two years to complete and students must pass GRE/NTS exam prior to the completion of the degree.

**Eligibility**

16 Years of education in Computer Science, Engineering, Mathematics or Statistics any relevant field.

**Required Courses**

**MS (Mathematics & Scientific Computations)**

**Compulsory Courses (12 credit hours)**

- MTS614 Mathematical Statistics
- MTS616 Advanced Numerical Computing
- MTS615 Dynamical System
- MTS618 Statistical Modeling and Computing

**Elective Courses**

**Mathematics Concentration (6 credit hours)**

- MTS610 Calculus of Variation
- MTS612 Numerical Methods for ODEs and PDEs
- MTS620 Asymptotic Analysis
- MTS626 Advance Convex Analysis
- MTS628 Advance Numerical Optimization
- MTS630 Advance Mathematical Physics
- MTS632 Advance Variational Inequalities
- MTS634 Advance Numerical Linear Algebra
- MTS636 Advance Hilbert Space
- MTS641 Continuum Mechanics
- MTS642 Geometric Methods in Mechanics and Physics

**Computation Concentration (6 credit hours)**

- MTS629 Machine Learning and Pattern Recognition
- MTS631 Production Quality Software
- MTS633 Fundamental Algorithms
**Course Structure**

**MS (Mathematics & Scientific Computing)**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory Courses (12 credit hours)</td>
<td></td>
</tr>
<tr>
<td>MTS609  Numerical Analysis</td>
<td>MTS613  Design of Experiments</td>
</tr>
<tr>
<td>MTS614  Mathematical Statistics</td>
<td>MTS619  Time Series Analysis</td>
</tr>
<tr>
<td>MTS615  Dynamical System</td>
<td>MTS623  Applied Regression Models</td>
</tr>
<tr>
<td>MTS617  Multivariate Statistics</td>
<td>MTS627  Statistical Quality Control</td>
</tr>
<tr>
<td>MTS621  Stochastic Processes</td>
<td></td>
</tr>
<tr>
<td>MTS625  Theory and Practices of Forecasting</td>
<td></td>
</tr>
<tr>
<td>Computation Concentration (6 credit hours)</td>
<td></td>
</tr>
<tr>
<td>MTS627  Machine Learning and Pattern Recognition</td>
<td></td>
</tr>
<tr>
<td>MTS631  Fundamental Algorithms</td>
<td></td>
</tr>
<tr>
<td>MTS635  Simulation and Modeling</td>
<td></td>
</tr>
<tr>
<td>MTS691/692 Thesis</td>
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</tr>
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</table>

**Semester Three**

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory Courses (6 credit hours)</td>
<td></td>
</tr>
<tr>
<td>MTS629  Production Quality Software</td>
<td>MTS633  Information Retrieval and Data Mining</td>
</tr>
<tr>
<td>MTS639  Principles in Parallel Computing</td>
<td></td>
</tr>
</tbody>
</table>

**Elective Courses**

**Statistics Concentration (6 credit hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTS611</td>
<td>Statistical Inference</td>
</tr>
<tr>
<td>MTS617</td>
<td>Multivariate Statistics</td>
</tr>
<tr>
<td>MTS621</td>
<td>Stochastic Processes</td>
</tr>
<tr>
<td>MTS625</td>
<td>Theory and Practices of Forecasting</td>
</tr>
</tbody>
</table>

**Computation Concentration (6 credit hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTS627</td>
<td>Machine Learning and Pattern Recognition</td>
</tr>
<tr>
<td>MTS631</td>
<td>Fundamental Algorithms</td>
</tr>
<tr>
<td>MTS635</td>
<td>Simulation and Modeling</td>
</tr>
</tbody>
</table>

**Semester Four**

<table>
<thead>
<tr>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis (Statistics Oriented)</td>
</tr>
<tr>
<td>6 credit hours</td>
</tr>
</tbody>
</table>

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I found the IoBM MBA to be a milestone in my professional and personal life. The intensity and breadth of the program prepares you for high pressure situations, complex problem solving and work-life balancing that you can use in your approach to all challenges in life. For satisfying my everlasting passion for cars, I am managing my entrepreneurial venture – which was born in a classroom at IoBM. My entrepreneurial journey, being taught as case study at a leading local university, made its way to the final round of Shell Tameer Entrepreneurial Awards 2012, and earned me the honor of being an alumnum of the International Visitors Leadership Program (IVLP) sponsored by the US Department of State. I would certainly recommend the IoBM MBA as an excellent opportunity to enhance your leadership skills and as a recognized route for career progression.

*Shakaib Uzzaman Khan*
Alumnus
Founder & Director
SK Motor Syndicate & Digital Marketing Manager, Standard Chartered Bank
Telecommunication is an exciting area of study, involving fast moving and sophisticated technologies of telephone, television, radio, computers, the internet and more.

MBA in Telecommunication Management, offered by IoBM, is designed to provide the management skills and technical knowledge required to plan, acquire, evaluate and operate telecommunication systems. Students learn the structure and environment of the telecommunication industry, total quality management, strategic planning and financial management with emphasis on critical management concepts. This program can prepare students for careers in the telecommunication industry. The course has been designed by telecommunication 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 load of 12 credit hours (4 courses) in each of the 3 sessions (Fall, Spring and Summer).

**Required Courses**

**Accounting**
- ACC401 Introduction to Managerial and Cost Accounting
- ACC402 Introduction to Financial Accounting

**Communication**
- COM402 Business Communication

**Economics**
- ECO401 Micro and Macroeconomics

**Finance**
- FIN404 Financial Management

**Human Resource Management**
- HRM401 Human Resource Management

**Management**
- MAN401 Principles of Management
- MAN402 Organizational Behavior
- MAN405 Strategic Management
- MAN411 Project Management
- MAN501 Total Quality Management

**Marketing**
- MKT401 Principles of Marketing
Telecommunication
TCM401 Introduction to Technology Management
TCM402 Introduction to Teletraffic Engineering
TCM403 Global Comm: Industry and Policy
TCM404 Management of Telecommunication
TCM405 Optical Communication Network
TCM406 Network Design
TCM408 Advanced Mobile and Wireless Communication
TCM409 Customer Service & Call Center Tech.
TCM410 Management of Network Security
TCM411 Telecommunication Marketing
TCM507 Optimization of Telecommunication Systems

Elective Courses
TCM501 Management of Telecommunication Regulatory System
TCM502 The Future of Emerging Technology
TCM503 Electronic Business, System and Technology
TCM504 Management of Physical Security Technology System
TCM505 Telecommunication Business Continuity Process and Crisis Management
TCM506 Telecommunication Business Process
TCM508 Managing Telecommunication in Media Application
TCM510 Managing the Creative Process
TCM511 IP Multimedia Technologies

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Communication</td>
<td>Introduction to Financial Accounting</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>Introduction to Technology Mgmt.</td>
<td>Global Comm. Industry and Policy</td>
</tr>
<tr>
<td>Introduction to Teletraffic Engineering</td>
<td>Management of Telecommunication</td>
</tr>
<tr>
<td>Semester Three</td>
<td>Semester Four</td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td>Financial Management</td>
</tr>
<tr>
<td>Intro. to Managerial &amp; Cost Accounting</td>
<td>Micro and Macroeconomics</td>
</tr>
<tr>
<td>Network Design</td>
<td>Optical Communication Network</td>
</tr>
<tr>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>Telecommunication Marketing</td>
</tr>
<tr>
<td>Total Quality Management</td>
<td>Strategic Management</td>
</tr>
<tr>
<td>Customer Service &amp; Call Center Tech.</td>
<td>Project Management</td>
</tr>
<tr>
<td>Management of Network Security</td>
<td>Elective</td>
</tr>
</tbody>
</table>
The PhD Programs will connect knowledge of three disciplines mathematics, statistics, and computer science to policy-relevant decision-making in business and government. The programs aim to train researchers to contribute to theory, develop inventive and useful models and methods, and conduct applied scientific investigations. Individual researchers will vary in their emphasis, but the field includes all these aspects. This program emphasizes on rigorous course work and high quality research that should be published in international conferences and HEC recognized journals. Course and research work are arranged as per HEC criteria.

Eligibility

M.Phil. /M.S. / in Computer Science related field 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 / M.Phil or equivalent degree from HEC recognized institutions in a relevant discipline.
• GRE subject specific or GAT subject test conducted by the NTS, or equivalent in the relevant discipline. A minimum of 60% (percentage) marks is required
• Pass interview conducted by the Institute
• Meet all other HEC stipulated requirements

Program Requirements

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

• PhD course work requirements consist of six graduate level courses (18 credit hours)
• On completion of dissertation/thesis the student is awarded 12 credits

A PhD student must additionally complete the following requirements:

• Pass Comprehensive Exam
• PhD Proposal/Synopsis Development
• Pass 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
• Publish at least one paper in an ISI indexed or an HEC recognized journal. An official acceptance of the paper is also acceptable
• Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
• Dissertation/Thesis Finalization
• Open defense of PhD dissertation
• Meet any other HEC requirement
• Final Dissertation/Thesis Submission to BASR
• Degree Award
Course Structure

Semesters One to Nine (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  Advance 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  Advance 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
- PCS850  Research Thesis

**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
- PST850  Research Thesis

**PhD (Mathematics & Scientific Computing)**
- PMT701  Advanced Numerical Computing
- PMT703  Linear Algebra and Lie Algebra
- PMT705  Applied Matrix Theory
- PMT707  Numerical Methods for PDEs
- PMT709  Topics in Inverse Problems
- PMT711  Topics in Numerical Differential Equations
- PST 701  Advance Statistical Computing & Graphics
- PST703  Regresion Modeling & Computation
- PST713  Nonlinear and Integer Programmg
- PMT850  Research Thesis
BS INDUSTRIAL ENGINEERING AND MANAGEMENT

This is an intensive program integrating engineering skills with managerial knowledge. The program has been designed in close consultation with leading engineering firms. A blend of management and engineering courses makes this program distinct from other engineering courses. Another outstanding feature is the provision of hands on training facilities in industrial units on a continuous basis, which blends theory with practical experience. Each final year student is required to undergo 2 credit hours of internship of 6 to 8 weeks with a reputable engineering firm. This close collaboration increases job opportunities and accessibility to higher technical and managerial positions.

This program requires completion of 138 credit hours of course work, including 46 courses. Students graduating with a CGPA of 2.5 automatically qualify for the MBA program offered by IoBM. Students can also proceed further for postgraduate work in Industrial / Management Engineering at leading international schools.

Required Courses

Accounting
ACC101 Introduction to Financial Accounting

Computer Science
CSC310 Computer Simulations

Engineering
ENG101 Workshop Practices
ENG103 Engineering Drawing
ENG108 Introduction to Thermo-Fluids
ENG201 Design of Machine Elements
ENG203 Engineering Economics
ENG209 CAD/CAM Applications
ENG218 Metrology and Statistical Quality Control
ENG220 Mechanics of Materials
ENG303 Production Planning and Control
ENG305 Work Study and Methods Engineering
ENG307 Basic Electronics

General Sciences
GSC101 Physics

Management
MAN101 Principles of Management
MAN303 Production and Operations Management

Marketing
MKT301 Principles of Marketing

Communication
COM107 Academic English
COM402 Business Communication

Engineering
ENG102 Engineering Mechanics
ENG105 Basic Industrial Engineering
ENG109 Industrial Chemistry
ENG202 Production System Design
ENG206 Manufacturing Process
ENG217 Materials Engineering
ENG219 Industrial Maintenance and Safety
ENG300 Electrical Technology and Instrumentation
ENG304 Automation and Robotics
ENG306 Basic Machine Design

Human Resource Management
HRM301 Human Resource Management

Management Information Systems
MIS104 Computer Programming and Graphics
MIS406 Operations Research
MIS409 Computer Applications and MIS

Mathematics
MTH202 Engineering Mathematics
MTH208 Differential Equation and Complex Variables
MTH403 Numerical Computing / Analysis
MTH406 Finite Element Analysis
**Political Sciences**  
PSC301 Pakistan Studies

**Statistics**  
STA204 Industrial Applications of Statistics  
STA407 Design of Experiments

**Religious Studies**  
REL101 Islamic Studies

**Elective Courses**

**Engineering**  
ENG204 Plant Engineering  
ENG216 Reliability Analysis  
ENG401 Computer Integrated Manufacturing  
ENG402 Manufacturing Strategies  
ENG403 Human Factor Engineering  
ENG404 Tool Design

**Management**  
MAN402 Organizational Behavior  
MAN501 Total Quality Management  
MAN503 Supply Chain Management  
MAN509 Logistics and Inventory Control

**Mathematics**  
MTH406 Finite Element Analysis

**Course Structure**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics</td>
<td>Introduction to Thermo-Fluids</td>
<td>Materials Engineering</td>
</tr>
<tr>
<td>Computer Programming and Graphics</td>
<td>Engineering Mechanics</td>
<td>Pakistan Studies</td>
</tr>
<tr>
<td>Physics</td>
<td>Engineering Drawing</td>
<td>Design of Machine Elements</td>
</tr>
<tr>
<td>Workshop Practices</td>
<td>Industrial Chemistry</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>Academic English</td>
<td>Business Communication</td>
<td>Electrical Technology &amp; Instrumentation</td>
</tr>
<tr>
<td>Islamic Studies</td>
<td>Diff. Equation and Complex Variables</td>
<td>Basic Industrial Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Applications of Statistics</td>
<td>Production &amp; Operations Management</td>
<td>Basic Machine Design</td>
</tr>
<tr>
<td>Mechanics of Materials</td>
<td>Human Resource Management</td>
<td>Computer Simulations</td>
</tr>
<tr>
<td>Production System Design</td>
<td>Operations Research</td>
<td>CAD/CAM Applications</td>
</tr>
<tr>
<td>Introduction to Financial Accounting</td>
<td>Metrology &amp; Statistical Quality Control</td>
<td>Engineering Economics</td>
</tr>
<tr>
<td>Basic Electronics</td>
<td>Principles of Marketing</td>
<td>Numerical Computing / Analysis</td>
</tr>
<tr>
<td>Computer Applications and MIS</td>
<td>Manufacturing Process</td>
<td>Industrial Maintenance &amp; Safety</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Planning and Control</td>
<td>Automation and Robotics</td>
</tr>
<tr>
<td>Design of Experiments</td>
<td>Work Study and Methods Engineering</td>
</tr>
<tr>
<td>Project I</td>
<td>Project II</td>
</tr>
<tr>
<td>Elective I</td>
<td>Elective III</td>
</tr>
<tr>
<td>Elective II</td>
<td>Elective IV</td>
</tr>
</tbody>
</table>
BE ELECTRICAL ENGINEERING IN ELECTRONIC AND TELECOMMUNICATION

BE Electrical Engineering program is launched at IoBM with specialization in Electronic and Telecommunication. This program is geared towards those who want to integrate engineering expertise with managerial skills. This integration will result in enhanced job opportunities and accessibility to higher technical and managerial positions. It further involves designing and managing technology at the national and international level to find new and exciting ways to use their expertise.

The program is Pakistan Engineering Council (PEC) approved 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 given to laboratory work, experimental knowledge and innovative teaching methods. One of its special features is an Internship of 6 to 8 weeks in a reputable engineering organization. During the first four semesters, 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 area of interest and provide them thorough understanding about the advanced subjects in that particular area of specialization.

Completion of course work (with 2.5 CGPA) and internship automatically qualify students for the Master’s programs offered by IoBM. They can also proceed further for postgraduate studies or work in the fields of Telecommunication and Electronics, at leading universities and organizations throughout the world. The IoBM course credits are easily transferable to a majority of international universities.

### Required Courses

**Communication**
- COM101 Functional English
- COM203 Methods in Business Writing
- COM402 Business Communication

**Computer Engineering**
- CME102 Fundamentals of Computing
- CME104 Computer Programing and Problem Solving
- CME203 Data Structures and Algorithms
- CME205 Microcontroller and Microprocessor Systems
- CME301 Computer Communication and Networks

**Electrical Power Engineering**
- EPE101 Linear Circuit Analysis
- EPE102 Electronic Workshop Practices
- EPE200 Electrical Network Analysis
- EPE201 Computer Aided Engineering Design
- EPE302 Electrical Machines

**Electronic Engineering**
- ELE200 Electronic Devices and Circuits
- ELE201 Digital Logic Design
- ELE304 Electronic Circuit Design
- ELE370 Instrumentation and Measurements
- ELE403 Embedded Systems Design
- ELE415 Opto-Electronic
- ELE417 Industrial Electronic
- ELE419 Linear Control Systems
- ELE422 VLSI Design
- ELE450 Senior Design Project I
- ELE451 Senior Design Project II
- ELEXXX Elective I
- ELEXXX Elective II
- ELEXXX Elective III
- ELEXXX Elective IV
Telecommunication Engineering
TCE200  Electronic Communication System
TCE204  Electromagnetic Field Theory
TCE205  Signal and Systems
TCE301  Probability Methods in Engineering
TCE321  Wave Propagation and Antenna
TCE404  Digital Signal Processing Techniques
TCE415  Transmission and Switching Systems
TCE416  Digital Communication
TCE421  FPGA Based System Design
TCE422  Communication Systems
TCE450  Senior Design Project I
TCE451  Senior Design Project II
TCE461  Wireless and Mobile Communications
TCE471  Optical Communication
TCEXXX Elective I
TCEXXX Elective II
TCEXXX Elective III
TCEXXX Elective IV

Engineering Management
ENG203  Engineering Economics

Mathematics
MTH107  Calculus and Analytical Geometry
MTH204  Linear Algebra
MTH215  Differential Equation
MTH216  Complex Variable and Transforms
MTH403  Numerical Computing / Analysis

Religious Studies
REL101  Islamic Studies

General Sciences
GSC103  Applied Physics

Management
MAN101  Principles of Management
MAN302  Organizational Behavior

Political Sciences
PSC301  Pakistan Studies

Social Sciences
SSC100  Community Services

Inter-Disciplinary Engineering
IDE401  Principles of Applied Mechatronics
IDE402  Renewable Energy Methods

Course Structure
First two years are common for both electrical engineering streamlines (Electronic and Telecommunications)

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional English (3+0)</td>
<td>Methods in Business Writing (3+0)</td>
</tr>
<tr>
<td>Applied Physics (3+1)</td>
<td>Electronic Devices and Circuits (3+1)</td>
</tr>
<tr>
<td>Linear Circuit Analysis (3+1)</td>
<td>Linear Algebra (3+0)</td>
</tr>
<tr>
<td>Fundamentals of Computing (3+1)</td>
<td>Computer Programming and Problem Solving (2+1)</td>
</tr>
<tr>
<td>Calculus and Analytical Geometry (3+0)</td>
<td>Islamic Studies or Ethical Behavior (2+0)</td>
</tr>
<tr>
<td></td>
<td>Electrical Workshop Practices (0+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Structures and Algorithms (3+1)</td>
<td>Microcontroller &amp; Microprocessor Systems (3+1)</td>
</tr>
<tr>
<td>Digital Logic Design (3+1)</td>
<td>Principles of Management (3+0)</td>
</tr>
<tr>
<td>Network Analysis (3+1)</td>
<td>Electromagnetic Theory (3+0)</td>
</tr>
<tr>
<td>Differential Equation (3+0)</td>
<td>Complex Variables and Transforms (3+0)</td>
</tr>
<tr>
<td>Pakistan Studies (2+0)</td>
<td>Signal and Systems (3+1)</td>
</tr>
<tr>
<td>Computer Aided Engineering Design (0+1)</td>
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</tbody>
</table>
### Course Structure

#### Streamline 1: Electronic Engineering

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability Theory and Statistics (3+0)</td>
<td>Instrumentation and Measurements (3+1)</td>
</tr>
<tr>
<td>Numerical Computing / Analysis (3+0)</td>
<td>Electronic Circuit Design (3+1)</td>
</tr>
<tr>
<td>Communication Systems (3+1)</td>
<td>Engineering Economics (3+0)</td>
</tr>
<tr>
<td>Linear Control Systems (3+1)</td>
<td>Digital Signal Processing (3+1)</td>
</tr>
<tr>
<td>Electrical Machine (3+1)</td>
<td>Elective I (3+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Behavior (3+0)</td>
<td>Business Communication (2+0)</td>
</tr>
<tr>
<td>Renewable Energy Methods (3+0)</td>
<td>Principles of Applied Mechatronics (3+1)</td>
</tr>
<tr>
<td>Elective II (3+1)</td>
<td>Elective IV (3+1)</td>
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<tr>
<td>Elective III (3+1)</td>
<td>Senior Design Project II (0+3)</td>
</tr>
<tr>
<td>Senior Design Project I (0+3)</td>
<td></td>
</tr>
</tbody>
</table>

#### Elective Courses

**Streamline 1: Electronic Engineering**

- CME301 Computer Communication and Networks
- CME414 Digital Image Processing
- ELE417 Industrial Electronics
- ELE422 VLSI Design
- ELE428 Digital Electronics
- ELE430 Solid State Device
- TCE461 Mobile and Wireless Communication

- ELE415 Opto-Electronic
- ELE420 Power Electronics
- ELE423 Digital control system
- ELE429 Introduction to Nano-Technology
- ELE432 Robotic and Application
- TCE321 Wave Propagation and Antenna

### Course Structure

#### Streamline 2: Telecommunication Engineering

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Systems (3+1)</td>
<td>Computer Communication and Networks (3+1)</td>
</tr>
<tr>
<td>Instrumentation and Measurements (3+1)</td>
<td>Electronic Circuits Design (3+1)</td>
</tr>
<tr>
<td>Probability Methods in Engineering (3+0)</td>
<td>Digital Signal Processing (3+1)</td>
</tr>
<tr>
<td>Linear Control Systems (3+1)</td>
<td>Engineering Economics (3+0)</td>
</tr>
<tr>
<td>Numerical Computing / Analysis (3+0)</td>
<td>Elective I (3+1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Behavior (3+0)</td>
<td>Business Communication (2+0)</td>
</tr>
<tr>
<td>Renewable Energy Methods (3+0)</td>
<td>Principles of Applied Mechatronics (3+1)</td>
</tr>
<tr>
<td>Wireless and Mobile Communication (3+0)</td>
<td>Elective IV (3+1)</td>
</tr>
<tr>
<td>Elective II (3+1)</td>
<td>Senior Design Project II (0+3)</td>
</tr>
<tr>
<td>Elective III (3+1)</td>
<td></td>
</tr>
<tr>
<td>Senior Design Project I (0+3)</td>
<td></td>
</tr>
</tbody>
</table>

#### Elective Courses

**Streamline 2: Telecommunication Engineering**

- CME414 Digital Image Processing
- TCE415 Transmission and Switching System
- TCE416 Digital Communication
- TCE423 RF and Microwave Engineering
- TCE425 Telecom Management
- TCE431 Digital Filter Design
- TCE421 FPGA Based System Design
- TCE427 Antenna Theory and Design
- TCE429 Tele-traffic Engineering

- TCE420 Information Theory and Coding
- TCE461 Mobile and Wireless Communication
- TCE321 Wave Propagation and Antenna
- TCE424 Radar Systems
- TCE430 Satellite Communication
- CME420 Multimedia Communication
- TCE426 Electromagnetic Compatibility
- TCE428 Mobile and Pervasive Computing
- TCE471 Optical Communication
The MS in Engineering Management degree (MEM) 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. Sound decision-making, information management, project management, quality engineering, design engineering, simulation, facility layout, production system and industrial costing management are some of the core issues being dealt as part of their career. MEM graduates can fill this gap.

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

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

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

**Course Contents**

- **Duration:** 2 years
- **Total credit hours:** 30
  - Teaching: 24
  - Thesis/ Project: 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 MS degree requirements in the discipline of Engineering Management. A minimum of four courses from core subjects and four courses from optional subjects be undertaken.

**Eligibility**

BSc/BE degree (16-years of education) in any engineering discipline
Compulsory Core Courses (Four 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)

MS Projects (Compulsory)

MEM 517 Thesis/ Project (6)

Elective Courses (Any Four Courses)

MEM505 Applied Engineering Analysis (3+0)
MEM506 Production System Design and Analysis (3+0)
MEM507 Operations Analysis & Resource Allocation (3+0)
MEM508 Operation Management (3+0)
MEM509 Simulation Modeling (3+0)
MEM510 Production Planning and Control (3+0)
MEM511 Advances Practices in Engineering Management (3+0)
MEM512 Environmental and Safety Management (3+0)
MEM513 Industrial Costing Management (3+0)
MEM514 Technology Management (3+0)
MEM515 Lean Six Sigma & Lean Manufacturing (3+0)
MEM516 Marketing Management (3+0)

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>Elective I (3+0)</td>
</tr>
<tr>
<td>Research Methodology (3+0)</td>
<td>Elective II (3+0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective III (3+0)</td>
<td>Thesis-II / Project-II (4+0)</td>
</tr>
<tr>
<td>Elective IV (3+0)</td>
<td></td>
</tr>
<tr>
<td>Thesis-I / Project-I (2+0)</td>
<td></td>
</tr>
</tbody>
</table>
COLLEGE OF ECONOMICS AND SOCIAL DEVELOPMENT
The College of Economics and Social Development (CESD) is a liberal arts college with graduate and undergraduate programs in the areas of accountancy, management & law, education, economics, media studies and psychology. Research is a core competence of CESD. The program is designed to help students build a solid foundation in general business principles and skills. It requires completion of 144 credit hours of course work and 2 credit hours of internship of at least six weeks in a firm approved by the College. Students graduating with a CGPA of 2.5 automatically qualify for MBA program offered by CBM in a weekday full-time program, students may take a maximum of six courses per semester with Summer as an optional semester. This program will lead to MBA or a professional accountancy qualification. Students have the option of passing the Institute of Chartered Accountants of Pakistan (ICAP) foundation and intermediate examinations simultaneously with obtaining the program.

**Required Courses**

**Accounting**
- ACC102 Introduction to Financial Accounting I
- ACC103 Introduction to Financial Accounting II
- ACC202 Taxation I
- ACC203 Financial Accounting I
- ACC204 Taxation II
- ACC304 Financial Accounting II
- ACC305 Cost Accounting I
- ACC405 Internal Auditing
- ACC414 Auditing I
- ACC415 Cost Accounting II
- ACC416 Auditing II
- ACC417 Corporate Reporting
- ACC418 Performance Measurement and Decision Making
- ACC501 Advanced Financial Accounting
- ACC502 Advanced Managerial Accounting

**Communication**
- COM103 Functional English-I
- COM104 Functional English-II
- COM105 Business Communication and Behavioral Studies-I
- COM106 Business Communication and Behavioral Studies-II

**Economics**
- ECO202 Introduction to Economics and Finance-I
- ECO203 Introduction to Economics and Finance II
- ECO204 The Pakistan Economy

**Finance and Banking**
- FIN201 Introduction to Business Finance
- FIN202 Financial Management
- FIN502 Strategic Financial Management
- FIN511 Analysis of Financial Statements

**Law**
- LAW101 Mercantile Law-I
- LAW102 Mercantile Law-II
- LAW103 Company Law-I
- LAW104 Company Law-II
- LAW301 Intellectual Property, Patents, Copyrights
- LAW400 Company Secretarial Practices
- LAW404 Arbitration
- LAW407 Statutory Compliance
**Human Resource Management**  
HRM301  Human Resource Management  
HRM502  Industrial Relations and Labour Laws

**Management Information Systems**  
MIS413  Information Technology-I  
MIS416  Information Technology-II

**Social Sciences**  
SSC202  Environmental Studies  
SSC401  Business Ethics

**Religious Studies**  
REL101  Islamic Studies

**Language**  
LAN 10*  Foreign Language I  
*1 = Introduction to Arabic  
*2 = Introduction to French  
*3 = Introduction to Spanish  
*4 = Introduction to German  
*5 = Introduction to Japanese  
*6 = Introduction to Italian  
*7 = Introduction to Russian  
*8 = Introduction to Chinese

### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
</table>
| Functional English I  
Quantitative Methods I  
Information Technology I  
Introduction to Economics and Finance I  
Introduction to Financial Accounting I  
Mercantile Law I | Introduction to Economics and Finance II  
Introduction to Financial Accounting II  
Mercantile Law II  
Quantitative Methods II  
Functional English II  
Business Communication and Behavioral Studies I |

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
</table>
| Financial Accounting I  
Taxation I  
Business Communication and Behavioral Studies II  
Company Law I  
Cost Accounting I  
Auditing I | Company Law II  
Financial Accounting II  
Cost Accounting II  
Auditing II  
Information Technology II  
Taxation II |

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
</table>
| Introduction to Business Finance  
The Pakistan Economy  
Financial Management  
Islamic Studies  
Intellectual Property, Patents, Copyrights  
Principles of Management | Human Resource Management  
Principles of Marketing  
Introduction to ERP Systems  
Business Ethics  
Internal Auditing  
Advanced Financial Accounting |

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
</tr>
</thead>
</table>
| Company Secretarial Practices  
Project Management  
Methods in Business Research  
Advanced Managerial Accounting  
Corporate Reporting  
Analysis of Financial Statements | Strategic Financial Management  
Statutory Compliance OR Arbitration  
Performance Measurement and Decision Making  
Industrial Relations and Labour Laws  
Entrepreneurship and Small Business Management  
Introduction to a Foreign Language OR Corporate Governance OR Environmental Studies |
The BS (Honors) Media Studies program is designed to provide students 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.

The curriculum seeks to endow students with creativity, and deep insight into the evolution and dynamics of media and visual communication, through an array of courses in journalism, communication and social sciences, as well as practical hands-on exposure to the art and craft of filmmaking, television and new media.

The program has benefited tremendously from the guidance and support this department has been consistently receiving from media experts and practitioners, specialists in the field of journalism and filmmaking, as well as collaboration with and guidance from media channels and establishments, media-related institutions and regulatory authorities.

The four-year program requires completion of 144 credit hours of course work, and a compulsory student internship.

**Required Courses**

**Communication**
- COM108 English I
- COM109 English II

**Economics**
- ECO106 Basic Economics

**Islamic Studies**
- REL101 Islamic Studies

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

**Law**
- LAW405 Media Law and Business Ethics

**Management**
- MAN305 International Relations
Media Studies

MMM301 Photo Journalism
MMM303 Outline of Political Science
MMM307 World Civilization and Culture
MMM310 News Writing and Reporting
MMM312 Introduction to Advertising and PR
MMM314 Online Journalism
MMM316 Sub Editing
MMM321 Development Communication
MMM324 Media Management and Marketing
MMM328 Methods in Media Research
MMM330 Appreciation of Vernacular Literature
MMM333 Sports Journalism
MMM337 Thesis (Journalism)
MMM342 Advanced Filmmaking – The Art & Craft I
MMM349 Radio I
MMM351 Production Management
MMM353 Lighting Design
MMM355 Production of Documentary
MMM357 Advanced Editing & Sound Design
MMM359 Graphics & Animation for Web
MMM361 Fashion Journalism
MMM363 Introduction to Design Tools
MMM365 Advanced Filmmaking – The Art & Craft II (Studio)

MMM302 Logic and Critical Thinking
MMM304 Media Literacy
MMM308 Contemporary World Media
MMM311 Introduction to Broadcast Media
MMM313 Theater Arts
MMM315 Feature, Article and Column Writing
MMM318 Economic Journalism
MMM322 Current Affairs
MMM326 Studio Production
MMM329 Creative Writing Workshop
MMM332 News Production / News Anchoring
MMM336 Human Rights and Gender Reporting
MMM338 Cinematography I
MMM344 Screenwriting for Film/TV
MMM350 Radio II
MMM352 Advanced Production Management
MMM354 Introduction to Editing & Sound Design
MMM356 Ad-Film Production
MMM358 Advanced Cinematography
MMM360 Introduction to Photography
MMM362 History of Filmmaking
MMM364 Introduction to Mass Communication
MMM366 Advanced Filmmaking – The Art & Craft II (Thesis)

Pakistan Studies

PSC301 Pakistan Studies

Statistics

STA100 Basic Statistical Methods

Social Sciences

SSC101 Introduction to Psychology
SSC104 Principles of Sociology
SSC302 Important Concepts in Philosophy

Course Structure

Common Courses for Journalism & Production Majors:

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>English II</td>
</tr>
<tr>
<td>Urdu I</td>
<td>Urdu II</td>
</tr>
<tr>
<td>Introduction to Mass Comm.</td>
<td>Media Literacy</td>
</tr>
<tr>
<td>Introduction to Photography</td>
<td>Introduction to Design Tools</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>Basic Economics</td>
</tr>
<tr>
<td>Principles of Sociology</td>
<td>Islamic Studies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Writing Workshop</td>
<td>Appreciation of Vernacular Literature</td>
</tr>
<tr>
<td>News Writing and Reporting</td>
<td>World Civilization and Culture</td>
</tr>
<tr>
<td>Theater Arts</td>
<td>History of Filmmaking</td>
</tr>
<tr>
<td>International Relations</td>
<td>News Production I</td>
</tr>
<tr>
<td>Outline of Political Science</td>
<td>Important Concepts in Philosophy</td>
</tr>
<tr>
<td>Pakistan Studies</td>
<td>Logic and Critical Thinking</td>
</tr>
</tbody>
</table>
### Journalism Majors

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Broadcast Media</td>
<td>Feature, Article and Column Writing</td>
</tr>
<tr>
<td>Introduction to Advertising and PR</td>
<td>Online Journalism</td>
</tr>
<tr>
<td>News Production / News Anchoring</td>
<td>Economic Journalism</td>
</tr>
<tr>
<td>Sub-Editing</td>
<td>Photo-Journalism</td>
</tr>
<tr>
<td>Cinematography I</td>
<td>Methods in Media Research</td>
</tr>
<tr>
<td>Production Management</td>
<td>Media Law and Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Seven</td>
<td>Semester Eight</td>
</tr>
<tr>
<td>Introduction to Broadcast Media</td>
<td>Human Rights and Gender Reporting</td>
</tr>
<tr>
<td>Development Communication</td>
<td>Fashion Journalism</td>
</tr>
<tr>
<td>Sports Journalism</td>
<td>Media Management and Marketing</td>
</tr>
<tr>
<td>Radio I</td>
<td>Magazine Production</td>
</tr>
<tr>
<td>Production of Documentary*</td>
<td>Thesis (Journalism)*</td>
</tr>
<tr>
<td></td>
<td><em>Internship (2 credit hours)</em></td>
</tr>
</tbody>
</table>

**Credit Hours: 6**

### Production Majors

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Broadcast Media</td>
<td>Advanced Editing &amp; Sound Design</td>
</tr>
<tr>
<td>Lighting Design</td>
<td>Screenwriting for Film &amp; TV</td>
</tr>
<tr>
<td>News Production / News Anchoring</td>
<td>Advanced Cinematography</td>
</tr>
<tr>
<td>Introduction to Editing &amp; Sound Design</td>
<td>Advanced Production Management</td>
</tr>
<tr>
<td>Cinematography I</td>
<td>Methods in Media Research</td>
</tr>
<tr>
<td>Production Management</td>
<td>Media Law and Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Seven</td>
<td>Semester Eight</td>
</tr>
<tr>
<td>Radio I</td>
<td>Graphics &amp; Animation for Web</td>
</tr>
<tr>
<td>Current Affairs</td>
<td>Ad-Film Production</td>
</tr>
<tr>
<td>Production of Documentary*</td>
<td>Media Management and Marketing</td>
</tr>
<tr>
<td></td>
<td>Advanced Filmmaking – The Art &amp; Craft II (Thesis)*</td>
</tr>
<tr>
<td></td>
<td><em>Internship (2 credit hours)</em></td>
</tr>
</tbody>
</table>

*Credit Hours: 6
MBA EDUCATIONAL MANAGEMENT
FOR STUDENTS WITH 16 YEARS EDUCATION

This is a weekend program which requires completion of 72 credit hours of course work, including 24 courses of 3 credit hours each spread over six consecutive semesters (two-years). Students must maintain a CGPA of 3.0 for the conferment of the degree. The course structure is subject to change in compliance with HEC requirements. The course is particularly designed for schools and school system managers, administrators, principals and coordinators.

Students can take a minimum load of 6 credit hours (two courses) or maximum of 12 credit hours (four courses) in each of the 3 semesters (Fall, Spring and Summer).

Required Courses

Accounting
ACC402 Introduction to Financial Accounting

Educational Management
EDM406 Education Policy and Planning
EDM412 Marketing Education Services
EDM415 Educational Philosophy and Ethics
EDM418 Testing in Education
EDM419 Managing Teaching and Learning
EDM420 Academic Writing and Seminar Skills
EDM424 Teacher Education
EDM425 Developing Leadership and Management Skills
EDM426 Curriculum Management and Planned Change
EDM427 Research Methods in Education I (Qualitative)
EDM428 Research Methods in Education II (Quantitative)
EDM434 Thesis Writing
EDM437 ICT in Education
EDM439 Developing Research Projects

Finance
FIN404 Financial Management

Human Resource Management
HRM401 Human Resource Management

Management
MAN401 Principles of Management
MAN402 Organizational Behavior

Marketing
MKT401 Principles of Marketing

Social Sciences
SSC406 Psychology and Learning
### Elective Courses

**Educational Management**
- EDM502 Managing Higher Education Systems
- EDM503 Quality Assurance in Education
- EDM504 Managing Schools and School Systems
- EDM508 Knowledge Management
- EDM511 Lifelong Learning in Changing Contexts
- EDM513 Strategic Management Issues in Education
- EDM514 Early Childhood Development

### Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Teaching and Learning</td>
<td>Teacher Education</td>
</tr>
<tr>
<td>Academic Writing and Seminar Skills</td>
<td>Curriculum Mgmt. and Planned Change</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>Psychology and Learning</td>
<td>Introduction to Financial Accounting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Philosophy and Ethics</td>
<td>Developing Leadership &amp; Mgmt. Skills</td>
</tr>
<tr>
<td>Research Methods in Education I (Qualitative)</td>
<td>Testing in Education</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>Research Methods in Education II (Quantitative)</td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td>Financial Management</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Education Services</td>
<td>Elective II</td>
</tr>
<tr>
<td>Developing Research Projects</td>
<td>Elective III</td>
</tr>
<tr>
<td>Education Policy and Planning</td>
<td>ICT in Education</td>
</tr>
<tr>
<td>Elective I</td>
<td>Thesis Writing</td>
</tr>
</tbody>
</table>
This is a weekend program which requires completion of 108 credit hours of course work, including 36 courses of 3 credit hours each spread over nine consecutive semesters (three-years). Students must maintain a CGPA of 3.0 for the conferment of the degree. The course structure is subject to change in compliance with HEC requirements.

The program is designed for students who have passed a two-year Bachelor’s degree. Students can take a minimum load of 6 credit hours (two courses) or maximum of 12 credit hours (four courses) in each of the 3 semesters (Fall, Spring and Summer).

**Required Courses**

**Accounting**
ACC402  Introduction to Financial Accounting

**Communication**
COM403  Interpersonal Communication Skills
COM407  English Language Development

**Educational Management**
EDM402  Applied Linguistics
EDM403  Critical Thinking and Reading
EDM406  Education Policy and Planning
EDM412  Marketing Education Services
EDM414  Classroom Management
EDM415  Educational Philosophy and Ethics
EDM417  Educational Counseling
EDM418  Testing in Education
EDM419  Managing Teaching and Learning
EDM420  Academic Writing and Seminar Skills
EDM421  Sociology of Education
EDM422  Learners and Learning Styles
EDM423  Reflective Inquiry in Education
EDM424  Teacher Education
EDM425  Developing Leadership and Management Skills
EDM426  Curriculum Management and Planned Change
EDM427  Research Methods in Education I (Qualitative)
EDM428  Research Methods in Education II (Quantitative)
EDM429  ICT in Education
EDM430  Developing Research projects
EDM434  Thesis Writing

**Finance**
FIN404  Financial Management

**Human Resource Management**
HRM401  Human Resource Management
Management
MAN401 Principles of Management
MAN402 Organizational Behavior

Management Information Systems
MIS400 Computer Applications and System

Marketing
MKT401 Principles of Marketing

Social Sciences
SSC402 Introduction to Psychology
SSC406 Psychology and Learning

Statistics
STA403 Statistics and Mathematics

Elective Courses

Educational Management
EDM502 Managing Higher Education Institutions
EDM503 Quality Assurance in Education
EDM504 Managing Schools and School Systems
EDM508 Knowledge Management
EDM511 Lifelong Learning in Changing Contexts
EDM513 Strategic Management Issues in Education
EDM514 Early Childhood Development

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Psychology</td>
<td>Reflective Inquiry in Education</td>
<td>Educational Counseling</td>
</tr>
<tr>
<td>Critical Thinking and Reading</td>
<td>Learners and Learning Styles</td>
<td>Classroom Management</td>
</tr>
<tr>
<td>Applied Linguistics</td>
<td>Statistics and Mathematics</td>
<td>Computer Applications and Systems</td>
</tr>
<tr>
<td>English Language Development</td>
<td>Interpersonal Communication Skills</td>
<td>Sociology of Education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Semester Five</th>
<th>Semester Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Teaching and Learning</td>
<td>Teacher Education</td>
<td>Educational Philosophy and Ethics</td>
</tr>
<tr>
<td>Academic Writing and Seminar Skills</td>
<td>Curriculum Mgmt. and Planned Change</td>
<td>Research Methods in Education I (Qualitative)</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Organizational Behavior</td>
<td>Human Resource Management</td>
</tr>
<tr>
<td>Psychology and Learning</td>
<td>Introduction to Financial Accounting</td>
<td>Principles of Marketing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Semester Eight</th>
<th>Semester Nine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing Leadership and Mgmt. Skills</td>
<td>Marketing Education Services</td>
<td>Elective II</td>
</tr>
<tr>
<td>Testing in Education</td>
<td>Developing Research Projects</td>
<td>Elective III</td>
</tr>
<tr>
<td>Research Methods in Education II (Quantitative)</td>
<td>Education Policy and Planning</td>
<td>ICT in Education</td>
</tr>
<tr>
<td>Financial Management)</td>
<td>Elective I</td>
<td>Thesis Writing</td>
</tr>
</tbody>
</table>
MSc ORGANIZATIONAL PSYCHOLOGY AND HUMAN RESOURCE MANAGEMENT FOR STUDENTS WITH 16 YEARS EDUCATION

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

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

Students can take a minimum load of 6 credit hours (two courses) or maximum of 12 credit hours (four courses) in each of the 3 semesters (Fall, Spring and Summer).

Foundation Courses

Psychology
PSY400  Introduction to Organizational Psychology

Management
MAN401  Principles of Management

Human Resource Management
HRM401  Human Resource Management

Statistics
STA410  Introduction to Behavioral Statistics

Communication
COM402  Business Communication
COM405  Organizational Consulting Skills

Core Courses

Psychology
PSY402  Counseling Psychology
PSY405  Group Dynamics
PSY406  Research Methods in Organizational Psychology
PSY407  Personnel Psychology
PSY408  Consumer Psychology
PSY430  Psychological Testing-I
PSY431  Psychological Testing-II
PSY432  Behavior Modification in Industry
PSY433  Leadership and Strategic Change
Human Resource Management
HRM408 Human Resource Issues in Pakistan
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labor Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills and Collective Bargaining
HRM530 Research Practicum in HRM

Elective Courses

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

Human Resource Management
HRM531 Pay for Performance and Reward
HRM532 Performance Management
HRM508 Salary and Compensation
HRM509 Leadership Studies

Course Structure
(Career Option I Majors Psychology)

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

Course Structure
(Career Option II Majors HRM)

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Management</td>
<td>Group Dynamics</td>
<td>Research Methods in Org. Psychology</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>Organizational Consulting Skills</td>
<td>Consumer Behavior</td>
</tr>
<tr>
<td>Intro. to Organizational Psychology</td>
<td>Psychological Testing-I</td>
<td>Recruitment and Selection</td>
</tr>
<tr>
<td>Statistical Inference</td>
<td>Human Resource Issues in Pakistan</td>
<td>Industrial Relations and Labor Laws</td>
</tr>
<tr>
<td>Semester Four</td>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Counseling Psychology</td>
<td>Psychological Testing-II</td>
<td>Elective I</td>
</tr>
<tr>
<td>Personnel Psychology</td>
<td>Behavior Modification in Industry</td>
<td>Elective II</td>
</tr>
<tr>
<td>Employee Training &amp; Development</td>
<td>Leadership and Strategic Change</td>
<td>Elective III</td>
</tr>
<tr>
<td>Negotiation Skills &amp; Collective Barg.</td>
<td>Research Project / Practicum</td>
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</tr>
<tr>
<td>(3 credit hours)</td>
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</tbody>
</table>
MSc ORGANIZATIONAL PSYCHOLOGY AND HUMAN RESOURCE MANAGEMENT
FOR STUDENTS WITH 14 YEARS EDUCATION

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

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

Students can take a minimum load of 6 credit hours (two courses) or maximum of 12 credit hours (four courses) in each of the 3 semesters (Fall, Spring and Summer)

Foundation Courses

Psychology
PSY400 Introduction to Organizational Psychology

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN413 Corporate Social Responsibility

Human Resource Management
HRM401 Human Resource Management

Marketing
MKT401 Principles of Marketing

Statistics
STA410 Introduction to Behavioral Statistics

Communication
COM402 Business Communication
COM405 Organizational Consulting Skills
COM403 Interpersonal Communication Skills

Social Sciences
SSC104 Principles of Sociology
SSC401 Business Ethics

Management Information System
MIS401 Computer Applications

It’s a delight to have educational accolades from a place like IoBM that not only gives quality education but also gives self-reliance as how to face professional world once we are out in the professional arena. I feel a sense of accomplishment by completing my graduation and master degree program from IoBM. Having IT and Marketing knowledge, I mastered the skills of business development right after I graduated and joined IT industry of Pakistan in 2010. Later on I was moved to Oman in 2011 and recently I have been relocated to UAE. From the very beginning of my career, I have always tried to embrace business practices (that I learnt during my stay at IoBM). This practices have helped me in getting abreast of the game in IT services industry and has certainly taken me to the paramount level – one can dream of! IoBM will always have a special place in my heart for making me what I am today. Thanks to faculty, management, and staff for providing extra ordinary services to the student community and to Alumni.

Faizan Sattar Baloch
Alumnus
Director Operations
Microsoft Enterprise Services, KalSoft UAE
Core Courses

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

Human Resource Management
- HRM408 Human Resource Issues in Pakistan
- HRM501 Recruitment and Selection
- HRM502 Industrial Relation and Labor Law
- HRM503 Employee Training and Development
- HRM504 Negotiation Skills and Collective Bargaining
- HRM530 Research Practicum in HRM
- HRM505 Organizational Change & Development
- HRM506 Strategic HRM
- HRM511 Performance Appraisal

Elective Courses

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

Human Resource Management
- HRM508 Salary and Compensation
- HRM509 Leadership Studies
- HRM531 Pay for Performance and Reward
- HRM532 Performance Management

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
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</tr>
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<tbody>
<tr>
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<td>Human Resource Management</td>
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<td>Introduction to Behavioral Statistics</td>
<td>Principle of Marketing</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>Principle of Sociology</td>
<td>Personality Theories</td>
<td>Performance Appraisal</td>
</tr>
<tr>
<td>Computer Applications</td>
<td>Business Ethics</td>
<td>Business Communication</td>
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<td></td>
<td></td>
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<tr>
<td>Semester Four</td>
<td>Semester Five</td>
<td>Semester Six</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>Psychological Testing-I</td>
<td>Consumer Psychology</td>
</tr>
<tr>
<td>Industrial Relation and Labor Law</td>
<td>Organizational Change &amp; Development</td>
<td>Recruitment and Selection</td>
</tr>
<tr>
<td>Organizational Consulting Skills</td>
<td>Interpersonal Communication Skills</td>
<td>Strategic HRM</td>
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<tr>
<td>Semester Seven</td>
<td>Semester Eight</td>
<td>Semester Nine</td>
</tr>
<tr>
<td>Counseling Psychology</td>
<td>Psychological Testing-II</td>
<td>Elective I</td>
</tr>
<tr>
<td>Personnel Psychology</td>
<td>Behavior Modification in Industry</td>
<td>Elective II</td>
</tr>
<tr>
<td>Employees Training and Development</td>
<td>Leadership &amp; Strategic Change</td>
<td>Elective III</td>
</tr>
<tr>
<td>Negotiation Skills &amp; Collective Barg.</td>
<td>Research Practicum in HRM</td>
<td>Elective IV</td>
</tr>
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</tbody>
</table>
MPhil leading to PhD in Organizational Psychology

The MPhil leading to PhD 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 from IoBM or Master’s degree holders in the relevant subject 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. Experience in research or teaching will be considered as an additional qualification.

Program Structure

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

Additional PhD level course work of at least 18 credit hours followed by thesis defense is required for the award of PhD degree.

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 in the Work Place
- 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)

Joining IoBM, I believe, was the wisest decision I ever made which supported me in my transition in becoming a complete and thorough business professional. I remain highly indebted to my distinguished faculty for their able guidance and support which helped me achieve the honor of Gold Medal for MBA(R) and to become the valedictorian of MBA Convocation 2013. During my course of bachelor’s and master’s degree I remained merit scholarship holder throughout. I am very thankful to IoBM for giving me a platform to actively participate in extracurricular activities as well, in which I represented Pakistan on behalf of IoBM in the global final of CIMA Global Business Challenge 2012 which was held in Sri Lanka. This not only boosted my level of confidence but also gave me a chance to meet business students like me from all over the world. The real and enduring education provided by IoBM to its students will definitely help them succeed in their professional career and growth.

Ayena Maqbool
Gold Medalist (MBA HRM)
Officer Finance
Lucky Cement Ltd.
MS ECONOMICS

This program is proposed for MA \ MSc students who have 16 years of prior 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 coursework for 30 credit hours and six credit hours of thesis writing.

Required Courses

Economics
ECO501 Microeconomics
ECO502 Macroeconomics
ECO503 Econometrics and Research Methods
ECO505 Theory and Practice of Economic Policy
ECO507 Development Economics
ECO510 Mathematical Economics

Elective Courses

Economics
ECO516 Monetary Economics

Finance
FIN503 Corporate Finance
FIN518 Current Issues in Islamic Finance
FIN406 Financial Econometrics
FIN517 Theory and Practice of Finance

Course Structure

Semester One
Microeconomics
Macroeconomics
Econometrics and Research Methods

Semester Two
Theory and Practice of Finance
Theory and Practice of Economic Policy
Financial Econometrics

Semester Three
Elective I
Elective II
Thesis Writing (6 credit hours)
MS/MPHIL IN EDUCATION

MS/MPhil in Education is specially geared for teachers teaching at all levels in private and public sector institutions as well as administrators who have an interest in research. This is a two-year degree program completed by advanced coursework and research. Candidates can enroll for a minimum of two years and a maximum four years. The coursework is offered in the first year and the second year of candidature is devoted to thesis writing. At the end of the first year, the candidates are required to produce an extended research proposal (approximately 2500-3000 words). Upon acceptance of their research proposal, the candidates are guided to conduct research and are finally examined on the basis of thesis defense and written presentation of the thesis of an upper limit of 20000 - 25000 words.

Eligibility

- As per HEC policy 16 years of education in the relevant field of study with 3 CGPA or B-Grade
- Candidates must clear NTS test

Program Details

- Duration: 2-4 years
- Number of courses: 8 courses
- Course: 24 credit hours
- Thesis: 6 credit hours
- Minimum CGPA requirement for the award of degree: 3.0

Course Structure

**Semester One**  
MPE615  Research Methods in Education  
MPE617  Statistical Testing and Inferences in Education  
MPE603  Policies and Education in Pakistan

**Semester Two**  
MPE604  Developing a Research Project  
MPE605  Economics of Education  
MPE606  Global Issues in Education

**Semester Three**  
MPE610  Philosophical Foundations in Education  
MPE611  Readings in Education

**Semester Four - Six**  
MPE609  Research Thesis
PHD IN PSYCHOLOGY

PhD in Psychology is a program that will promote scholarship, research, and service at an academic level. The doctoral program will inspire to be the highest degree of excellence at Institute of Business Management for faculty and candidates alike to remain current in the research literature, and to conduct socially relevant and intellectually competent research in the specialized areas.

Eligibility
MS/MPhil 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, or equivalent in the relevant discipline. A minimum of 60% (percentage) marks is required
- Pass interview conducted by the Institute
- Meet all other HEC stipulated requirements

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

- PhD course work requirements consist of six graduate level courses (18 credit hours)
- On completion of dissertation/thesis the student is awarded 12 credits

A PhD student must additionally complete the following requirements:

- Pass Comprehensive Exam
- PhD Proposal/Synopsis Development
- Pass 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
- Publish at least one paper in an ISI indexed or an HEC recognized journal. An official acceptance of the paper is also acceptable
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Meet any other HEC requirement
- Final Dissertation/Thesis Submission to BASR
- Degree Award

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS701</td>
<td>PSS705</td>
</tr>
<tr>
<td>Methods and Issues in Advanced Qualitative Research</td>
<td>Seminar in Multidisciplinary Studies</td>
</tr>
<tr>
<td>PSS703</td>
<td>PSS707</td>
</tr>
<tr>
<td>Methods and Issues in Advanced Quantitative Research</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Semester Four to Nine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective course for Psychology</td>
<td>PSS850 Research Thesis</td>
</tr>
<tr>
<td>PSS709 Measurement and Assessment</td>
<td></td>
</tr>
<tr>
<td>PSS710 Psychology of Personality</td>
<td></td>
</tr>
</tbody>
</table>
The aim of PhD in Education is to promote scholarship, research, and service at an academic level. The doctoral program will inspire to be the highest degree of excellence at the Institute of Business Management for faculty and candidates alike to remain updated in the current research literature and to conduct socially relevant and intellectually competent research in the specialized areas. This program will address research competencies with a range of courses in education.

Eligibility

MS/MPhil 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.
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Program Requirements

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- 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
- Publish at least one paper in an ISI indexed or an HEC recognized journal. An official acceptance of the paper is also acceptable
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Meet any other HEC requirement
- Final Dissertation/Thesis Submission to BASR
- Degree Award
Course Structure

Semester One
PSS701 Methods and Issues in Advanced Qualitative Research
PSS702 Advanced Educational Philosophy

Semester Two
PSS703 Methods and Issues in Advanced Quantitative Research
PSS705 Seminar in Multidisciplinary Studies

Semester Three (Electives: Select any Two)
PSS710 Planning, Developing and Evaluating Curriculum
PSS 712 Educational Policies and Organizational Development
PSS 714 Managing Educational Projects and Intervention
PSS 716 Education for Human Development
PSS 718 Managing Learning Organizations
PSS 720 Teacher Professional Development

Semester Four to Nine
PSS850 Research Thesis
PHD IN ECONOMICS

The PhD Economics Program focuses on imparting state of the art teaching and research skills within the broader economics discipline. Students registering for the program should have a thorough knowledge of economic theory, technical and quantitative skill, 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

MS/MPhil 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 / M.Phil or equivalent degree from HEC recognized institutions in a relevant discipline
- GRE subject specific or GAT subject test conducted by the NTS, or equivalent in the relevant discipline. A minimum of 60% (percentage) marks is required
- Pass interview conducted by the Institute
- Meet all other HEC stipulated requirements

Program Requirements

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

- PhD course work requirements consist of six graduate level courses (18 credit hours)
- On completion of dissertation/thesis the student is awarded 12 credits

A PhD student must additionally complete the following requirements:

- Pass Comprehensive Exam
- PhD Proposal/Synopsis Development
- Pass 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
- Publish at least one paper in an ISI indexed or an HEC recognized journal. An official acceptance of the paper is also acceptable
- Evaluation of PhD Dissertation by two foreign faculty members from developed countries as per HEC criteria
- Dissertation/Thesis Finalization
- Open defense of PhD dissertation
- Meet any other HEC requirement
- Final Dissertation/Thesis Submission to BASR
- Degree Award
Required Courses

PDE701  Advanced Research Methodology
PDE702  Advanced Applied Econometrics
PDE703  Development Economics
PDE704  New Dimensions in Economics and Public Policies

Elective Courses

PDE711  Industrial Economics
PDE712  Public Finance
PDE713  International Trade
PDE714  Selected Topics in Monetary Economics
PDE715  Selected Topics in Islamic Economics

Political Economy and Economic Policy Analysis, and (ii) Discourses on Globalization

Course Structure

Semester One
Advanced Research Methodology
Advanced Applied Econometrics

Semester Two
Development Economics
New Dimensions in Economics and Public Policies

Semester Three
Elective I
Elective II

Semesters Four to Nine
PDE850 Research Thesis
INTERNSHIP AND PLACEMENT PROGRAMS
IoBM makes efforts to help students get some experience in highly competitive organizations. Their fresh ideas, unique perspectives and fundamental knowledge are important assets that can help shape the future of an organization. The Internship Program for interns is designed to provide students with the opportunity to work on meaningful assignments and gain real-world experience. Real-world experience is aligned to the courses studied by students. Such experience is of vital importance to students in two main areas:

1. **Gain Valuable Work Experience in the Chosen Field of Interest**

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

2. **Decide on Right Careers Prior to Graduation**

An internship provides a more accurate picture of what individuals do in certain professions. After experiencing a particular job environment and observing what it entails, students may decide if this is the right career for them. The internship is compulsory for all MBA, BBA, and BS final year students, and has a minimum duration of six consecutive weeks. Executive students are exempted from the internship program.

**Eligibility for Internship**

MBA: Minimum CGPA = 2.8

BBA / BS (Honors): Minimum CGPA = 2.4

- MBA & BBA (Honors) students should have passed the Methods in Business Research (MBR) course.
- The Institute selects the organization for internship for the student.
- A student has to select and write a case study on an intriguing problem faced by the organization or department where the student interns and to suggests workable solutions considering the courses studied.
- Students are required to explain in their report how the internship enriched their learning by identifying theories and concepts studied in class and their application in relation to their experience in the organization of internship. Reports are graded as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3.89</td>
</tr>
<tr>
<td>B</td>
<td>3.33</td>
</tr>
</tbody>
</table>

Grades lower than ‘B’ are considered ‘satisfactory’ and are not awarded any marks. Interns who fail to get a passing grade are required to re-write their reports.

- Reports are required to be submitted by an intern within two weeks of completion of the internship.
- All sponsoring organizations are requested to evaluate the intern’s performance on a prescribed form which is discussed with the intern so as to focus on his/her strengths and weaknesses.
ORGANIZATIONS WHERE IoBM STUDENTS HAVE INTERNE

AA Packaging Industries
AAG TV
Abbott Pakistan
ABUDAWOOD
ACCA Pakistan
Access Communication Solutions
Adamjee Insurance
Adcom (Pvt) Ltd.
AdMail Connection Magazine
Advance Trading Corporation
ADVANS Micro Finance Bank
Adys Sourcing
AEG Travel Services
Afroze Textiles
Aftab Technologies
Agility Logistics
Agro Processors & Atmospheric Gases
AIESEC
Airmen Golf Course & Recreational Park
Aisha Steel Mills
AKD Investments
AKD Securities
AKD Trade
Al Baraka Bank (Pakistan) Ltd.
Al Ghazi Tractors Limited
Al Karam Textiles Limited
Al Meezan Investment Management Ltd.
Al Zeb Industries
Al Zohaib Textile Mills
Alfa Engineering
Algorithm Consulting
Ali Gohar Pharmaceuticals
Allied Bank Pakistan Limited
Allied Engineering & Services
Alpen Solutions
Amerli Steels Ltd.
Analytical Measuring Systems Pvt. Ltd.
Anees Hussain
Anjum Asim Shahid Associates Ltd.
Anzo Chemicals
Apna TV
Arena
Arif Habib Commodities
Arif Habib Investments Limited
Arif Habib Securities Limited
Aroha Labs
Arpatech (Pvt) Ltd.
Artistic Milliners
ARY Digital Network
ASCO International Pvt.
Asia Petroleum Ltd.
Asiatic Public Relations Network
Askari Commercial Bank Limited
Atlas Group of Companies
Atlas Honda Limited
Atlas Lease Limited
Atrium Mall Management
Attock Cement Pakistan Limited
Aurora
Automobile Corporation of Pakistan
Avanza Solutions
Axact
Aziz Products
Babson Noller Corporation
Bake Parlor
Banbhore Ceramic Industries
Bank Al Habib Ltd.
Bank Alfalah Limited
Bank Islami Limited
Bank of Punjab
Barclays Bank Limited
BASF Pakistan Pvt. Limited
Bayer Pakistan Pvt. Limited
BBCL Pvt. Ltd
Berger Paints Pakistan Limited
Biogenics Pakistan (Pvt.) Ltd
Blitz Advertising Pvt. Limited
BMA Capital Pvt. Limited
BOC Pakistan Limited
Bosch Pharmaceuticals (Pvt.) Ltd.
BP Pakistan Exploration & Production
BR&W Pvt. Limited
Brands Image
Bridge Consultants Foundation
Brookes Pharmaceutical Laboratories
Bullseye 360
Burj Bank
Burque Corporation Pvt. Ltd.
Byco Petroleum Pakistan Ltd.
Candyland
Cargo Care
Casual Mode Pvt. Ltd.
Central Depository Company of Pakistan
Chevron (Formerly Caltex)
CIM Shipping
Circuit Advertising
Citi FM 89
Citibank N.A.
Citizen Archive of Pakistan
City School
Clariant Pakistan Limited
Coca-Cola Beverages Pakistan Ltd.
Commercial Union Assurance PLC.
Concern for Children Trust
Continental Biscuits Limited
Cool & Cool
Cordoba Corporation
Corvit Technologies
Cox & Kings (Agents) Limited
Creative Chaos Pvt. Ltd.
Creative Jin
Creativedge Communications
Credit & Commerce Consultants
Crescent Bank Limited
Crescent Steel and Allied Products Ltd.
Cres-Soft Pvt. Limited
Crown Power Est
Crystalite, Inc.
Cummins Sales & Services
Cupola Pakistan Limited
Cybernet
Cynamid Pakistan Limited
Dada Dairies
Dalda Foods Pvt. Limited
DAMCO
Dawlance Pvt. Limited
Dawn Group of Newspapers
Dawn News TV
Dawood Hercules Corporation
Deal Club
Dealtoday.pk
Deflog Pvt Ltd.
Deloitte
Delta shipping
Deutsche Bank A.G.
Dewan Cement
Dewan Mushtaq Group
DG Harbour
DHL Global Forwarding
DHL Pakistan Limited
Diamond Impex Corporation
Dr. Sulaiman Al Habib Medical Group
Dreamworld Resort
Dubai Islamic Bank
Dupont Far East Inc.
EDP Services Pvt. Limited
Efro Tech Services
Efroze Chemical Industries Pvt. Ltd.
EFU Insurance
Eli Lilly Pakistan (Pvt.) Limited
Elixir Securities
Emaculate Solutions
Emirates Global Islamic Bank Ltd.
Emirates Investment & Development, Dubai
Empact
English Biscuits Manufacturers Ltd.
Engro Asahi Polymer & Chemicals Ltd.
Engro Chemicals Pakistan Ltd.
Engro Corp.
Engro Foods
Engro Powergen
Engro Vopak Terminal Ltd.
ENI Pakistan Limited
ePlanet Communication
Etihad Airways
ETON FINANCIAL
Event Architects Pvt. Ltd.
Express News
Express Tribune
Facilities Shipping Agency
Far Eastern Impex (Pvt) Ltd
Fauji Fertilizer Company Ltd.
Fauji Foundation Securities
Faysal Asset Management Ltd.
Faysal Bank Limited
Fecto Cement Ltd.
Ferguson’s Associates
First Women Bank Ltd.
Five by Five Communications
Float Securities Pvt. Ltd.
FM 107 Pvt. Limited
FM Radio 91
Fontanalia
Four Season Garment
Freedom Security
Friends & Co
Gatron Industries
Genesis Direct
Geo TV
Gerry’s Information Technology
Gestetner Pvt. Limited
Getz Pharma
Ghandhara Nissan Diesel Ltd.
Gillette Pakistan Limited
GlaxoSmithKline Pakistan Ltd.
Global Sea Foods
Gloria Jeans
GM Fashion
Godil Cold Chain Pvt. Ltd.
Gravity Communications
Green Star Social Marketing
GroupM
Gul Ahmed Textile Mills
H&S Pvt. Ltd.
Habib Bank AG Zurich
Habib Bank Limited
Habib Metropolitan Bank Limited
Hanif Packages
Harvest Topworth International
Hawk Advertising
Helium Pvt. Ltd.
Hermain Travels
Higher Education Commission Pakistan
Hilal Confectionary Ltd.
Hilton Pharmaceutical Pvt. Ltd.
Hinopak Motors Limited
Hoechst Marion Roussel Pakistan
Home Express
HRS Global
HRSG Recruiting
HRSI
HSBC Bank Middle East Ltd.
Hubcrete Pvt. Ltd.
Hum TV
HYACINTH
Hyeworth Renault Petersen Pak Pvt. Ltd.
I.Q. Knitwear
IAL Saatchi & Saatchi
IBEX Global
IBM – Pakistan
ICG Pakistan Limited
Icon Securities (Private) Ltd
IEC Pvt. Ltd.
IGI Financials
IGI Insurance
Indus Motor Company Ltd.
Institute of Securities Management & Research
Intel Pakistan Corporation
Interflow Communications Pvt. Ltd.
InterGraphics C&A Pvt. Ltd.
International Advertising Pvt. Limited
International Asset Management Co. Ltd.
International Brands Limited
Invest & Finance Securities Limited
Invest Capital Pvt. Ltd.
Ismail Hamed & Sons
Ismail Industries Limited
Ismail Iqbal Securities (Private) Limited
ISMAR
ITOCUH Corporation
Izhar Concrete
J & P Coats Pakistan Pvt. Ltd.
J. Walter Thompson Asiatic Pvt. Ltd.
Jaffer Brothers Limited
Jaffer Business Systems (Pvt.) Ltd.
Jahangir Siddiqui & Co. Ltd.
Jang Group
Javed Engineering Enterprise
JCR-VIS Credit Rating Company
Jofa International
Johnson & Johnson Pakistan
JS Bank Limited
JS Global
JS Investments Limited
Jubilee Life Insurance
JWT Pakistan
Kalsoft Pvt. Limited
Karachi Cargo Services Pvt. Ltd.
Karachi Electric Supply Corporation
Karachi International Container Terminal Ltd.
Karachi Stock Exchange Limited
KARSAZ Pvt. Ltd.
KASB Bank Limited
KASB Securities Limited
Knoll Pharmaceuticals Limited
Kolson Pakistan
Kopack Shipping
KPMG Taseer Hadi & Co.
Lakson Business Solutions Ltd.
Lakson Group of Companies
Lane 12
Li Fung (Singapore) Pte. Limited
Liberty Books
Lisco Pakistan
Logicose
L’oreal Pakistan
Lowe & Rauf Pvt. Limited
Lucky Cement Ltd.
Maaz Pharmaceutical
Macter Pharma
Maersk Pakistan Pvt. Ltd.
Magnus Investment Advisors Limited
Maison Consulting And Solutions
Mamora International
Management Association of Pakistan
Manhattan Leo Burnett
Marina Industries
Marksman Advertising
Marriott Hotel
Martin Dow Pharmaceuticals (Pak) Ltd.
Matech Consulting and Outsourcing
MCB Bank Limited
MCR Pvt. Limited – Pizza Hut
Meat One
Meeco Asia Pacific
Meezan Bank Ltd.
Meher Associates Pvt. Limited
Merck Pharmaceutical
Merck Sharp & Dohme of Pakistan Limited
Merit Packaging Ltd
Meritocracy
Metlife Alico
MicroSoft Pakistan
Midas Safet
Millennium Software Pvt. Ltd.
Mindshare Pakistan Pvt. Ltd.
MM Group of Companies
Mobil Askari Lubricants
Mobilink
MPS Securities
Muller & Phipps Pakistan Ltd.
Multinet Pakistan Ltd.
Mustaqim Dyeing & Printing Industries
Nabi Qasim Industries
Nanosoft Technologies
Narejo Human Resources
Nash Advertising
National Bank of Pakistan
National Foods Limited
National Industrial Parks Ltd.
National Marketing Services
National Refinery Ltd.
Naveena Exports Pvt. Ltd.
Nedo Corporation
Nestle’ Milkpak Limited
NIB Bank Limited
NIFT
Nippon Paint
Novartis Pharma Pakistan Ltd.
Novo Nordisk Pharma
Ocean Express Agencies
Octara Pvt Ltd.
Ogilvy & Mather
Oman International Bank
Opal Laboratories Pvt. Ltd
Oreatech Systems
Orient Communications
Orient Energy Systems
Orix Investment Bank
Orix Leasing Pakistan Limited
Osaka Lighting
OTSUKA
Oxygene
P&O Nedlloyd
Pacon Manufacturing
Pak Brunei Investment Company
Pak Grefaf
Pak Gulf Leasing Company Ltd.
Pak MediaCom Pvt. Limited
Pak Mercantile
Pak Oman Asset Management Company
Pak Oman International Bank Ltd.
Pak Oman Microfinance Bank Limited
Pak Qatar Family Takaful Limited
Pak Suzuki Motors Co. Ltd.
Pakistan Beverage Ltd.
Pakistan Credit Rating Agency
Pakistan Currency Exchange
Pakistan International Airlines
Pakistan International Container Terminal Ltd.
Pakistan Mercantile Exchange
Pakistan Petroleum Limited
Pakistan Refinery Limited
Pakistan State Oil Co. Limited
Pakistan Steel Mill
Pakistan Tobacco Company Limited
Pak-Kuwait Investment Co. Ltd.
PARCO
Park Towers – Prime Management Services
Parke Davis & Co. Limited
PEL
Pepsi Cola International Limited
Pfizer Laboratories Limited
Pharmatec
PharmEvo Private Limited
Philip Morris International
Philips Electrical Industries Limited
Pksstudent.com
Popular Fabrics
Port Qasim Authorities
Premier Distributer
Prestige Communications Pvt. Ltd.
Prime Human Resource Services (Pvt) Ltd
Procter & Gamble Pakistan Limited
Protege Global
Punjab Oil Mills Limited
Qasim International. Container Terminal Ltd.
Qatar Airways
Qube
Rajby Industries
Reckitt Benckiser Pakistan Limited
Red Bull
Red Communication
Red Cut
Regent Plaza Hotel
Relacom Pakistan
Reuteris Limited
Rhone Poulenc Rorer Pakistan
RK Printers
Roche Pakistan Limited
Rocket Internet (Daraz.pk)
Ryan Agencies
Saleeqa
Sandrill
Sanofi-Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
Sattar & Sattar Co.
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Schneider Electric
Searle Pakistan Limited
Shadman Cotton Mills Limited
Shamrock Communications
Shan Foods
Sharp-Filter Pvt. Ltd.
Shell Pakistan Limited
SHELL Tameer
Sheraton Hotel
Shield Pakistan
Sidat Hyder
Siemens Pakistan Limited
Silchem
Silk Bank Ltd.
Sindh Bank Ltd.
Sindh Technical Education and Vocational Training Authority
Skyline
SMS Pakistan
Solushunz
Soneri Bank Ltd.
SoSafe Water Technologies
Spark Communication
Spectrum Communications
Standard Capital Securities
Standard Chartered Bank Limited
State Bank of Pakistan
Status Pro
Strongman Medline
Sui Southern Gas Company Limited
Summit Bank Ltd.
Symmetry
Synergy Advertising Pvt. Limited
Syngenta
Tapal Tea Pvt. Limited
Target Resourcing
Tariq Abdul Ghani & Co. Ltd.
Tata Best Foods
Taurus Securities Limited
TCS Pakistan Ltd.
TDAP
Teach For Pakistan
Telenor Pakistan Pvt. Limited
Tery World Textiles
Tetra Pak
Texas Heart Institute
Texpo Pakistan
Tharparker Sugar Mills
The Financial Daily
The Aga Khan University Hospital
The Citizens Foundation
The First Micro Finance Bank Ltd.
The Resource Group
THK Associates Pvt. Ltd.
Topline Securities
Torque
Toyota Motor Corporation
TPL Trakker
Tradekey Pvt. Ltd.
Total Lubricants
Tri-Emmm Textile Products
U.F. Enterprises (Pvt) Ltd.
Ufone
Unicon International
Unilever Pakistan Limited
Unisys Pakistan Pvt. Limited
United Bank Limited
United Electrical Engineers Pvt. Ltd.
Universal Express
USAID
Usmanco International
VectraCom
Vision Direct Marketing
W Woodwards Pakistan Ltd.
Warid Telcom Pvt. Limited
Westminster & Eastern Financial. Services
World Wide Cargo Service
WorldCall
Wrap n Roll
Wyeth Pakistan Limited
Xcess Logistics
Xenith Public Relations (Pvt.) Limited
Yapi Kredi Invest
Yunus Textile Mills Limited
Zafa Pharmaceutical Laboratories Ltd.
Zeppelin Communications
ZIL Limited
Zindagi Service Limited
Zong
360 Training
3M Pakistan Pvt. Limited
IoBM lays tremendous emphasis on its close collaboration with the government, firms, banks and leading HR consultants so as to ensure appropriate induction of its graduates into such organizations. Close linkages are maintained with CEOs and Heads of Departments in organizations so as to provide the best career prospects for graduates. Efforts are made to match the talents of students with requirements of both multinational and local organizations.

Emphasis has been placed on the requirement of Career Fair Seminars. They provide a meeting ground between the corporate world and graduates with the provision of resumes to HR representatives where students are selected for jobs against their requirements immediately, or at a later stage since their personal data remains easily available with such organizations for possible employment. In Career Seminars, graduates are given fresh insight into the corporate world with detailed discussions on the writing of resumes and methodology in performing well during interviews.

IoBM’s Internship & Placement Department provides a firm commitment to its graduates for developing careers. This begins from the point the student is inducted and continues with a life long partnership. We assist our graduates / alumni in finding their career paths. Some of the activities designed for placing students include, but are not limited to:

1. **On Campus Recruitment Drives**

The Internship & Placement Department has been able to develop strong relationships with the corporate sector by signing MoUs for both Internship & Job Placements, co-sponsoring guest lectures and seminars. As a result, companies frequently conduct on campus recruitment drives. This includes such organizations such as Unilever, P&G, ICI, GSK, Engro, etc.

2. **Publishing Annual Graduate Directories**

MBA graduates are invited to showcase their resumes in IoBM’s bi-annual Graduate Directory. This publication is circulated to about 264 national and multinational companies and is an essential tool for being placed in the market. The Internship & Placement department recently conducted a survey to determine the efficacy of this document. It was found that 62% of the respondents were contacted for interviews and 69% of these were able to secure positions.

3. **Career Counseling**

Guidance and counseling is an extremely important aspect of development for young adults at IoBM. With this in mind the team in the Internship & Placement Department is constantly engaged in assisting students in the entire process of preparing for and actually finding jobs for them.
4. **Guest Lectures by Industry Experts**

Recognizing the importance of networking and relationship management, the Department frequently invites industry professionals for lectures, conferences and corporate events. Our aim is to provide students with the opportunity to establish a strong and lasting contact base before graduation to ensure that they are able to get positions in the industry and business organizations.

5. **Workshops Related to Career Management**

The department has recently introduced periodic in-house workshops such as interviewing techniques, resume writing, behavior patterns in organizations, etc.

6. **Career Fair**

The department organizes a Career Fair, inviting organizations engaged in their recruitment cycle to make company presentations and answer questions from students. The department envisages this as an annual event not only for interactive sessions between students and the corporate world, but also for providing resumes for either immediate employment, in case jobs are available with the organization concerned, or resumes being kept pending by organizations for jobs whenever such an opportunity arises.

7. **Job Alerts via Group mail, Notices and Rozeepk.com**

IoBM’s Internship & Placement Department manages a database of job opportunities in the market. Students are provided opportunities through group mails, notices and an online web portal in collaboration with Rozeepk.com.
<table>
<thead>
<tr>
<th>FIRMS EMPLOYING IoBM GRADUATES</th>
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<tbody>
<tr>
<td>A.F. Ferguson &amp; Co. Chartered Accountants</td>
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<td>A.I. MIR LLC</td>
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<td>Boom Group Pakistan</td>
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<td>Bottom-line Pvt. Ltd.</td>
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<td>Bounty Studio</td>
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<td>BP Pakistan Exploration &amp; Production</td>
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<td>Brand Mileage</td>
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<td>Brand Synario</td>
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</tbody>
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Breezecom Pvt. Ltd
Bridgestone Tires Pakistan Limited
British Oxygen
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
Caresse Cosmetics, Santcos Limited
Celentas Digital Solutions
Centegy Technologies (Pvt.) Ltd.
Central Depository
CIM Shipping
Citi Security
Citibank N.A.
Citizen Archive of Pakistan
Citizens Foundation
Clariant Pakistan Limited
Classic Designs
Classified Tribune
Clicktrade
Cloud BPO
CM Pak 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
Crystal-Lite
Cubix Labs
Cupola Pakistan Limited
Custom HR Solutions
Cybernet
Dadabhoy Investments Pvt. Ltd.
Dadex
Dalda Foods Pvt. Ltd.
DAMCO
Dawlance (Pvt.) Limited
DAWN Group of Newspapers
Deal Club
Deal Today
Dealon
Deloitte
Descon Engineering
Deutsche Bank
Dewan Group
Dewan Mushtaq Trade Ltd.
DG Harbour
DGS Pvt. Ltd.
DHL Forwarding
DHL Global Forwarding
DHL Pakistan Limited
Digital Tribe
Directing Edge
DMK Consultancy
Dollar Industries
Dolmen Group
Dot Images
Dow Jones
Drug Information Systems
Dubai Islamic Bank
Duleaf
Dupont Pakistan
EDGE Financials
EFU General Insurance Limited
EFU Life
Eli Lilly Pakistan (Pvt.) Ltd.
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Emirates Bank Ltd.
Emirates Global Islamic Bank Limited
Empact
Engage 24*7
Engage Consulting
English Biscuits Manufacturers Ltd.
Engro Corp.
Engro Foods Ltd.
Engro Pak Tank Terminals Limited
Engro Polymer Pakistan
ENI Pakistan Limited
EPFirms
Ephlux
ePlanet Communication
Epoxy Industries (Pvt.) Limited
eSys Pakistan
Etihad Airways
Etilize Pvt. Ltd.
Evaluation Factor (Pvt) Ltd.
Evernew Entertainment
Evolution Advertising
Excelerate
Express News
Faysal Asset Management Ltd.
Faysal Bank Limited
Fidelity Insurance
First Capital Equities Pvt. Limited
First Women Bank Ltd.
Fitness Republic
Flight Connections
Focus Humanitarian
Folio 3
Food Connections Pakistan
Forex Financial Products
Forte Pakistan Pvt. Ltd.
Foundation Public School
14th Street Pizza
Freight Systems Co. Ltd.
Friends of Literacy & Mass Education
FYSL Trade
Gatron Industries Ltd. / Novatex Ltd.
GEMCO Pakistan Ltd.
General Tyre & Rubber Company Ltd.
Genix Pharma Private Limited.
Getz Pharma
Ghulam Farooq Group
Giga Group of Companies
GlaxoSmithKline Pakistan Limited
Global Food Marketing
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Habitt
Haleeb Foods,
HANDS Pakistan
Hasnain Tanweer Associates (Pvt) Ltd.
HBL Asset Management Ltd.
Herbion International Inc.
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HRS International
HSBC Bank Middle East Ltd.
HUBCO
Hum TV
Human Resource Solutions
HURD
IAL Satchi & Satchi
IBEX Global
IBL Group
IBM Pakistan
ICE Animation
ICL Pakistan Limited
Icon Global
Icon Securities
ICS Group of Companies
Ifra Soft Technology
IGI Financial Services
IJARA
Imrooz
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Indus Motors Company
Industrial & Commercial Bank of China
Industrial Development Bank of Pakistan
Information Technology Services
Intel Pakistan
Interactive Cell
Interactive Health Solutions
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JS Bank Limited
JS Global Capital Limited
JS Investment
Junctionz
KalSoft (Pvt.) Limited
Karachi Deals
Karachi Electric Supply Company
Karachi International Container Terminal Ltd.

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Karachi Stock Exchange Limited
Karachi Vocational Training Institute
KASB Bank Limited
KASB Capital
KASB Funds Limited
KASB Securities
K-Electric (Formerly KESC)
Khadim Ali Shah Bukhari & Co. Ltd.
Khaliq Fashion
KNYSYS
Kopak Shipping Company
KPMG Taseer Hadi & Co.
Khawaja Ghareeb Nawaz Trust
KZR Associates
Lakson Group of Companies
Lalani & Associates
Land O’Lakes Inc.
Lane 12
Lasmo Oil Pakistan Limited
Lawrencepur
LGS Matrix
Liberty Books
Live Securities Pvt. Ltd.
Lo’real
Logic Information Systems, Inc.
Logicose
Lowe & Rouf
Lucky Cement Ltd.
Lucky Knits
M. Yousuf Adil Saleem & Co. Chartered Accountants
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Midas Safet
Midas Safety
Mindshare Pakistan Pvt. Limited
Mitsubishi Corporation
Mobil Askari Lubricants
Mobilink
Mobitel, KSA
Mon sieur
MS Associates
Muller & Phipps Pakistan Pvt. Ltd.
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Narejo Human Resources
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National Clearing Company of Pakistan Ltd.
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National Fullerton Asset Management Ltd.
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Nelson Pakistan
Nestle Pakistan Limited
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New Jubilee Insurance Co. Limited
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Nike Pakistan Limited
Novartis Pharma Pakistan Limited
OBS Group
Oman National Electronics, Dubai
OMD Pakistan
OMV Pakistan Exploration
Oratech Systems Pvt. Limited
Orient Public Relations
Orix Investment Bank Pakistan Ltd.
Orix Leasing Pakistan Limited
Oxford University Press
Oxygene Pakistan
P & O Nedlloyd
Packages Limited
Pak Mediacom Pvt. Limited
Pak-Arab Refinery Limited
Pakistan Institute of Corporate Governance
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PIRANA Group
Pixarch
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Prestige Communications Ltd.
Prestige Grey
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Procter & Gamble
Promotech Media Solution (Pvt) Ltd.
Protege Global
Qineqt
Qubee
Rain Bargain
Reckitt Benckiser Pakistan Ltd.
Red Tape
Reveal Executive Development Center
Reveal Pakistan
Rhone Poulenc Rorer Pakistan Ltd.
Rising Technologies
Robotics Labs
Roche Pharmaceuticals Limited
Rocket Internet (daraz.com)
Rohi International Pvt. Ltd.
Roshan Media
S13 - Systems Innovations Pvt. Ltd.
Sach International
Sagacious Business Consultancy
Salsoft Technologies Pvt. Ltd
Samba Bank Ltd.
Sanofi Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
SBT Japan
Schneider Electric Pakistan (Pvt.)Ltd.
School of Leadership
SCT Group
Searle Pharmaceuticals
Service Sales Co.
Shabbir Tiles & Ceramics Ltd.
Shafi-Reso Chemicals
Shaheen Airlines
Shajar Capital
Shamrock
Shan Foods Pvt. Ltd.
Shangrila Pvt. Ltd.
Sharaf Shipping Agency
Shell Pakistan Limited
SibiSoft Inc.
Sidat Hyder
Siemens Pakistan Limited
Signium International
Sindh Education Foundation
Singer Pakistan Limited
SKF Pakistan Pvt. Ltd
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
Streebo
Strongman Medline
Summit Bank
Sun Consultants
Sun Enterprises
Sun Systems
Super Trading Inc.
Symbios.pk
Synapse Consulting
Sysnet Pakistan Pvt. Ltd.
Systems Limited
Talent Optimizers
Tameer Micro Finance Bank Ltd.
Tapal Tea
Target Resourcing
Tata Group of Industries
Tata Textile Mills Ltd.
Taurus Securities Ltd.
TBH Employment and Consulting Services
TCS (Pvt.) Limited
Teach for Pakistan
Teamants
Teamz International Pvt. Ltd.
TeleCard Ltd.
Telenor Pakistan Limited
TenPears
The Aga Khan Health Services
The Aga Khan University Hospital
The Bank of Khyber
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
360 Training
Time & Vision Advertising
Times Consultant (Pvt) Ltd.
TIPU Associates
TNI - Worldwide Partners Inc.
Top Boss
Total Lubricants
Touchpoint (Pvt) Ltd.
Toyota Indus Motor Company
TPL Trakker Limited
TPS
TradeKey
Transit HR Consulting
Transworld Associates
Travel Mate
Travel Solutions
Travelport
TRG Customer Solutions
Triple-e (Pvt.) Limited
TV One - Airwaves Media Pvt. Ltd.
UBL Fund Managers
UBL Insurers
Ufone

Uniferoz
Unilever Pakistan Limited
Union Bank Limited
Unique Pakistan
Unisys Pakistan Pvt. Limited
United Assets Management Co.
United Bank Limited
United Consultants Pvt. Limited
United Energy Pakistan Ltd.
United Marine Agencies
United Registrar of Systems Limited
United Sales Pvt. Limited
Universal Brush Ware Pvt. Ltd.
Urbanite
US Consulate, Karachi
USAID Pakistan
Versa Canada Inc.
Visa International (Asia Pacific) Ltd.
Vision Express
Ward Howell International
Warid Telecommunication
Waterlink Group of Companies
Wavetec Pvt. Ltd.
Weekend World Marketing Limited
Westminster & Eastern Financial Services Ltd.
Winstar Pvt. Ltd.
World Tel
World Wildlife Fund for Nature Pakistan
WorldCall Broadband Limited
Wrap n Roll
WWF Pakistan
Xenith Public Relations (Pvt.) Ltd.
Younus Brothers Group
Yunus Textile Mills Ltd.
ZAP Infotech Inc.
Zeppelin Communications
ZH Technologies Inc.
ZIL Limited
Zishan Engineers Pvt. Ltd
Zong
ZRG International
ENTREPRENEURSHIP & MANAGEMENT EXCELLENCE CENTER
ENTREPRENEURSHIP & MANAGEMENT EXCELLENCE CENTER (EMEC)

The Entrepreneurship & Management Excellence Centre is the executive education wing of Institute of Business Management. EMEC is responsible for conducting specialized management training programs by closely working with its clients. The Entrepreneurship & Management Excellence Centre provides a wide range of open enrolment and customized programs. These programs are designed for professionals, business personals 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 with research interests ranging from global business issues. Many of our trainers are leaders in their fields and bring in new knowledge and experiences in their sessions.

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 targets determining in what areas the training is needed. This process helps EMEC develops customized training programs for its clients.

Open Enrolment Training

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

Initiatives by EMEC

- 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
Independent, Free and Responsible Media

The Institute of Business Management has been awarded an “Independent Free & Responsible Media” project under the aegis of the Citizen’s Voice Project for Independent, Free and Responsible Media. This project will be undertaken by Trust for Democratic Education and Accountability (TDEA), and Institute of Business Management (IoBM).

The project aims to gauge media responsibility and independence through development of Media Responsibility and Independence Index. The index will be developed through the formation of Pakistan Citizen’s Forum comprising representatives from media, civil society and academia is one of its kind activities in Pakistan. Not only this group will facilitate in developing the index but will also highlight the issues surfacing in developing the index.

Collaboration with Harvard University

IoBM has been associated with Harvard University’s South Asia Initiative (SAI) to bring Harvard to Pakistan. Aman Foundation has partnered with the Harvard University which seeks to increase scholarship on and in Pakistan by arranging a host of activities like seminars from eminent Harvard faculty for audiences in Pakistan, host conferences, facilitate research, and initiate scholarly exchange. As part of the engagement, seminars will be conducted via video conference by Harvard faculty members during the year that highlight problems and identify innovative solutions relating to a variety of issues ranging from health and education to energy and environment. Three webinars were conducted in Spring 2013. IoBM screened the seminars for Harvard SAI in Pakistan and began a long lasting relationship with them.

The seminar titled; “Troublemakers: Entrepreneurial Approaches against Corruption” was held on February 27, 2013. This seminar was aired simultaneously across Pakistan, Bangladesh and Sri Lanka and engaged thought leaders, policy makers, and public and private agencies involved in the areas of development. Another seminar titled; “Innovation in Education: Lessons for Entrepreneurship in Pakistan” was held on March 6, 2013. Yet another webinar, “Education in the Marketplace” was held on April 1, 2013.
In order to enhance the capacity of Not for Profit Organizations in Pakistan and to bridge the gap between citizens and government to promote good governance, The United States Agency for International Development (USAID) awarded a three year, $45 million contract under the aegis of The Citizen’s Voice Project (CVP). This project is being undertaken by a consortium of the Trust for Democratic Education & Accountability (TDFEA), The Asia Foundation (TAF), and Grant Thorton - Amjum Asim Shahid Rehman (GT-AASR).

Entrepreneurship & Management Excellence Centre of Institute of Business Management, in this regard, conducts NPO (Not for Profit Organization) Management Course training and since October 2012 to date EMEC has conducted six NPO Management Course trainings and has build the capacity of more than sixty participants of thirty different NPO’s across the country. NPO Management Course is a seven day residential training program comprising five (5) compulsory and two (2) optional courses. The participants are trained in Strategic Planning, Financial Management, Monitoring & Evaluation, Compliance, Project Management, Proposal Writing, Leadership, Public Outreach, Human Resources & Admin & Procurement.

Activities at EMEC

- USAID NPO Management Course 5th Round, May-June 2013
- Risk Assessment Workshop, May 2013
- USAID NPO Management Course 6th Round, June 2013
- HR Diploma 3rd Round Module 1, June 2013
- HR Diploma 3rd Round Module 2, August 2013
- Business Writing Workshop, September 2013
- HR Diploma 3rd round Module 4, September 2013
- Leveraging Social Media, October 2013
- Launch of Diploma in Supply Chain Management, October 2013
- Problem Solving & Decision Making Skills, November 2013
- HR Diploma 3rd Round Module 5, November 2013
- HR Diploma 3rd Round Module 6, December 2013
- HR Diploma 3rd Round Module 7, December 2013
- HR Diploma 3rd Round Module 8, January 2014
- HR Diploma 3rd Round Module 9, January 2014
- Business Communication, January 2014
- Advance Ms Excel, March 2014
- Intermediate Excel, March 2014
- Basic and Advance Excel training for Bayer in March-April, 2014
- Communication Skills Training at Ten Pearls April, 2014
- Professional Development Program in Health Management for General Practitioners with PharmEvo

NPO Management Course

In order to enhance the capacity of Not for Profit Organizations in Pakistan and to bridge the gap between citizens and government to promote good governance, The United States Agency for International Development (USAID) awarded a three year, $45 million contract under the aegis of The Citizen’s Voice Project (CVP). This project is being undertaken by a consortium of the Trust for Democratic Education & Accountability (TDFEA), The Asia Foundation (TAF), and Grant Thorton - Amjum Asim Shahid Rehman (GT-AASR).
Contract Research/Consultancy

- Economics Department: Comparative Study on Non Tariff Barriers in Pakistan, India and China, Trade Development Authority of Pakistan (TDAP), September 2012.

- Economics Department and EMEC in collaboration with Delloitte, Pakistan, Comparative Development strategy for Baluchistan, for the Government of Baluchistan, sponsored by UNDP.

- A consultancy “CUSTOMER PERCEPTIONS AND BEHAVIOUR: A STUDY OF TOYOTA, HONDA AND SUZUKI CAR OWNERS” for Indus Motors was conducted by IoBM from April 12 to June 13.

Research at IoBM and EMEC

- Research, being a core competence, is accorded top priority at the Institute of Business Management
- All full time faculty members have a contractual obligation to complete one major research study per year
- MBA at IoBM is research intensive and every optional course is designed to include a research component

Pakistan Business Review

Pakistan Business Review (PBR) is Institute of Business Management (IoBM’s) multidisciplinary journal in continuous publication since April 1999. It is Pakistan’s first refereed academic business research quarterly. PBR is an HEC approved Y category journal. It is abstracted and indexed by the American Economic Association in the ECONLIT and the Journal of Economic Literature, USA. It is supervised by an International Advisory Board of Business Academics from national and international organizations such as the London School of Economics, the University of Sussex, the University of San Diego and Indiana University, USA, Bochun University, Germany, the United Nations Industrial Development Organization, the International Association for Clean Technology, Austria. International advisory board members are also drawn from China, Spain, Columbia, Sri Lanka, Bangladesh, Lithuania, and Nepal. The Institute of Cost and Management Accountants of Pakistan, the Institute of Chartered Accountants of Pakistan, the Pakistan Institute of Development Economics, the Applied Economic Research Center, the University of Karachi and the Agha Khan University faculty are also represented on the board. All full time faculty members at IoBM are on the editorial board and contribute research papers on a regular basis. Pakistan Business Review is in its fourteenth year of continuous publication. PBR published a total of 31 research papers during April 2012 to April 2013.

National Conferences Attended and Papers Presented by IoBM Faculty in 2013-2014

- “Impact of Media Advertisements upon Subliminal Persuasion of Pakistani youth audience” by Dr. Linah Askari in Social Intervention International Conference at University of Karachi

- “Inflection of Media Advertisement Subliminally Persuades Pakistani Youth towards Carefree Attitudes of Life” by Dr. Linah Askari in International Conference on The Emerging Issues of Social Sciences in Pakistan at Quaid-i-Azam University, Islamabad


- “Alleviation Poverty through Skill Development Income Generation through Household Activities” by Dr. Shahida Wizarat in Aik Hunar Aik Nagar (AHAN) at South Asian Convention & Exhibition on Handicrafts

- Pay Satisfaction and Organizational Commitment in Private Business University Faculty by Shagufta Ghauri in Emerging issues of Social Sciences in Pakistan at HEC

- “Metaphysical and Epistemological Presumptions of Business Ethics Discourses and the Postmodernist Challenges” by Asad Shehzad in International Research Conference on Contemporary Management Practices at LUMS
International Conferences Attended and Papers Presented by IoBM Faculty in 2013-2014

• “Learning Styles of Students and Teaching Styles of Teachers in Business Education: A Case Study of Pakistan” by Dr. Nasreen Hussain and Dr. Nadia Ayub in International Conference on Education and Educational Psychology in Turkey

• “The Relationship between Personal Growth Initiatives and Psychological Well-being among Adolescents” by Dr. Nadia Ayub in the Second International Journal of Arts & Science Conference in USA

• “Testing the Validity of CAPM and APT in the Oil, Gas and Fertilizer Companies Listed on the Karachi Stock Exchange” by H. Jamal Zubairi in the third Conference on Financial Markets and Corporate Governance in Australia

• “An Investigation of the Factors Influencing the Capital Structure of Listed Companies in Pakistan” by H. Jamal Zubairi in International Conference on Business Management & Information Systems (ICBMIS2012) in Singapore

• “Transverse Product Effect on CSEM with Double Hydrocarbon Reservoir in Seabed Logging” by Seema Ansari in 3rd Global Conference for Academic Research on Scientific and Emerging Technologies (GCARSET) in Malaysia

• “Problems Faced by Parents of Young Children with Mental Retardation” by Shelina Bhamani in the third International Conference on “Global Trends in Emotional Intelligence (EI) and Peace Education” in Nepal

• “Trends of Emotional Intelligence in University Students” by Shelina Bhamani in the third International Conference on “Global Trends in Emotional Intelligence (EI) and Peace Education” in Nepal

• “Are Schools Disabled Friendly for Young Children? A Case Study from Pakistan” by Shelina Bhamani in International Conference on Inclusive Education in Bangladesh

• “Profitability Determinants of Commercial Banks” by Samina Riaz in International Business and Social Sciences Research Conference in Dubai

• “Promoting Intercultural Communication: An Empirical Study” by Fareeda Ibad in International Symposium on Languages and Communication in Turkey

• “Institutionalizing Health Management in Pakistan” by Dr. Asima Faisal in Healthcare Executive Management Development Program in India

• “Trypanophobia (Needle Phobia) in Young Adults - A Cross Sectional Study in Karachi, Pakistan” by Dr. Asima Faisal in International Symposium on Business and Social Sciences in Japan

• “Impact of Modern Agricultural Policies on Women Working in Agriculture in Pakistan” by Urfi Khalid in 6th Annual International Conference on Business and Society in a Global Economy in Greece

• “Trade-led Growth Hypothesis: An Empirical Analysis of South Asian Countries” by Dr. Shahida Wizarat in a conference on “Applied Financial Economics” in Greece

Faculty Publications

• Impact Factor Publications 14
• Other publications 8
Publications 2013-2014

IoBM is concerned about the lack of textbooks which reflect Pakistan environment and practices for business students. Several textbooks by IoBM faculty have been published. These include:

1. “Teacher PD and Distance Education: A case from South Asia”. Saarbrucken, Germany: LAP LAMBERT Academic Publishing by Nasreen Hussain in 2012

2. “Marital Satisfaction”, Publisher: LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany, by Dr. Nadia Ayub in 2012

3. “Mother’s Dysfunctional Attitude - Is She Responsible for My Emotional State in Adulthood”, Published by LAMBERT Academic Publishing, Saarbrucken, Germany, by Dr. Linah Askari in 2013

4. Case Study by Javaid Ahmed on “Organizational Transformation Challenges at the State Bank of Pakistan” in Asian Journal of Management Cases

External Research

Consultancy work has been undertaken for the Federation of Pakistan Chambers of Commerce and Industry, the Aga Khan Education Service, Karachi, the Institute of Bankers in Pakistan, Deloitte, Touche International Chartered Accountants, the United Nations Industrial Development Organization, Vienna, SBP, Doha Bank FPCCI, TDAP and the Government of Sindh. Research papers from CBM are regularly presented at the annual meetings of the Pakistan Society for Development Economics, Islamabad.

Online Accessibility

IoBM subscribes to the Business Collection of JSTOR, an online access to a vast collection of business academic journals. It allows access to 46 multidisciplinary and discipline specified collections. In addition, the HEC has allowed us online access to almost 5000 research journals. These publications carry theoretical and applied research findings in fields such as Accounting, Business, Computing, Economics, Engineering, Finance, Law, Management, Marketing, etc. The fast internet link of IoBM provides an easy access to download articles and research reports. Students are encouraged to avail the browsing facility available on the campus. The faculty is also encouraged to use these research journals, give assignments and group discussion exercises based upon the articles of specific fields.

PERN2

IoBM is now connected with Pakistan Education & Research Network (PERN2) which is a high speed dedicated National Research & Education Network (NREN) for the universities/institutes and other academic sectors of Pakistan. This will provide students, faculty members and researchers a fully integrated and dedicated communication infrastructure using advanced Information & Communication Technologies. This NREN is being established to achieve true collaborative research, knowledge & resource sharing and distance learning. PERN2 is also aimed to have connectivity to other NREN(s) of the world including APAN (Asia), Internet2 (USA), GEANT2 (Europe), etc. and initiate collaborative research with the consortiums of NREN(s). It will establish 10GbE Metro Network in Islamabad, Lahore, Karachi, Quetta, Multan, Hyderabad and Peshawar Regions for universities /institutes. PERN2 is designed for multi-services carrier network.
QUALITY ENHANCEMENT CELL (QEC)

QEC is a separate department headed by a Director, Deputy Director and Statistical Officer under the Rector. The Quality Enhancement Cell of IoBM, set up to enhance the quality of teaching and learning of various programs of the university, has been successfully functioning over the last 6 years. Recently, IoBM has been rated by the Higher Education Commission as one of the top institutions in terms of the performance of its QEC and scored 96% on the basis of quantitative assessment through quality process reports in year 2012-13 and scored 98% in the year 2011. QEC is an institutional member of Asia Pacific Quality Network (APQN), American Society for Quality (ASQ) and a member of the Council for Higher Education Accreditation (CHEA).

QEC also monitors plagiarism policy implementation and serves as a focal point for the implementation of HEC quality criteria and has patronage of the management.

QEC has been responsible for setting up Standard Applications and Products (SAP) University Alliance Linkages with an Australian University with the help of German experts as IoBM is among the very few institutions in the country which is providing SAP training to its students in the areas of Supply Chain Human Capital Management, Finance and Accounting, etc.

IoBM has been awarded Asian Pacific Quality Network (APQN) Best Internal Quality Assurance award at APQN Conference in Taiwan held in April, 2013.
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 the 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.

Students of MBA Executive program are exempted from this examination.

Structure

The comprehensive examination is of 3 hours duration divided equally into three segments consisting of three case studies of one hour duration each.

The case studies are related to all specializations available to MBA students.

To pass the comprehensive examination, a student must get satisfactory grades in all of the three case studies. The examination is conducted twice a year in the months of March and September. Passing the Comprehensive examination is a mandatory requirement for obtaining the MBA degree.

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 student has completed all course requirements and attained a CGPA of at least 3.0 in his/her program.
PROCEDURE FOR SUBMITTING MS, MPhil & PhD Thesis

MS / MPhil Thesis

- Candidates must pass NTS (50% or more marks in General Exam)
- Candidates must pass 08 courses (24 credit hours) with a minimum CGPA of 3.0. D grades will not be considered
- Qualified candidates will inform M.Phil program coordinator/ HoD to decide on a specialized area for research
- Candidates to suggest supervisor as per relevant area of interest
- BASR 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 will 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 will 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 will form the thesis defense committee.
- Candidates will defend the thesis through powerpoint presentation
- Viva report to be submitted to the respective dean
- Dean to forward the examiner’s report to BASR for the final approval of degree
- The Rector will confirm the award of the degree

PhD Thesis

- Candidates must pass NTS (50% or more marks in subject exam)
- Candidates must pass 06 courses (18 credit hours) with a minimum CGPA of 3.0. D grades will not be considered
- Qualified candidates will inform PhD program coordinator/HoD to decide on a specialized area for research
- Candidate to suggest supervisor as per relevant area of interest
- BASR 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 will 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 will 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 will form the thesis defense committee.
- Candidates will defend the thesis through powerpoint presentation
- Examiners report to be submitted to the respective dean
- Dean to forward the examiner’s report to BASR for final approval of degree
- The Rector will 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 cooperative learning, directed class discussions and activities in critical thinking.

- The case method of instruction continues to be a significant classroom teaching strategy at IoBM so as to integrate 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>75-78</td>
<td>3.00</td>
</tr>
<tr>
<td>C+</td>
<td>68-74</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).

The grade of ‘I’ (Incomplete) may be recorded to indicate that the requirements of a course have been substantially completed, but for a legitimate reason, a small component of the work (final examination) remains to be completed and the record of the student justifies the expectation that he or she will obtain a passing grade upon completion. The instructor should be notified of the reason for the non-completion of work in order to ascertain the legitimacy of that reason and in turn to grant an incomplete grade.

In order to complete the “I” grade, students must appear in the final examination in the following semester. Failure to do so will result in an ‘F’ grade. The incomplete grade is not counted in the computation of the CGPA for the semester in which the incomplete grade was permitted. The instructor assigning an incomplete grade files with the Dean a signed form indicating the reason for the incomplete grade.

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 the repetition of a course, the 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 the 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 to receive the degree. MBA and MS students are required to repeat those courses in which they receive F and D grades.

My four years at IoBM were transformational. IoBM opened my eyes to various specialized fields including MSc in Organizational Psychology. I specialized in Human Resource Management which is the most competitive program offered by IoBM among the leading business schools in Karachi.

Coming to IoBM was the best decision I made, I got selected for the exchange program in Turkey which gave the opportunity to meet students from across the world, and was exposed to a learning community. The Bachelor’s degree earned has greatly enriched my knowledge and understanding of the underlying theories and concepts of Human Resource Management and opened avenues of progression in the corporate world. It has laid the initial foundation of my corporate career and I am wholeheartedly grateful to the alma mater for my success in the professional and personal life.

Noor-Ul-Huda Nagaria
Gold Medalist (BBA Honors)
Senior HR Business Partner
Narejo Human Resources (Pvt.) Ltd
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 that may be considered expedient for effectively maintaining the highest standards. 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 above mentioned regulations.
The Disciplinary Committee

The Disciplinary Committee, IoBM, comprises a Chairman, Rector, Executive Director Administration, Academic Heads of Departments, Controller of Examination, and such 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. award ‘F’ (fail) grade to a student cheating in an examination or a part of the examination concerned;
7. 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.

I have 7 plus years of work experience after I graduated from IOBM. I have worked in a bank, in IT firms and also in the Education Sector. I am currently Assistant Director of Adopt a School Program at Sindh Education Foundation. I wouldn’t have reached here, had I not spent 2 years in CBM getting my MBA degree in Marketing that groomed me as a future Manager. With its humongous campus, and great teachers, CBM was like a second home to me and my two elder sisters, Sabina Mir and Sara Mir. The placement office is excellent, and has been expanding over the years. I have fond memories of my university. In short CBM rocks!!!

Maria Mir
Alumna
Assistant Director
AASP Sindh Education Foundation
ATTENDANCE POLICY

Ensure 100% attendance for each course. 20% absences are permissible, only in case of illness, or emergencies. These 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.

DRESS CODE POLICY

Appropriate dressing enhances the personality and contributes to successful non-verbal communication in the workplace.

IoBM expects its students to reflect its values and standards in every way, and especially in the way they dress and conduct themselves. This will enable them to make a positive impression and project a professional image wherever they go.

In order to achieve the above stated objectives, the following guidelines must be strictly observed:

- All clothing worn by students should be well laundered.
- Clothes should be inoffensive in terms of cuts and style, or by way of messages printed on them.
- Female students may only wear jeans provided their tops are of mid-thigh length. They should also be modest and avoid transparent materials and short lengths for sleeves and trousers/shalwars.
- Only light make up, jewelry and perfume is permitted.
- Male students are only allowed full length trousers or jeans. For footwear, they must wear dress shoes, moccasins, joggers or sandals with back straps.
- Male students should maintain proper haircuts and refrain from piercing their ears and faces.

No variations or violations in all of the above will be permitted and students doing so will be marked absent in their respective classes.
EXAMINATION NORMS

Each semester has two hourly exams (6th & 11th week) & one final exam in the 15th week. Marks distribution is conveyed to the students at the beginning of the semester which traditionally is 15 marks for each hourly 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.

IoBM, in its pursuit of excellence, believes in providing a congenial atmosphere to the students during all exams in order to get them to perform at their 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:

- 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 check their exam location and be seated at least 10 minutes prior to the exam time. Late comers will be made to wait for 5 minutes in case of hourlies and 15 minutes in the final exams before they are allowed entry.
- As per Institute’s policy all question papers are to be returned along with the answer scripts.
- Students are required to bring their own stationary and calculators as no lending or borrowing is permitted during examination.
- Programmable calculators or any other kind 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-terms, 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 done 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.
**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

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.
ADMISSION AND FINANCE
ADMISSION REQUIREMENTS

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 any one of the following:

- A Higher Secondary School (HSC) Certificate with at least *50% marks awarded by a recognized Provincial Intermediate Board
- 3 A-Levels with a minimum of *two Cs, preferably in business related subjects, excluding General Paper and Urdu or an 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

In addition:

- Atleast 5C’s in O-Level exam or minimum 50% marks in SSC or equivalent
- Success in aptitude test and interview conducted by IoBM

*Subject to revision by the IoBM Management

Eligibility for entrance to Engineering Programs:

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

- A Higher Secondary School (HSC) Certificate with at least *60% marks awarded by a recognized Provincial Intermediate Board
- IBCC equivalence certificate will be required for A-Levels with atleast one C grade in science related subject. American High School Diploma with CGPA 2.5 or any other qualifications
- Any other qualification if an authority has issued an equivalence certificate.

In addition:

- Success in aptitude test and interview conducted by IoBM

*Subject to revision by the IoBM Management
Eligibility for entrance to two year Master’s Programs:

The admission for Master’s Programs would be based on any one of the following:

- A four year Bachelor’s degree 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
- Four years overseas bachelor’s degree or equivalent recognized by HEC
- Students with 2/3-year Bachelor’s degree are eligible for MBA (3-year) program.

In addition:

- Minimum 50 % marks in overall Academic career or 5C’s in O-Level and 2C’s in A-level exam excluding General Paper and Urdu or equivalent.
- 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 for MBA Weekend Program would be based on any one of the following:

- A four year Bachelor’s degree 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
- Four years overseas bachelor’s degree or equivalent recognized by HEC
- Students with 2/3-year Bachelor’s degree are eligible for MBA (3-year) program.

In addition:

- One-year work experience (for MBA Weekend).
- Minimum 50 % marks in last qualification
- Success in aptitude test and interview conducted by IoBM.

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

Eligibility for entrance to MS/MPhil Program:

It is based on any one of the following:

- Master in relevant field with high second division or equivalent from HEC recognized Institutes/Universities in Pakistan

In addition:

- Minimum 50 % marks in overall Academic career or 5C’s in O-Level and 2C’s in A-level exam excluding General Paper and Urdu or equivalent
- Success in aptitude test and interview conducted by IoBM
- Minimum 50% cumulative Score in GAT General test as required by HEC
Admission Requirements for Ph.D Programs:

- Candidate having 18 years of education from an HEC recognized university is eligible to apply. For admission into the PhD minimum CGPA 3.0 on scale of 4 or First Division in M.Phil/M.S/Equivalent degree is required

In addition:

- Success in aptitude test and interview conducted by IoBM
- Minimum 60% cumulative Score in GAT subject test as required by HEC

Transfer of Credits

Students desiring credit transfer in a specific degree program will be required to submit application along with their transcripts and course outlines/descriptions.

The equivalence committee will examine such cases and decide accordingly, keeping in view the following:

- All requests must be for same level of program. Courses completed in Bachelor’s program cannot be considered for Master’s program
- Courses of two semesters can be accepted from highly reputed and HEC recognized institutes of Pakistan and abroad. However, each case will be reviewed separately and the decision will be taken considering the grades and the reasons for transfer

Readmission 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 struck off and candidates would be required to go through the admission process afresh in case they want to register for courses in future.

The procedure for rejoining:

Admissions can be deferred for maximum of two semesters with justification and approval of Executive Director Admissions. Any relaxation not beyond two years is subject to approval of Executive Director Admissions.

Students who complete their Bachelor’s from IoBM are eligible to register for MBA. However, if Security Deposit has been withdrawn, candidates may reapply for admission.

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 readmission.
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. Assistantships and financial assistance are provided to students on merit and need basis. Currently about 25% of the students are receiving some form of financial aid.

HEC - Japanese Scholarships
The Government of Japan in collaboration with the Higher Education Commission (HEC) Pakistan is offering scholarships to Pakistani students.

HEC - French Scholarships
French need based scholarships are available for graduate programs.

Endowment Fund - Education Department, GOS
Endowment scholarships awarded by the Government of Sindh, Education and Literacy Department, are also available to our students studying under undergraduate and graduate programs. These are based on a specific quota for urban and rural applicants.

IoBM Endowment Fund
IoBM has also established an endowment fund to help needy students. Many students are availing assistance through this fund.

Shahjehan Karim & Family Endowment Fund
Financial assistance are available through Shahjehan Karim & Family Endowment Fund. Many students will avail assistance through this program.

Janmohammad Dawood Trust
Generous scholarships and financial assistance are available through Janmohammad Dawood Trust. Many students are availing assistance through this program.

Tabba Foundation
Financial assistance are available through Tabba Foundation. Many students are availing assistance through this program.

Endowment Fund – Shan Foods
Endowment fund has been established by Shan Foods for various academic activities.

Sui Southern Gas Company Ltd. Scholarships
SSGC need based scholarships are awarded by SSGC for students enrolled in undergraduate programs from Sindh and Balochistan provinces.

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:

### FEE STRUCTURE*

<table>
<thead>
<tr>
<th>Post Graduate Programs</th>
<th>Registration Fee (1-2 Courses)</th>
<th>Tuition Fee* (per course)</th>
<th>Tuition Fee* Full Load**</th>
<th>Total Fee* (per semester)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS / MPhil Programs</td>
<td>3,500.00</td>
<td>11,500.00</td>
<td>23,000.00</td>
<td>10,000.00</td>
</tr>
<tr>
<td>PhD Programs</td>
<td>5,000.00</td>
<td>12,500.00</td>
<td>50,000.00</td>
<td>20,000.00</td>
</tr>
</tbody>
</table>

* Subject to change  
** Six courses for regular, four courses for weekend / evening programs and three courses for MS/Phil or PhD programs

Summer session fee is charged on the basis of courses taken. Convocation fee of Rs. 10,000.00 is charged on completion of the degree program, inclusive of degree charges of Rs. 3,000.00. MBA evening and weekend students, planning to take less than a full load, would be charged registration and tuition accordingly. However, caution money will remain the same.

The registration duration of thesis is one year (3 consecutive semesters) after 3rd semester. Students will be required to get themselves re-registered in thesis by paying registration fee and one course fee for the subsequent semesters.
Fee Refund Policy

Caution Money

- Students are enrolled in courses with the understanding that they will complete the entire curriculum. If for any reason they drop the program after completion of first semester, they are not entitled to a refund of caution money.
- Students who have successfully completed their program can claim a refund within the period of one year from the date of Convocation. Failure to make a claim within this timeframe will result in forfeiture of the caution money.

Tuition Fees

1. If a student drops a course/courses or semester within the due date, tuition fees paid for courses will be transferred to the next semester. In case of failure to notify the drop of a course/courses within the due date, full tuition fees will be charged. If a student drops a course/courses or semester after the due date, full tuition fees will be charged.
2. If a course is cancelled by the Institute due to any reason, the student would be entitled to claim a refund for the course fee or carry it forward to the next semester/subsequent semester.
3. If a student withdraws(without getting registered/courses dropped) from the Institute before the start of a semester for any reason, he/she would be entitled to claim a refund of tuition fee. However, no refund is allowed during the semester in such cases.
4. If a student drops course(s) in cases where he intends to achieve the required improvement in GPA and no classes have been attended, he would be allowed a refund of the tuition fees.
5. If a student paid a full load course fee and registered for a fewer number of courses (without dropping any course) excess payment may be refunded/carried forward to the next semester.

External students

Tuition fees for any course(s) would be refundable if no classes have been attended.

Registration Fee

Registration fee is refundable/adjustable in the following cases:

1. If a course is cancelled by the Institute due to any reason, the student would be entitled to claim a refund of the Registration fee(full or prorate) or carry it forward to the next semester/subsequent semester.
2. If a student has deposited Registration fees but does not get registered, registration fees would be refundable/carried forward to next semester.
3. If for any reason IoBM defers the admission of any candidate till the next semester, registration fee will be carried forward to the next semester.

Fresh Entrants

In case a candidate, after getting admission, decides to withdraw from the Institute, the following refund policy as per directive of Higher Education Commission (HEC) will be applicable:

<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 convening of classes</td>
</tr>
<tr>
<td>Half (50%) Fee Refund</td>
<td>From 8th – 15th day of convening of classes</td>
</tr>
<tr>
<td>No Fee (%) Refund</td>
<td>From 16th day of convening of classes</td>
</tr>
</tbody>
</table>

- In case a candidate fails to meet the admission criteria after declaration of HSC/A-Level results, he/she will be refunded tuition fee within the first semester of his admission.
- If for any reason IoBM defers the admission of any candidate till the next semester, tuition fee will be carried forward to the next semester.
- If any candidate is allowed a deferment of admission to improve his/her grade and later he/she decides not to join he/she will not be entitled for refund of tuition fees.
ORGANIZATION
Board of Governors

The Board of Governors exercises the powers to hold, control and administer the property, funds and the 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 effectiveness of the Institute's operations and continuity and preservation of its autonomy.

Members of the Board of Governors (listed on Page 10)

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. Basheer Janmohammad, Chairman
- Mr. Shahjehan S. Karim
- A Judge of Sindh High Court
- Chairman Higher Education Commission or his nominee
- Secretary, Education & Literacy Department or his nominee
- Mr. Muhammad Ali Tabba
- Mr. Salahuddin Qureshi
- Mr. Talib S. Karim
- Deans of respective Colleges
- 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
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:

- Mr. Tasneem Ahmed Siddiqui
- Dr. Abuzar Wajidi

Board of Studies

The following departments exist in the Institute:

College of Business Management (CBM)

College of Computer Science and Information Systems (CCSIS)

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)
Electronics & Telecommunication

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. Shahjehan S. Karim, President
- Dr. Mehtab Karim
- Dr. Ahmer S. Karim
- Mr. Mohsin Furqan
- Dr. Musarrat Hasan
- Dr. Mrs. Afroze Imam Ali Kazi
- Mr. Sani Ahmed
- Ms. Sabina Mohsin
- Mr. Talib S. Karim
- Mr. Mehboob S. Karim
- Mr. Nabhan Shah Karim
- Mr. M. W. Jahangir, Secretary

It is a great honor and pleasure to be a graduate of IoBM especially being a part of the first batch of Actuarial Sciences and Risk Management. It was a blend of learning experience with fun and activities. IoBM has not only enhanced me in my studies but also improved my time management, communication, intellectual and presentation skills. All the management staff and teachers were really kind and cooperative throughout these four years. Getting a Gold Medal was my greatest achievement which made me realize that hard work really pays off. All in all, it has been an outstanding experience being part of such a prestigious university.

Shoaib Rizvi
Gold Medalist (BS AS&RM)
Management Associate
Magnus Investments Advisory Limited
FACULTY
Rector IoBM & Executive Director, Academics, Corporate Affairs & EMEC

Talib S. Karim, Rector & Executive Director Academics Corporate Affairs and Entrepreneurship & Management Excellence Center, 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 Marketing Association of Pakistan and represents the Institute in various Associations nationally and internationally.

College of Business Management (CBM)

The Dean

Prof. Dr. Irfan Hyder, Dean CBM and CES, holds a PhD and M.S. from University of Texas at Austin, USA. In addition, he holds an MBA from IBA and BE-Electronic from DCET/NED. He has a wide experience in academic leadership, consultancy, entrepreneurial ventures, trainings, teaching, research, in the design and implementation of innovative programs and as a motivational speaker. He provides consultancy for entrepreneurial and personal visions, students/parental counseling and education. In his career spanning over 18 years, he has worked in leadership positions at various organizations. He was deputy director at IBA and Dean and VP of PAF-KIET. He has extensive industry consultancy experience for private and public sector organizations such as Oxford University Press, Trade Development Board (EPB), Pakistan Ordnance Factories, Pakistan Steel, Ministry of Science and Technology, etc. His entrepreneurial ventures include E-Patterns Software Solutions, Ahsan Memorial (AEF) & L2L Academy.

Advisors

Muhammad Ashraf Janjua, Advisor to the President, holds MA (Economics) degree from Government College, Lahore (Punjab University) and MA (Development Economics) from Williams College, Mass. USA. He has done one-year graduate work at Stanford University, California, USA. He also worked in the office of Executive Director for Pakistan at IMF, Washington DC from 1979 to 1983. Before joining State Bank of Pakistan in 1966, he has been a Research Economist in the Pakistan Institute of Development Economics (PIDE) and Associate Editor of Pakistan Development Review (PDR), Deputy Governor (Policy) and member Board of Directors from 1992 to 1995 and subsequently, Chief Economic Advisor, State Bank of Pakistan from 1995 to 2004. He is member Board of Directors at Atlas Asset Management Ltd. since 2008, and at National Institute of Banking And Finance (NIBAF) since 2009. Among other research work, he is the author of History of the State Bank of Pakistan Volume-III (1977-88) and Volume-IV (1988-2003).

Dr. Muhammad Arshad Malik, Advisor Health, Hospital and Pharmaceutical Management, is a retired Federal Secretary to the Government of Pakistan. He joined Civil Service of Pakistan (CSP) in 1957 and studied Public Administration at Oxford University (England). He holds an MBBS degree and has held senior positions, including Secretary Health, in various Ministries/Departments and Organizations from 1959-1995. He had been Professor of Government and Management Sciences at a reputable University. He had also been elected a Senior Associate Member at St. Anthony’s College, Oxford University, England.
Dr. Ahmer S. Karim, Advisor, College of Computer Science and Information Systems (CCSIS), has a PhD and a Master’s degree from Arizona State University, USA, preceded by Bachelor of Science in Finance and MIS from the University of Arizona, USA. 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 also other academic conference proceedings. Dr. Karim has also published several academic books on Information Systems.

Accounting and Finance

H. Jamal Zubairi, Senior Fellow and Head of Department of Accounting and Finance, holds a BE degree from Dawood College of Engineering & Technology and MBA from IBA, Karachi. He also holds a banking diploma (DAIBP) from the Institute of Bankers of Pakistan. He possesses over 30 years of professional experience, mainly as a development banker with the National Development Finance Corporation and has also worked for other leading financial institutions such as ORIX Leasing. He has taught core as well as elective courses in Accounting and Finance for over 20 years, both as visiting and full time faculty. His research interests are in the areas of Banking, Risk Management and Corporate Finance. He has presented research papers at various international conferences and has also co-authored a book ‘Financial Management in Pakistan’ which was published by the Oxford University Press, Pakistan in the year 2005.

Dr. Muhammad Mahmud, Senior Fellow serving as a Senior Fellow and Former Dean, Faculty of Management Sciences, (KASBIT). Before joining (KASBIT) Dr. Mahmud served Institute of Business Administration (IBA), Karachi for twenty-four years in various capacities (teaching, research and administrative). Dr. Mahmud has MBA degree from the IBA Karachi and Ph.D. degree in Business Administration from the University of Malaya, Kuala Lumpur, Malaysia. His main area of interest is finance. He has published more than 24 articles in reputed local and International Journals. The Institute of Bankers of Pakistan for participating in research essay competition awarded him third prize in 2002 and fourth prize in 2003.

Syed Ajaz Ahmed, Senior Fellow of Finance and Accounting, is a fellow member of ICMAP and has qualified the final examination of the ICMAP in 1976. He has served for 32 years in national and multinational corporations and has headed finance and accounts department in various industrial sectors, including construction, food and beverages and petrochemicals. Mr. Ajaz has also worked for investment banking, shipping and textile sectors. Before joining IoBM as full-time member, he has been an adjunct faculty member at ICMAP and facilitator of ICAP.

Sharique Ayubi, Associate Professor of Finance and Accounting. He holds a Master in Business Administration (MBA) from IBA, Karachi and another Master’s degree in Economics from the University of Karachi. He also holds a Banking Diploma from the Institute of Bankers, Karachi. Currently, he is enrolled in the MS/PhD program. His experience in industry has been in National Development Finance Corporation (NDFC), where he worked for 14 years. He has been teaching courses in Finance, Accounting and Management for over 12 years at various universities and business schools. His research interests are Corporate Governance; Regulation of Banking and Securities Markets; and Comparative Management.
Naseem Akhtar, Associate Professor, Finance and Accounting, is an MBA from IBA (gold medalist) and BE Mechanical from NED. He has working experience of 28 years. His last appointment was with Rousch (Pakistan) Power Limited as a Chief Executive Officer. Prior to that, he worked as an Assistant Vice President, NDFC. He was also the Company Commander-Captain in Pak Army for 3 years.

Syed Maqbool ur Rehman, Assistant Professor in Accounting and Finance, is an investment banker as well as an educator with an MBA from IBA. He has also received a diploma in banking from the Institute of Bankers in Pakistan. He has worked with reputed financial institutions for 18 years in operational areas in senior management positions. He has been teaching since 1989 at various business schools. His research interests include Risk Management, Compliance of IAS by local industry, Corporate Governance and Financial Markets.

Tauseef A. Qureshi, Assistant Professor in Finance, holds an MBA from the Institute of Business Administration. He has a unique blend of industry and teaching experience and has held senior management positions in Pakistan, USA and Canada.

Mehboob Moosa, Assistant Professor, Accounting, is a fellow member of ICMAP. He has also qualified CA final group-II. His 30 years’ experience includes working with national and multinational companies like BOC (Pakistan) Ltd., Al-Futtaim Engineering, Dubai, Habib Group, World Group of Companies (Automobiles), Liberty Textiles, etc. as well as audit firms like KPMG Taseer Hadi, Sidaat Hyder, Rahim Jan and educational institutions of UK and Pakistani education streams. 132og 2012 - 2013 Institute of Business Management

Shazia Farooq, Senior Lecturer of Accounting and Finance, is a CFA Charter holder and also holds BBA (Hons) and an MBA from IBA, Karachi. She brings 15 years of professional experience in the field of finance, banking and research. She is teaching core as well as elective courses in Finance.

Kamran Rabbani, Senior Lecturer, Finance and Accounting, is an MBA in Finance. 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 4 years of teaching experience as visiting faculty at Greenwich and at IoBM since January 2010.

Tazeen Arsalan, Senior Lecturer, Finance and Accounting, holds BBA (Hons) and an MBA from IoBM, Karachi. She has 5 years of business consultancy experience and has presented various papers at national and international levels.

Samina Riaz, Senior Lecturer in Accounting, holds an MBA in Finance from Bahria University. Her research interests are in the areas of Banking and Financial Accounting and also presented research papers in the national and international Conferences and intends to pursue PhD in the same.
**Misbah Iqbal**, Senior Lecturer in Accounting and Finance, holds a BBA (Hons.) and MBA degree from the Institute of Business Management and is currently pursuing her M.Phil in Business Management to be followed by a PhD in Finance. She has been teaching Finance and Accounting courses for 11 years, with around 3-year professional experience as an Investment Analyst (covering the Cement, Tractors, FMCG and Automobile sectors) and has been quoted on various national and international magazines for such. Involved in the USAID’s and TAF’s program on Training NPO personnel, she has conducted various trainings for such. Her research papers have been published in the Pakistan Business Review and presented in the International Sindh Conference’12. Her research interests are behavior of Capital Markets, Financial Management techniques, evolution of Shariah Financing and Development & History of Sindh. She is a recipient of the Group Study Exchange Program Fellowship 2013 for New Jersey, USA, hosted by the Rotary Foundation, International

**Sarwat Ahson**, Senior Lecturer, holds an MBA degree from Institute of Business Administration, Karachi. She brings with her eight years of corporate banking experience, two years of consulting and four years of teaching experience in various institutes of repute including IBA, SZABIST and IoBM.

**Samreen Mohsin**, Lecturer in Accounting & Finance holds BBA (hons) and MBA with majors in Finance from IoBM Karachi. She has been associated with IoBM since 2007 as a visiting faculty.

**Najeha A. Bela**, Junior Lecturer, Accounting & Finance, holds a BBA and MBA in finance from University of Karachi, and has a teaching experience of one year. She is currently pursuing M-Phil in Business Management from CBM, and has research interests in contemporary accounting and finance.

**Communication**

**Dr. Nasreen Hussain**, Senior Fellow and HoD Education and Communication with the rank of Professor, holds a PhD in Education. She has 30 years of diverse teaching, research, and national as well as international consultancy experience. She has edited books as well as written academic articles and book chapters. Her last two books were published in early 2009 by the Oxford University Press and the Cambridge Scholars Publishing, UK. She has received British Council, Hornby Trust, USIS, USAID and AKU awards to pursue her academic and research projects and is also the External Moderator for the University of Cambridge. Her interest is in educational research methods with a special focus on qualitative research, continuing professional development, curriculum design, and material development.
Fareeda Ibad, Associate Professor and Senior Fellow, Communication Skills, holds a Master’s degree from the University of Punjab in English. Her professional experience of 37 years includes teaching English and Communication to adult learners in diversified contexts. She has worked at the PACC in the capacity of language teacher, officer-in-charge, teacher trainer and curriculum coordinator. She has also worked at the British Council in the capacity of IELTS examiner and trainer, and ICFE examiner. Her communication teaching experience of 20 years includes teaching at both BBA and MBA levels at IoBM, Greenwich and Iqra Universities. Her additional experience is in the field of testing in ELT and corporate training in Soft Skills development.

Muhammad Asif Khan, Assistant Professor, Communication, is an MA in English Literature and Linguistics from the University of Karachi and MBA from IoBM. He has a rich experience of teaching English and communication related subjects to various categories of students ranging from intermediate and A-Levels to BBA and MBA. His areas of interest include TESL, Business Communication and Interpersonal Skills. He is also a contributor to the Pakistan Business Review (PBR), where his interviews with prominent personalities of the corporate world are published. In future he plans to pursue his MPhil in the area of HRD.

Aliya Sikandar, Assistant Professor, Department of Communication, holds a Master’s degree in TESOL from the Institute of Education, University of London, UK, and a Master’s degree in English Literature from the University of Karachi. She also has an RSA certificate in Teaching of English (COTE) from University of Cambridge. She has worked for the Aga Khan University for almost 24 years before joining the Institute full time in September, 2013. Currently, Ms Sikandar is engaged in teaching Business Communication and, Academic English courses. Her areas of interest are Business Communication, Critical Discourse Analysis, Scholarly Writing and Spoken Discourse.

Muhammad Irfan Sheikh, Senior Lecturer in Communication, earned his Master’s degree in English Literature and Linguistics from the National University of Modern Languages (NUML). He completed his Bachelor of Commerce from the University of Karachi, Bachelor of Education from Hamdard University and ‘Training to Teach English for Specific Purposes’ (TTESP) from the Aga Khan University. He is a member of PARE (Pakistan Association for Research in Education) and SPELT (Society of Pakistan English Language Teachers). He is an M Phil fellow and is currently working on his research thesis. He has developed a website “Webell” for ELT and research purposes.

Wajdan Raza, Senior Lecturer, Communication, has an EIL Certificate from Kings’ College, London and MA English Linguistics from the University of Karachi. His PhD in Sociolinguistics is in progress from the University Sains Malaysia. He has also submitted his MPhil English Linguistics dissertation at the University of Karachi. He has teaching experience of five years and his last appointment was as an Assistant Professor in the Department of English at PAF-KIET. He has conducted training and has been a visiting lecturer at the Aga Khan University, Karachi University and NUML. He has four published research papers to his credit. He is also a recipient of KINGS Award 2010 by the King’s College London.

Sarwat Nauman, Senior Lecturer in Communication, holds an MA in English Literature from the University of Karachi. She has teaching experience of 7 years and has been associated with Greenwich University, Pakistan International School Jeddah, and Defence Authority College for Women.
Mehvish Saleem, Lecturer, Communication Skills, holds a Master’s degree in English Linguistics from the University of Karachi. Her professional experience includes teaching English and Communication for over 6 years at various public and private sector universities. She has been associated with NUCES-FAST, University of Karachi, Iqra University, Institute of Cost and Management Accountants of Pakistan and Federal Urdu University. She has worked as a support teacher trainer for EDLINKS-USAID for English Language Proficiency Enhancement Refresher Program in Sindh and Baluchistan. She is a member of IATEFL (International Association of Teachers of English as a Foreign Language) and SPELT (Society for Pakistan English Language Teachers). She was a visiting postgraduate at the University of Warwick. Her research interest includes teaching English in large classes/‘difficult circumstances’, second language anxiety, and practitioner research.

Syeda Mahtab Fatima, Lecturer in Arabic and Islamic Studies, has Master’s degree in Arabic from Quaid-e-Azam University, Islamabad with two certificates in Arabic courses from the National University of Modern Languages, Islamabad. She has done BA and BEd from the University of Punjab, Lahore. She has more than 12 years of teaching experience. Her case study about the importance of Arabic Language in International trade was published in Pakistan Business Review July 2010.

Lubna Ali, Lecturer in Communication, has a TESOL Certificate from Middlesex University, London and MA English Linguistics and Literature from NUML University. She has English Language teaching experience of 5 years and has taught English Language and communication to students ranging from ESOL students at Middlesex University, engineering students at NED and business school students at Bahria University and IoBM. She is a member of SPELT (Society of Pakistan English Language Teachers). In future, she plans to pursue her MPhil and PhD in Applied Linguistics.

Ishtiaq Ahmed Kolachi, Lecturer in Communication, is M.A in English Literature and Bachelor in Education (B.Ed) from Shah Abdul Latif University Khairpur, Sindh. He has also done his Diploma in Linguistics from National University of Modern Languages, Islamabad. He has vast experience of teaching English Language, Communication Skills and Business English. His areas of interest include TESL, Business Communication and Teachers’ Training Programs. In the near future he plans to pursue his M.Phil in the area of Education.

Abdul Nazeem, Junior Lecturer in Communication, holds Bachelor’s degree from University of Karachi. He has worked with Alliance Française de Karachi and Consulate General of France in Karachi for more than 4 years. He has a background of IT (Desktop Support Engineer), Tourism and Hospitality and Obtained DELF - Diplôme d’études en langue française from République Française Ministère de l’Éducation Nationale. He has successfully completed Community Based Disaster Risk Management training with FOCUS Humanitarian Assistance Pakistan and worked as search & rescue team leader. He is Interpreter to French delegations with CSSK (Center of Social Sciences Karachi). He has been attending training programs and sessions arranged by l’Alliance Française de Karachi & Consulate General of France in Karachi.

Environment and Energy Management

Dr. Shahid Amjad, is a Professor and Head of the Department, Environment & Energy Management. He 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 has been associated with the National Institute of Oceanography as Director General and with various top universities of Pakistan as Acting Vice Chancellor and Professor. He has also been associated as a visiting faculty with NED and the University of Karachi since 2005.
Dr. Abdulrauf Farooqi is a Professor with 30 years post-doctorate experience in teaching, research & development, and humanitarian assistance, 2005-2011. Dr. Abdulrauf Farooqi has held the positions of Professor and Chairman of the Department of Environmental Science at Allama Iqbal Open University and International Islamic University (IIU) Islamabad, as appointed by the HEC. He provided seasoned leadership and academic expertise to direct and advance academic research, training, and quality educational programs in Environmental Sciences, Agricultural Sciences, and Youth Studies. Dr. Farooqi holds 22 years of extensive field experience with the World Bank and the United Nations High Commissioner for Refugees (UNHCR) in leading through a collaborative international effort to protect and assist refugees.

**Health, Hospital and Pharmaceutical Management**

Dr. Asima Faisal, Head of Department & Assistant Professor, MBA Health and Hospital Management Program at IoBM hold an MBBS from Sind Medical University and MBA in Health and Hospital Management from IoBM. She has more than 18 years of experience in the health industry serving diversity in the areas of health management. She was Director Media and Marketing and afterwards Director Programs for the Institute of Health Management (IHM) at Dow University of Health Sciences (DUHS). Dr. Asima was associated with Sind Education Foundation where she arranged health Camps and health Trainings of Teachers (TOTs) all over Sind. She has been actively involved in CSR activities like free Health camps, flood relief, disaster management activities and conducting TV shows on various medical and health management issues of the society. She was also affiliated with South City Hospital in sharing her expertise in managerial and administrative areas. She is a member of the subject committee for pharmaceutical representatives training and assessment from the National Testing Service (NTS). She was sent as a Counselor for the British High Commission to Universities in the United Kingdom for pursuing avenues of internationalization of higher education. Being a Certified Master Trainer she has also done consultancies for health education in GlaxoSmithKline, for their Continuing Medical Education programs (CME) all over Pakistan. Added to her credentials, on an academic front, she has presented at various international forums in India and Japan. Dr. Asima is currently pursuing for her PhD program at IoBM.

Dr. Humeira Jawed Abidi, Lecturer in Health and Hospital Management, holds an MBA (Health Management) from IoBM and MBBS from Sindh Medical University. She has worked in the Clinical Trial Unit of the Aga Khan University Hospital and GlaxoSmithKline in the area of Product Management. She is also the former President of CBM Society of Health Managers (CSHM). Dr. Humeira is a Certified Master Trainer in Faculty Professional Development Program (MT FPDP) from the Higher Education Commission, Pakistan and under the same; she has also been certified from Asian Institute of Technology, Bangkok, Thailand for an advanced program on ‘Ensuring Training Effectiveness for MT FPDP’. At present, she is enrolled in PhD Program at IoBM.

**Management and HRM**

Dr. Khalid Amin, Senior Fellow and Head of Departments of Management, Human Resource Management and International Relations, holds an MBA and a PhD in Business Administration. He is also a Fellow, Institute of Corporate Secretaries and a Fellow, Institute of Bankers. He has been Chief Executive, Dubai 9 Group, Dubai; Secretary General (Chief Executive), Federation of Pakistan Chambers of Commerce & Industry; Secretary General & Chief Executive, All Pakistan Textiles Mills Association; Chief Executive, Telecard Ltd.; Chief Operating Officer of two Financial Institutions in the Prudential Group; General Manager in Pakistan Automobile Corporation, State Petroleum & Board of Industrial Management. He has been actively involved in Business Research and has over 50 reports, papers and articles to his credit. He has been advising the Ministries of Finance, Commerce and SECP & FBR on business facilitation and regulation. He has been a visiting Professor in MBA Programs in business schools in Pakistan, USA and Europe.
Abdul Qadir Molvi, Associate Professor of Management, has specialized in sales management training, marketing and strategy for corporate clients. He has earned a professional diploma in International Trade and Commerce from UC Berkeley, (USA), MBA (IBA), and BSc from the University of Karachi. He has over 33 years marketing experience of pharmaceutical and consumer products with leading MNCs. He was elected to the Council of the Marketing Association of Pakistan (1996-98) and served as its Vice President in 1998. He has also been invited to lecture on international marketing to the classes of Brand Management 1999 at Fullerton College, California, USA.

Humayun Zafar Choudhry, Assistant Professor in Management, holds an MA in International Relations from the University of Karachi and has completed a number of management courses from Middlesex University, London. His experience in the industry encompasses the areas of Management, Project Financing, Leasing, Modarabas, and Credit and Marketing. He had been associated with IoBM for 12 years as visiting faculty before joining the Institute on a permanent basis. He also conducts Management Development workshops for IoBM and has conducted the same for the corporate sector as well as for NIPA (National Institute Of Public Administration). Mr. Choudhry had worked in senior most positions in the financial sector, and his last position in a public limited company was that of CEO. In the year 2010, he qualified as a certified Director education from Pakistan Institute Of Corporate Governance (PICG).

Dr. Fazal Anwer Khalidi, Assistant Professor of Management, 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 adjunct faculty. His qualifications include 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 has also attended an executive development program at the Thunderbird School of Global Management, Arizona, USA.

Shagufta Rafif Ghauri, Senior Lecturer, Management, holds a Master’s degree in Human Resource Management and brings along a vast experience of teaching different management subjects and Business English courses to BBA, MBA and MBA(Executive) students. She has also served in the capacity of Vice Principal at a reputed O Level School in Karachi for 3 years. She has been a faculty member of different universities of Karachi and has also been conducting courses and training workshops at the Teacher’s Resource Center. She had been associated with IoBM for seven years.

Shiraz Ahmed, is a Senior Lecturer in department of HRM and holds M.Phil in Management. He has received training from master trainers from the UK, Africa and Pakistan. He has been trained by foreign faculty of the British Council for their Global Leadership Development Program. He is also a British Council Trained Management Trainer and a Certified HR Professional as well. He has spoken and facilitated sessions to local and foreign diplomats including British Foreign Minister, British High Commissioner, Global CEO and Regional Directors. Managers from junior to senior positions including Head of Departments and Directors have attended his workshops. People from Nokia, Siemens, RBS, Shell, Wal-Mart, Emirates Airline, ICI, Haier, Engro, Coca Cola, AC-Nelson, B Braun, Bayer, Mobilink, Byco, Descon engineering, Toyota Indus Motors and many more have benefited from his workshops. He has been visiting faculty in leading business schools.

Ali Mujahid, Senior Lecturer, Human Resource Management, did his BBA in Marketing and MBA in Management from University of Central Oklahoma, USA. He has 10 years of teaching, research and consultancy experience in different organizations in Pakistan. His areas of interest include creativity, business education, leadership and organizational development. His main focus is to develop and research innovative tools to enhance student development and learning.
Erum Zahoor Zaidi, Senior Lecturer, Human Resource Management holds an MS in Management Sciences and MBA (Marketing) from SZABIST Karachi. She has delivered lectures on Entrepreneurship development, Operations Management, Information and Business Management, Experiential Marketing and Business Research Methods at the leading Universities in Karachi. She has worked with Injaz Pakistan to develop the entrepreneurship program. She has organized seminars on entrepreneurship development and personal management as well as executive development in various universities.

Juveria Baig, Lecturer in Human Resource Management has more than six years of diversified experience in the areas of Project Management, Recruitment, Training, Coaching and Mentoring and Performance Management. Her education includes B.Sc (Hons) from Textile Institute of Pakistan, MBA from Hamdard University and Masters in Human Resource Management from University of New South Wales, Sydney, Australia. After working with a Swiss Multi-National and USAID, Juveria turned her focus towards academia and taught at her alma mater in Sydney, Australia. She is very seriously committed to a career in research, learning & development and teaching. Her research focus remains in the areas of Knowledge Management and Workforce Development.

Marketing

Javaid Ahmed, Senior Fellow and Department Head of Marketing, is a Certified Board Director, FCIM, FCMI (UK), Member of Mensa and a UK Chartered Engineer. He has an MBA with Distinction from Lancaster (empirical research awarded 1st prize by the British Institute of Management) and BSc Eng (London). He brings over 28 years of a successful top management career with the multinational health care industry including over a decade in Switzerland, Malaysia and the Philippines. He has been on the Jury of the EFP Prime Ministers’ Corporate Award of Excellence. He is case research active in corporate and market strategy and has supervised CBM’s MPhil Marketing program. He has written two research based dissertations, published fifteen papers and articles and delivered twenty-two selected professional presentations and workshops.

Riaz Khan, Senior Fellow, Marketing holds Bachelor degrees from Florida International University in Industrial Engineering Technology and also in Electronics Engineering Technology and has Master’s degree in International Marketing from the University of Houston, Houston, Texas. USA. He possesses over 32 years of experience in senior level positions, mainly as international marketer working for various multinational companies around the world. He was Executive Director Marketing in Trade Development Authority of Pakistan has also worked for other leading organizations like Philips NV Holland, Pak Arab Refinery. His research interests are in the area of international marketing and its environment and have written numerous research papers which he has read and shared at various international conferences and seminars held in Mexico City, New York, Frankfurt and other international venues. He also was associated for two years in UNDP program of Technical Cooperation between Developing Countries (TCDC) based in New York City. He has been a visiting Professor in MBA Programs at various universities in USA. In December 2013, his marketing research paper was approved by Indian Institute of Management in Bangalore (IIMB), India where he was invited to share and read his research paper for the participants in the 3rd International Management Conference held in Bangalore, India.

Kausar Saeed, Associate Professor, Marketing possesses over 22 years of diversified experience of corporate, academic, entrepreneurial and developmental sector. She has 15 years of teaching experience at graduate and undergraduate level in various renowned universities of Pakistan and her areas of specialization are Management and Marketing. She has spent ten years in Marketing Communications out of which five years were in Advertising with Interflow Communications. She also served as Manager Capacity Development with Aga Khan Foundation where she was involved in developing and conducting training for developmental sector organizations in Pakistan. Currently, she is pursuing her MS Degree in the area of Management Sciences.
Saeed-ur-Rehman, Senior Fellow, Marketing, holds an MA in Political Science from the University of Karachi. His experience in Sales as a senior manager and executive is spread over a period of 34 years. His association with highly reputed multinationals such as Cyanamid and Gillette has honed his management, leadership, and communication skills. He has also been involved in conducting sales training on a national platform.

Saadiyeh Said, Assistant Professor, has an MBA from IBA, Karachi. She has over 20 years of Marketing and market research experience, having worked in organizations like Johnson and Johnson and as Executive Director for Aftab Associates. She has worked as a marketing consultant for Ferozesons Laboratories, Pakistan Ltd. and Shazeb Industries. In addition, she has been actively involved in marketing training programs for various organizations and has undertaken several market research projects at a national level.

Amber Raza, Senior Lecturer, Marketing holds an MPhil and MBA (IoBM) and is part of IoBM’s Doctoral program (Business Management). She has worked with AKESP in the field of Education Research in Pakistan, and was part of the team that developed evaluating and monitoring instruments for the project QUaID (Quality Advancement through Institutional Development). She has seven years experience of teaching at the University level; supporting, 100 plus, students in their research projects which were based on diverse topics with focus on Management and Marketing. She has presented research papers at International (Turkey, Malaysia, India & Australia) and at National Conferences. Her first paper ‘Banks Love MBA’s was published in the IoBM research Journal (Pakistan Business Review) in October 2000. Since then she has contributed a number of research papers in the field of Marketing and Management.
College of Computer Science and Information Systems (CCSIS)

The Dean

Dr. Ejaz Ahmed, Dean of Computer Science Department, has done his PhD in Statistics from the University of Strathclyde, Glasgow, UK and MSc in Statistics from the University of Karachi. He has published many research articles in renowned international journals. He has over 27 years of teaching experience at the University of Karachi and IBA.

Computer Science and MIS

Dr. Abu Turab Alam, Senior Fellow with the rank of Professor of Computer Science, joined the Institute in January, 2004 and is currently teaching courses in Artificial Intelligence, Automata Theory, Natural Language Processing (NLP), Discrete Mathematics and Management Information Systems. His research interest is in Requirements Engineering and elicitation of software requirements for Software Development using NLP techniques. He has a vast experience of research and teaching in various organizations. At NED University, he has worked as a Systems Manager and improved the infrastructure at NED University.

Syed Farhan Mazhar, Assistant Professor in Computer Science, is a professional educator with over 10 years diverse experience in education and professional industry including national and international organizations; like NED University, Concordia University College, Canada, Capital Health, Edmonton, Canada. He received his M.Eng degree in Software Engineering and Intelligent system from University of Alberta, Edmonton Canada. He also possesses M.Sc in Applied Physics with specialization in electronics from University of Karachi, and has also completed his M.Phil course work from Department of ISPA, University of Karachi. His areas of interest are Software Engineering, Semantic web, Data mining, ERP, Database Management System and Project Management. He has also completed his international certification of Oracle (OCP 8/8i/9i/10g and 10g Linux certificate).

Sheikh Muhammad Ali, Senior Lecturer in Statistics, earned his MSc in Statistics from the University of Karachi. He has been involved in research and teaching in Mathematics and Statistics. He has almost eighteen years of teaching experience at various institutes. His areas of interest are Quantitative Analysis for Business and Management, Statistical Inference, Advanced Quantitative Methods, College Algebra, and Calculus for Business Decisions.

Engr. Muhammad Asghar Khan, Senior Lecturer in Computer Science, has a Master’s degree in Network and e-business centered computing from University of Reading (UK), MS in Computer Software Engineering from NUST and BS Computer Engineering from Sir Syed University of Engineering and Technology. He has four years of industrial experience of various national and international organizations. His areas of interest are Network Security; Semi structured Databases and System Virtualization.
Khalid Bin Muhammad, Senior Lecturer Computer Science, has a degree of Bachelor of Engineering from NED University of Engineering & Technology and is a member of Pakistan Engineering Council. He also possesses a Master in Computer Science from University of Karachi and an MBA in Banking & Finance from M.A. Jinnah University with first class first position. He has proficiency in Programming Languages specially Object Oriented Programming, Computer Graphics, Engineering Drawings, Computer Aided Designing, Multimedia Technologies, Relational Database Management Systems and Finance related courses. He has a mix of over thirteen years of experience working in industry including Dawlance (Pvt) Ltd and Pakistan Petroleum Ltd and also served as Manager IT.

Najmus Saher Shah, Senior Lecturer in Computer Science, holds an MCS degree and BSc (Honors) in Economics from the University of Karachi and has secured 2nd position in the department. She has three years of teaching experience.

Muhammad Waqar Khan, Senior Lecturer Computer Science, has a degree of Bachelor of Engineering from NED University of Engineering & Technology and a member of Pakistan Engineering Council. He also possesses a Master in Computer Science from University of Karachi and Post Graduate Diploma in Computer and Information Sciences from Karachi University. He is doing Master in Engineering from Usman Institute of Technology, Hamdard University. He has proficiency in Data Communication and Networking, Digital Communication, Programming Languages, System Analysis and Designing, Information Management System, E-Commerce, Mobile Communication System, Satellite Communication, Signal Processing, Relational Database Management Systems and communication networking related courses. He has a mix of over sixteen years experience of working in industry including Pakistan Telecommunication Company Limited (PTCL) as ADE & D.E, Wateen Telecom Pvt Ltd as Assistant Manager OFC Projects & Operations , Comstar ISA Ltd as System Support Engineer , PEMRA as Assistant General Manager , National University of Science and Technology as Lecturer and worked as a visiting faculty in different institutes and universities.

Mohammed Ather Akhaq, Lecturer, Computer Science has done his M.Phil in Management Information Systems from IoBM. He has also received Mater of Computer Science degree from IoBM. Currently he is focusing on research work and have couple of international publications. His research is mainly focused on information communication technologies.

Asim Iftikhar, Lecturer in Computer Science, holds a Master’s degree in Computer Science and is currently enrolled in MS program leading to PhD. He has also done Microsoft Certified Professional Systems Engineer (MCSE). He has eight years of teaching experience in computer related courses. His areas of interest include Digital Communications, E-commerce & Web Development and Graphics Designing.

Sobia Younus, Lecturer, Computer Science, holds an MSC in pure Mathematics and BSC Honors in Mathematics from the University of Karachi. She is currently enrolled in an MS program leading to PhD Mathematics from KU. She has two international publications in the International Journal of Applied Mathematics and Mechanics, India. She has also taught at NUST as visiting faculty.
Rabab Naqvi, Junior Lecturer holds a Master’s degree in Computer Science from University of Karachi. She has one year of teaching experience in computer related courses. Her areas of interest include Data Base Management System, Digital Computing & Artificial Intelligence.

Mathematics and Statistics

Dr. Syed Iftikhar Ali, Senior Fellow with the rank of Professor, holds MS and PhD from England. He has a vast teaching experience and has worked for SUPARCO, University of Benghazi (Libya), FAST Institute of Computer Science (Karachi) and Yanbu Industrial College, Saudi Arabia. He is a chartered Physicist and Member of Institute of Physics (London). His main interests are in the areas of Mathematics, Physics and Numerical Analysis.

Dr. Massarrat Ali Khan, Senior Fellow with the rank of Associate Professor, holds MSc in Statistics majoring Operations Research from the University of Karachi, MBA from IBA, Karachi and PhD from Hamdard University, Karachi. He possesses 16 years professional experience in private sector industries in Pakistan and abroad in which he worked with companies such as Philips Electric Company of Pakistan, Al-Futtaim Group of Companies, Juma Al Majid Establishment in UAE and NMC(National Management Consultant) Pakistan. He also has more than 19 years teaching experience in different universities and colleges. He taught at IBA Karachi, Hamdard University, ICMAP, Bahria University, CAMS, Textile Institute of Pakistan and has been associated with IoBM for 14 years as visiting faculty before joining the Institute on a permanent basis. He has conducted several marketing research and business development studies in Pakistan and abroad. His areas of interests are Operations Research for Management, Operations and Production Management, Quantitative Analysis for Business and Management, Statistical Inference and Mathematics.

Laiq Muhammad Khan, Senior Fellow, Statistics, holds an MSc in Statistics from the University of Karachi. He has over 35 years experience of teaching Statistics. His research interests are Statistical Modeling and Inferential Statistics. He has published research work in many national journals. He has taught as visiting faculty at FAST, Institute of Computer Science Karachi for the period 1995-2001. He has been associated with IoBM as visiting faculty since August, 2000.

Syed Wajahat Ali, Senior Lecturer in Mathematics, has an MSc from the University of Karachi. He has been involved in research and teaching in Mathematics and Statistics.

Rizwan Ahmed, Senior Lecturer in Mathematics and Statistics, has done his MSc in Statistics and MPA (Finance) from the University of Karachi. He has also done his MAS (Applied Economics) from Applied Economics Research Center, University of Karachi. He has six years of teaching experience at various institutes. His areas of interest are Quantitative Analysis for Business and Management, Statistical Inference, Macroeconomics, Mathematical Economics and Business Finance.
Hina Samreen, Senior Lecturer in Mathematics holds an MSc in Applied Mathematics and Master’s in Applied Economics from the University of Karachi. 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.

Sumaira Khan, Lecturer in Mathematics Department, has compleyed her MSc. in Applied Mathematics from Karachi University. She is enrolled in MPhill leading to Ph.D program in Operational Research from Karachi University. She has taught at NUST and Iqra University. She is the member of Review committee for the First National Conference on Islam and Scientific Research held at FAST-NUCES.

Logistics and Supply Chain Management

Muhammad Moin Uddin Ali Khan, Senior Fellow & Head of Supply Chain Management has BSc and BE degrees from University of Karachi and MS in Engineering from University of Missouri, USA. He has been trained in fields of Operations Management, Quality Assurance, Environmental Management, Supply Chain Management and Technology Management from USA, Japan, UK, South Korea, Sweden, Russia, Brazil and Australia. He has been associated with the industry and education for over 34 years. He is certified lead Auditor ISO 9000 QMS and is actively involved in developing Quality Enhancement activities at IoBM in close coordination with the HEC of Pakistan. His research publications are in the areas of advanced materials and has been guest speaker at American and Malaysian Universities.

Actuarial Science and Risk Management

Dr. S. M. Aqil Burney is professor at College of Computer Science and Information Systems is HoD (AS & RM). He hold M.Sc.(Statistics), M.Phil( Risk Theory and Insurance -Statistics) from University of Karachi (UoK) and Ph.D.(Mathematics) from Strathclyde University, Glasgow-UK along with many courses in Population Studies of UN, Computing. He has taught for more than 40 years at institutions and universities of Pakistan and abroad.He also holds extensive experience of academic management and organization. He was Meritorious Professor at Dept of Computer Science University of Karchi prior to joining IoBM. He has published more than 135 research papers and 7 books nationally and internationally in ICT, Mathematics, Statistics and Computer Science. He has supervised more than 10 PhD and 5 MS/M.Phil in Mathematics/Computer Science/Statistics and approved HEC Supervisor. He is Chairman(elect) National ICT Committee for Standard PSQCA-Ministry of Science & technology Govt. of Pakistan and member National Computing Education Accreditation Council (NCEAC), Member IEEE(USA), Member ACM(USA) and Fellow Royal Statistical Society UK).
Fakhir Musharaf, Assistant Professor holds a Master’s in Business Administration in Finance from the University of Leicester, UK. His PhD in Risk Management from Edinburgh Napier University UK is in process. He has working experience of 24 years and has worked as an Assistant Manager, Accounts in Cotton Export Corporation and Central Depository Company. He was Manager, Finance and Corporate Affairs in Soorty Enterprises. During his PhD, he also worked with Worech International, UK as a Consultant.

Sohail Ahmed Khan, Assistant Professor holds MS in Finance (specialization: Financial Mathematics) from Germany and also holds M.Sc. in Applied Mathematics from University of Karachi. 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, University of Karachi. His research interests encompass Computational Finance, Application of Methods from Financial Mathematics in Insurance, Interest Rate Modeling.

Steve James, Assistant Professor in Actuarial Sciences & Risk Management, joined the Institute in August, 2013. Holds MS degree in Financial Mathematics from Technical University Kaiserslautern, Germany. He has more than five years of teaching experience. He has also worked at Daimler (Germany).
College of Engineering and Sciences (CES)

Electrical Engineering & Telecommunication Management

Seema Ansari, Head of Electrical Engineering Department, has done MS/CS-Telecomm. from University of Missouri, KC, USA and B.E. Electronic Engineering from NED University of Engineering & Technology, Karachi, Pakistan. She is currently enrolled in PhD, Telecommunication Engineering at University of Malaga, Spain. During her academic career, she has been involved in teaching, research, management & administration and has held various positions. She is an author and co-author of 50 plus research papers published in both national and International Journals and magazines also presented papers in conferences. She participated in national and International conferences. She has also contributed as an author of a chapter in a book titled: “Wireless Sensor Networks and Energy Efficiency: Protocols, Routing and Management” published by IGI GLOBAL, USA in Jan. 2011.

Dr. Munaf Rashid, Assistant Professor Electrical Engineering Department, holds BS Electronics degree from SSUET and MS degree in Telecommunication from Hamdard University Pakistan (Gold Medalist). He received PhD degree in Electrical Engineering from Universiti Teknologi Malaysia (UTM). His research study is supported by Malaysian International Scholarship (MIS) program by Ministry of Higher Education Malaysia (MOHE). His research interest mainly lie in high level recognition task, in particular Human Action recognition, Emotion recognition systems, Image and Video retrievals and Machine learning. He served as a session chair for (IACSIT 2010) IEEE Conference in Singapore. He is a member and researcher of Computer Vision, Video and Image Processing (CVVIP) research group. He is the author of many scientific papers published in highly reputed international journals and conferences.

Mujtaba S. Memon, Senior Lecturer, Telecommunication, holds an MSc degree in Communication Technology and Policy from the University of Strathclyde, UK and a BE degree in Electronic Engineering from NED University. He has also completed an Advance Diploma in Software Engineering from Aptech Computer Education. He holds four years of professional experience in organizations like IZON, CYBIZSOL, EURO Support Services and Thistle Hotels.

Waqas uddin Qazi, Lecturer, Telecommunication, holds an MSc degree in Telecommunication Engineering from Staffordshire University, UK and a BE degree in Electronic Engineering from PAF- Karachi Institute of Economics and Technology. He has also completed CCNA course from the Xpedient Institute of Technology. He holds three years of professional experience in Pakistan State Oil. Currently Mr. Qazi is engaged in teaching Courses of Electrical Network Analysis, Linear Control System, Computer Architecture and Organization, Computer Concepts, Computer Concepts and Applications

Osama Mahfooz, Junior Lecturer, Telecommunication, holds an MBA degree in Telecommunication Management from the Institute of Business Management (IoBM) and BE degree in Electronics from the PAF-Karachi Institute of Economics & Technology. He has completed a CCNA Exploration certification from Aptech. He also has four research publications in journal of CCSIS, IoBM recognized by HEC that is PJETS (Pakistan Journal of Engineering Technology & Science)
Radha Mohanlal, Lab Engineer in the Electrical Engineering Department, holds a B.E degree in Telecommunications from N.E.D University of Engineering and Technology. She is enrolled in M.S (Telecommunications) in N.E.D. She has done project work on AODV Ad-Hoc Routing Protocols using remote access to a real test bed environment to perform real-time simulations and analysis. Her area of interest is Computer Networks, Networking Protocols, Information Theory as well as Wireless and Mobile Communications.

Industrial Engineering

Dr. Mohammad Irshad Khan, Senior Fellow and Head of the Department of Industrial Engineering with the rank of Professor, holds a PhD degree in Chemical Engineering and a Postgraduate Diploma from University of Bradford, UK. He has over 30 years experience of Industry and Management and is a registered consultant of the Islamic Development Bank, Jeddah and SMEDA, Pakistan. He is a professional member of Institute of Industrial Engineers, USA.

Mukhtar Ahmed, Senior Fellow, Industrial Engineering, has MS (Mechanical Engineering) from the University of Southern California, Los Angeles, USA and BE (Mechanical Engineering) from NED. He has teaching experience of almost 23 years and started his teaching career with NED where his last appointment was as Associate Professor. He also went to Zimbabwe, Harare Polytechnic as Lecturer. He has 4 years working experience with Roti Corporation of Pakistan as Deputy Manager, Technical.

Fahad Bin Abdullah, Lecturer Industrial Engineering, holds an MSC From University of South Bank- London. He has speacialized in Mechanical Engineering Management, Robotics and Simulations, Advanced Materials and Advance Human Machine Designing. He Holds a BE Mechanical Engineering Degree from NED University. He has the Project Coordination and Maintenance Engineering experience mainly related to field of Mechanical Engineering & Management

Falak Shad Memon, Lecturer Industrial Engineering, holds an MBA degree from Institute of Business Management She has done B.E (Industrial & Manufacturing) from NEDUET. She also has six years of industrial experience as a head of production and purchase department. She is certified ISO lead auditor and posses expertise on SAP in PP, MM and CO module.

Saima Yaqoob, Lab Engineer / Assistant Lecturer, holds a B.E degree in Industrial & Manufacturing from NEDUET, secured 9th position among the graduating batch of hundred and twenty students. She has two years of professional experience with Multinational Organization “YKK Pakistan Pvt ltd” & one year of teaching experience. She is currently enrolled in M.E Industrial Management in NEDUET.
College of Economics and Social Development (CESD)

**The Dean**

**Dr. Mohammad Ali Shamim**, Dean of College of Economics & Social Development, has a PhD in Civil Engineering from the University of Paris, France and an MBA from INSEAD, Fontainebleu, France. 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 working as the Managing Director & Chief Executive of a cement plant project.

**Commercial and Professional Studies**

**Mohamed Aslam Dossa**, Head of the Department of Commercial and Professional Studies, is a qualified Chartered Accountant and a Chartered Management Accountant (England). He has held senior management positions in Pakistan, England, Tanzania and Canada, besides having over 10 years of teaching experience. He was part of the ICAP team for development of the Code of Corporate Governance adopted by SEC Pakistan, and has been a member on ICAP’s Public Sector Committee. He is currently President of the Rotary Club of Karachi South.

**Abdul Jabbar Kasim**, Senior Fellow, Commercial and Professional Studies, brings a rich blend of corporate, professional and academic experience. Besides heading listed leasing companies as a CEO and member board he has taken seats as nominee director on various Corporate Boards. He obtained his B.Com from University of Karachi and went to IBA Karachi to earn his BBA (Hons) and MBA degrees. His main emphasis during the last several years is on Corporate Governance and Best Business Practices and Corporate Affairs. His articles on the said subject appear in the Daily Dawn and Business Recorder. He joined IoBM as a full time faculty in October 2011.

**Sartaj Qasim**, Assistant Professor, Commercial and Professional Studies did his MBA from the Institute of Business Administration, Karachi, in 1979 and FCMA from U.K. in 1992. He has over thirty years of experience in international aviation financial management. He has been posted in the Netherlands and Saudi Arabia and visited several countries in Europe, America and Asia on official assignments. In addition to his academic qualifications, he holds several airline industry qualifications from IATA including the IATA/UFTAA International Travel Consultant Diploma. He takes keen interest in training and staff development and is a member of the Chartered Institute of Logistics and Transport, U.K. He has conducted several training courses in airline finance and accounting.

**Ghulam Murtaza Korai**, Lecturer, Commercial and Professional Studies holds an MBA degree in Finance from IBA University of Sindh, Jamshoro, LLB from SM Govt. Law College University of Karachi, and ICFE (International Certificate in Financial English) from Cambridge ESOL UK. He is also doing his LL.M from SM Govt. Law College University of Karachi. His research interests are in the areas of Company Law, Corporate Governance and Intellectual Property Rights. He has five years of teaching experience at ICAP affiliated Institutes. He has undergone various training workshops in the field of Corporate Law.
Economics

Dr. Shahida Wizarat, Director Research, Chief Editor PBR and Head of the Department, Economics and an MS/PhD Coordinator, is an independent economist and has been involved in research, teaching and administration. Her areas of interest are industrial economics focusing on industrial productivity, its determinants; concentration and profitability; development economic issues; economic policies; debt and its management. She is the author of forty five research papers and articles published in journals of international repute in Pakistan and abroad. She has organized, attended and read papers at several international and national conferences. She earned an MA in Economics from Vanderbilt University, USA and her Ph D in Economics from the University of East Anglia, Norwich, England. She has served as the Editor of the Pakistan Journal of Applied Economics and Director of the Applied Economics Research Center, University of Karachi. She has also served on the Board Directors of the Karachi Stock Exchange. She is also on advisory boards and research councils of several organizations and universities. She has authored over forty five publications within the country and abroad.

Muhammad Ajaz Rasheed, Assistant Professor in Economics, earned his MPhil in Economics from the Institute of Business Management, an MAS (Applied Economics) from Applied Economics Research Center (University of Karachi) and MSc (Statistics) from the University of Karachi. He has 20 years professional and teaching experience in the area of Statistics, Economics and Computer Science. He has taught at the University of Karachi and University of Balochistan. He has worked with Social Policy and Development Center as a researcher. His research primarily focuses on Macro-Economic Modeling and Monetary Economics. He has published research papers in national and international journals. He has also contributed to the Sindh Economic Survey. He has been a member of FPCCI’s standing committee on research and development from July 2005 to June 2007.

Mirza Aqeel Baig, Assistant Professor in Economics has an MPhil in Economics from the Institute of Business Management, MAS in Applied Economics from AERC, University of Karachi and a Master’s degree in International Relations. He has over ten years teaching experience at various business institutions. His research interests are in the areas of Monetary Economics and Macro Economics. His research papers have been published in PBR and journals of the Statistics Department of the University of Karachi. He has also contributed papers in the Sindh Economic Survey and the 2nd international Sindh Conference at IoBM.

Ch. Sohail Ahmed, Senior Lecturer, holds an MSc (Statistics) from KU, MPA from IBA, and MAS (Economics) from Applied Economics Research Center, Karachi. He also holds PGD (Computer Science) from the University of Karachi. His research primarily focuses on International Trade and Econometrics. He is pursuing his MPhil Degree in the area of International Trade. He has served for 18 years of at various public and private academic institutions.

Muhammad Zubair, Lecturer in the department of Economics holds Master degree in Economics & Finance from the University of Karachi. He has also secured his post graduate diploma in Economics & Finance and B.A (HONS) with Economics and statistics From University of Karachi. He is also enrolled in M.Phil in IoBM. He has experience of 4 years of Broadcasting with Radio Pakistan in the capacity of Business anchor and reporter covering economic policy and stock market etc. He is contributing regularly his article on economic issues in renowned newspaper Express Tribune from 2 years.
Qazi Muhammad Adnan Hye, Research Fellow, Economics, has MPhil (Economics) from Applied Economics Research Centre (AERC), University of Karachi. He also has MAS (Economics) from AERC and Masters in Economics from Islamia University of Bahawalpur. He has 34 publications to his credit out which 31 are international and 3 are local publications.

Irfan Lal, Research Fellow in Economics, is currently enrolled in M Phil Program at IoBM. He has done MAS from Applied Economics Research Centre, University of Karachi and MA (Economics) University of Karachi.

Sabeen Anwar, Research Associate (Economics), holds MAS (Applied Economics) from Applied Economics Research Center (University of Karachi) and MSc (Hons) from the University of Karachi. She has two international publications. Her M.Phil (Economics) is in progress from IoBM.

Zia Ullah, Research Associate, has MAS from Applied Economics Research Center University of Karachi and MSc in Economics from Quaid-i-Azam University Islamabad. Research Areas includes International Economics and Macroeconomics.

Education

Prof. Dr. Nasreen Hussain, (see profile on page No. 179)

Dr. Muhammad Yousuf Sharjeel, Associate Professor and Head of IoBM City Campus holds a PhD in Measurement & Evaluation and B.Ed, M.Ed and M.Phil from Hamdard University. He was awarded three gold medals for his Bachelor, Master and M.Phil degrees in education and social sciences. He also holds professional certifications from Bradford and Cambridge Universities, U.K. He has conducted several professional HEC & NTS workshops on Training of Trainers and Faculty Development Programs across Pakistan. Besides, he has conducted seminars and workshops for British Council and many public sector universities including University of Karachi. He has presented his research papers at many national and international conferences. He received training from abroad on different educational testing and social sciences programs. He was awarded the professional teaching license in 1989 by the Ministry of Education, U.A.E

Samra Javed, Assistant Professor, Education and Manager, Entrepreneurship& Management Excellence Center (EMEC), holds a Master’s degree in English Language and Literature from Government College, Lahore. She has also completed In-service Certificate in English Language Teaching, which is an advanced English language teaching certification awarded by Cambridge, ESOL. In addition, she has worked as the Academic Coordinator of the Society of Pakistan English Language Teachers. She has been involved in research on various aspects of teaching and learning. She is currently pursuing her PhD in Social Sciences with specialization in Education. In addition, she is a trainer in communication skills and proposal writing.

Shelina Bhamani, Coordinator, Associate Degree in Education (ADE) and Lecturer in Education and Social Sciences, holds a Master’s degree in Education. She has recently received certification in Science of Early Childhood Development from Red River University, Canada. She has also completed her Advance Diploma in Human Development and Child Development. In addition to In-service Certificate in English Language Teaching, an advanced English language teaching certification, awarded by Cambridge University and an International Graduate Certificate of Education, Australian Catholic University. Moreover, she is a recipient of gold medals and international travel/study grant scholarships. She has worked as project consultant on many national and international projects. She has been involved in research on various aspects of teacher education and early childhood development. Ms Bhamani is currently pursuing her Research Degree in Education.
Center for Policy and Area Studies

Dr. Sahib Khan Channa, Senior Fellow, has Bachelor of Arts, Bachelor of Law, Master of Arts and Doctorate degrees from the University of Sindh and Post-Doctorate in Political Science from the Arkansas State University, USA. He has over 40 years of administrative, teaching and research experience, having served as Professor and Principal of some prestigious colleges of Karachi, besides holding various senior level positions in the Education Department, Government of Sindh. Recognized as a prominent historian/writer of Sindh by literary circles within the country and abroad, Prof. Channa has contributed a number of research articles to renowned research journals published by different departments/institutes of Sindh University. He has been a member of the Senate, Syndicate and Selection Board of the University of Karachi, also a member of the Senate of almost all the public universities of Sindh as well as member of the Board of Governors of all the Boards of Intermediate and Secondary Education in Sindh. Western, Central and South Asian political and strategic studies are his main research interests.

Urfi Khalid, Senior Fellow in Pakistan Studies, holds an MA in Physical and Political Geography from the University of Punjab, Lahore. Prior to her current assignment, she was associated with Institute of Business Management as visiting 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. Her research paper has been 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.

Business Psychology

Dr. Nadia Ayub, Head & Associate Professor of Department of Business Psychology earned a Doctor of Philosophy in Psychology from the University of Karachi, Pakistan. She is HEC approved PhD Supervisor and supervising number of MPhil & PhD thesis at IoBM. Her research focuses on social problems, adolescents, organizational issues, personality, family and marriages, and Psychometrics. Her researches appeared in Journal of Immigrant and Minority Health, Japanese Psychological Research, Journal of Child & Adolescent Mental Health, The International Journal of Interdisciplinary Social Sciences, Asian Journal of Distance Education, Pakistan Business Review, Journal of Alternative Perspectives in the Humanities and Social Sciences, Asian and Culture History, Pakistan Journal of Clinical Psychology, and other journals. She has published more than 20 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, European Journal of Business & Social Sciences, Journal of Pakistan Psychological Association, Universal Research Journal, and Pakistan Business Review. She has worked on research project on Community Health Sciences at the Aga Khan University and Hospital. She has organized, Third Annual Conference on Industrial and Organizational Psychology: Better Organizations through collaboration in Education, Research and Practice, and First National Conference on Application of Social Sciences in Pakistan at the Institute of Business Management. She is the member of HEC National Curriculum Revision Committee of Psychology. She is recipient of Group Study Exchange Program Fellowship 2011 for Pennsylvania, USA, hosted by the Rotary Foundation International. She received HEC Best University Teacher Award for 2011.
Dr. Linah Askari, Assistant Professor Psychology, Department of Business Psychology is a psychologist with vast academic and professional experience of behavioral, organizational, clinical and business psychology spanning over 18 years. She holds a PhD in Psychology from the University of Karachi and was awarded gold medals both in MSc Psychology and Post Magistral Diploma in Clinical Psychology from the University of Karachi. She is a recipient of ‘Star Laureate Award” in 2006 from ‘Who’s Who in Pakistan’. She has introduced the latest ‘Attitudinize Psychotherapy’ recognized internationally through paper presentations at conferences and research publications. She is also the co-editor of “Handbook of Counseling and Psychotherapy in an International Context”.

Dr. Sehar Hassan, Assistant Professor, Business Psychology, holds a PhD in Psychology from the University of Karachi. She has published 12 research papers out of which 2 were published in International Journals, like Indian Journal of Social Sciences and Official Journal of the World Psychiatric Association. She has also written a few chapters for two books “Pakistan Earthquake 2005 – The Day, the Mountains Moved” and ‘Wars, Insurgencies and Terrorism – A psycho-social perspective published by Oxford University Press. She holds full time teaching experience of approximately 1 year initially as Lecturer and then as Assistant Professor at Jinnah Women University, Rawalpindi. She has a part time clinical experience of 9 years and as visiting faculty for two years at PECH College and at Jinnah Post-graduate Medical College, Karachi. She has a special interest and training in the field of Trauma Psychology and has also designed and introduced Disaster and Emergency Management training courses.

Sadia Aziz Ansari, Senior Lecturer in Psychology earned her Master’s degree from the University of Karachi. She also holds a Post- Magistral Diploma in Clinical Psychology from Bahria University, Karachi. Her academic and research potential brings her to IoBM, where she continues to engage in research projects. Her research proposal entitled “Glass Ceiling at Call Centers in Pakistan” was funded by ILO. She has presented research papers at national and international conferences. In addition to that, she has more than two years of clinical experience at various reputable organizations. Her research primarily focuses on psychological assessment and development, employee attitude, positive psychology and emerging issues in applied psychology. Her current research projects focus on reward and compensation in the telecom industry, Karachi, and cross-cultural validation of Ryff’s Scale of Psych.

Islamic Studies / Philosophy Unit

Asad Shahzad, Assistant Professor in Philosophy Unit, has earned his MA in English Literature from the University of Karachi. He has received intensive training from SPELT under Cambridge University. He has taught at several educational institutions before joining IoBM. He writes for different newspapers on religious, political and social issues. He has presented several papers at national conferences on the topics of Unique Equilibrium of Free-Will and Determinism in Rumi’s writings and “The Impact of Fantastic Advertisement of Consumer Goods on the Mental Health of Society” His paper “Iqbal’s Idealist Critique of Hawking’s Materialist Concept of Time” was published in Iqbal Review, April 2008 issue; and “Incoherences in Konrad Lorenz’s Concept of Aggression” in PBR. Currently, he is involved in research in the area of the philosophy of globalization.
Media Studies

Ejaz Wasay, Head of Media Studies and Senior Fellow Marketing at the Institute of Business Management (IoBM), has over 37 years of industry experience in the fields of Marketing, Corporate Communications and Advertising. He has worked with several leading local companies and MNCs including United Bank Ltd. (UBL), Orient McCann-Erickson, Unilever, Glaxo, Philips and Gillette, and held senior level positions. With Gillette over 10 years, from 1984 to 1994, he worked in Pakistan, Brazil and was last based in Dubai – UAE as Marketing Manager Middle East. He has been a visiting faculty at IoBM since 2005 and joined as Sr. Fellow Marketing on January 1, 2011. Ejaz Wasay has been Council Member, Marketing Association of Pakistan (MAP) for several years, and its President in 2005.

Sabeen Jamil, Lecturer, Media Studies, holds an M.A in Mass Communication from University of Karachi and is pursuing MBA in Advertising and Media Management from IoBM. She has worked as a journalist at a leading English language newspaper and has been contributing to leading newspapers and magazines including The News, Dawn, Express Tribune and Newsline for three years now. She has been associated with a private university as a faculty before she joined IoBM in September 2011.
**VISITING FACULTY AT INSTITUTE OF BUSINESS MANAGEMENT (IoBM)**

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<th>Name</th>
<th>Qualification</th>
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<tr>
<td>Aamir Abbasi</td>
<td>MBA Finance, MSc Nuclear Physics</td>
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<td>Abdul Basit</td>
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<td>Abdul Hamid Khan</td>
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<td>Abdul Khaliq Aboya</td>
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<td>Amir Zia</td>
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<td>Amjad Hussain</td>
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<td>Dr. Amir Iqbal</td>
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<td>Noman Ahmed Siddiqui</td>
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<td>Noman Nasir</td>
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<td>Nuzhat Khan</td>
<td>MSc, (Analytical Chemistry)</td>
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<td>Sanam Aftab</td>
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<td>Shah M. Saad Hussain</td>
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<td>Shahzad Naeem</td>
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<td>Sheikh Abdul Qadir</td>
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<td>Shoaib Ahmed</td>
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<td>Sohail Sawani</td>
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<td>Syed Aqeel Zafar ul Hassan</td>
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<td>Syed Baber Ali</td>
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Syed Haris Hassan  
BS, (Sir Syed University)

Syed Khaleeq Ahmed  
MBA, FCMA, LLB, DAIBP

Taqi Shaheen  
Bachelors of Arts, (NCA)

Tariq Aziz  
MBA, (USA)

Tariq Saeed  
MBA, (Preston)

Yousriyah Mukry  
MBA in Marketing, (LUMS)

Zahid Khan  
MBA, (IoBM)

Zaki Anwar  
MBA, (IoBM)

Zulfiqar Jafer  
Chartered Accountant

Zarar Rahim Zubair  
MBA, (IBA)
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. Shahjehan S. Karim, President, Institute of Business Management has worked in the Civil Service of Pakistan for over 37 years, holding a number of senior positions with the Government of Pakistan and the Government of Sindh. He has also worked with the United Nations Organization as an International Civil Servant for almost a decade. He is a graduate of the University of Arizona, USA and also studied Public Administration at Cambridge University, UK; Transportation Management at the University of British Columbia, Canada and is a fellow of the Economic Development Institute of the World Bank. Mr. Karim is the Founder President of the Foundation for Higher Education and the Institute of Business Management.

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

Talib Syed Karim
Rector, IoBM & Executive Director
Academics, Corporate Affairs & EMEC
BS, Systems Engineering, University of Arizona, USA
MA, Economics, University of Arizona, USA

Manzoor Hussain Bhutto
Advisor to President
MA, Economics, (KU)

Dr. Akhlaq Ahmed
Advisor to President
MSc, (University of Karachi)
PhD, (Exeter University, England)

M. W. Jahangir
Senior Manager & HoD
Corporate Affairs
B.Com., (Sindh University), CA Finalist (ICAP)
Muhammad Misbahuddin  
Senior Manager & HoD  
HR & Administration  
MBA, (PIMSAT), LLB, (KU)

Maqsood Ahmed  
HoD, Internships & Placements  
MBA (IBA)

Nazir Ahmed Shaikh  
Controller of Examinations  
MSc, (University of Sindh)

Aslam Kurban Ali  
Senior Manager & HoD  
Finance, ACMA

Pervez Jamil  
Manager, Public Relations  
MA, (KU)

Syed Aley Ahmed  
Project & Maintenance Manager  
BE Civil, FIE, PE

Maj (R) Arif Sultan Khan  
Manager Purchase  
Graduate of PMA, Kakul

Samra Javed  
Manager, EMEC  
MPhil in Social Sciences (SZABIST)

Dr. Syed Shahanshah Hasan  
Medical Advisor & Incharge SAC  
MBBS (Dow Medical College)

Shaikh Muhammad Sharif Nasir  
Senior Assistant Librarian  
MILIS, (KU)

Imdad Ali Mugheri  
Incharge Admissions  
LLB (KU), MBA (University of Sindh)

Malik Barolia  
Senior Assistant Manager Accounts  
MBA (MAJU), ACMA-II
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<tr>
<th>Name</th>
<th>Position</th>
<th>Education/Qualification</th>
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<td>Saeed Mukhtar A. Siddiqui</td>
<td>Senior Assistant Manager, IT</td>
<td>MBA (Missorui)</td>
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<tr>
<td>Azam Hashmi</td>
<td>Course Coordinator</td>
<td>MBA (IBA)</td>
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<tr>
<td>Lt. Cdr. (R) Sartaj Hussain</td>
<td>Incharge Security</td>
<td>BA (Islamabad)</td>
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<tr>
<td>Syed Suleman Jaffer Hatimi</td>
<td>Proctor &amp; Chief Protocol Officer</td>
<td>BA (KU)</td>
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<tr>
<td>Nadeem Ahmed Khan</td>
<td>Assistant Manager, Internal Audit</td>
<td>MBA (Baqai) CIMA Finalist (England)</td>
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<tr>
<td>Muhammad Adnan</td>
<td>Assistant Manager, IT</td>
<td>MBA, MIS (KU)</td>
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<td>Muhammad Hassan Sayeed</td>
<td>Senior Admissions Officer-II</td>
<td>MBA (New Port University)</td>
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<tr>
<td>Humayun Rashid</td>
<td>Senior Sport Officer-II</td>
<td>MSC, MA &amp; BEd (KU)</td>
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<tr>
<td>Masood Hasan</td>
<td>Senior Accountant-II</td>
<td>MBA (Biztek)</td>
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<td>Mehmood Ahmed</td>
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<td>Muhammad Masood Khan</td>
<td>Senior Personnel Officer</td>
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<td>Abdul Khaliq</td>
<td>Senior Officer, Internship &amp; Placement</td>
<td>MBA (IBA), LLB (Hyderabad)</td>
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<td>Senior Maintenance Officer</td>
<td>Diploma of Associate Engg.</td>
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<td>Mehtab Alam</td>
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<td>House Keeping Officer-II</td>
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<td>Vara Syed</td>
<td>Student Counselor &amp; IR Officer</td>
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<td>Samiullah Khan</td>
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<tr>
<td>Faraz A. Khan</td>
<td>Officer, Corporate Affairs</td>
<td>CA, Finalist</td>
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COURSE DESCRIPTIONS
The courses offered by the Institute, covering a wide range of fields, are especially designed to help students gain an insight into the subject matter. The contents of the courses not only cover an international perspective of the concept taught but also place a special emphasis on the local/national content.

Course Abbreviations and Sequence

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- Please note that this list is subject to change. Details of courses, including information about the course activities and scheduling are distributed by the faculty at the time of registration.
- Students should ensure that they complete the Pre-requisite courses before opting for advanced level courses.
Accounting

ACC101/402 Introduction to Financial Accounting
This course is aimed at people with no or limited prior knowledge and provides an understanding of how financial statements are prepared for various types of organizations. The principles of financial accounting course focuses on the record-keeping and financial statement preparation process.

ACC102/103 Introduction to Financial Accounting I & II
The objective of these courses is to enable students to understand fundamentals of accounting theory and apply it to basic financial accounting.

ACC104 Cost and Management Accounting
This course covers the understanding of cost concepts, cost classifications, flow of costs stream, costing methods and accounting of elements of costs.

ACC201 Intermediate Financial Accounting
This course covers all aspects of corporate accounting, analysis of financial statements and specialized accounting for leases, construction contracts, inflation and taxation.

ACC202/204 Taxation I & II
The aim of these courses is to develop basic knowledge and understanding in the core areas of income tax and its chargeability as envisaged in the Income Tax Ordinance 2001 and the Income Tax Rules 2002 (relevant to the syllabus), Sales Tax Act 1990 and the Sales Tax Rules (relevant to the syllabus).

ACC203/304 Financial Accounting I & II
These courses are designed to provide understanding of accounting methods, and procedures as followed by business organizations. These cover the accounting process of classification, summarization, presentation in the light of International Accounting and Financial Reporting Standards.

ACC301/401 Introduction to Managerial and Cost Accounting
The course is designed to make students familiarize with product costing systems, including job order costing, process costing, joint products and by-products. The course also covers budgetary planning & control systems including standard costing and variance analysis, cost/volume/profit analysis, performance measures evaluation, etc.

ACC302 Accounting and Financial Information Systems
This course provides an understanding of computer based accounting and hands on training of application of accounting package.

ACC305/415 Cost Accounting I & II
These courses are designed to provide students an understanding of the importance of the role of cost accounting in planning and controlling the wide range of organizational and manufacturing cost.

ACC405 Internal Auditing and EDP Accounting
This course covers the understanding and application of internal auditing tools and techniques and information system for management of risk and security system.

ACC410 Management Accounting
This course deals with the performance evaluation, decision making and control aspects of business. It creates an understanding of cost concepts, principles, tools and techniques of management accounting for performance measurement, operational and investment decisions and cost controls.

ACC413 Managerial Accounting
This course is designed to familiarize students with product costing systems including job order costing, process costing, joint products and by-products. The course also covers budgetary planning & control systems including standard costing and variance analysis, cost/volume/profit analysis, performance measures evaluation, etc.

ACC414/416 Auditing I & II
The purpose of these courses is to give students theoretical and to a limited extent, technical knowledge and skills of auditing and review of historical financial information. It will provide a foundation for acquiring intensive knowledge required for professional competence.

ACC417 Corporate Reporting
This is an advanced course in the field of Financial Accounting. The course includes preparation of financial statements, consolidated accounts and their disclosures; accounting for investment in subsidiaries and associated undertakings; reporting on investments in joint ventures.

ACC418 Performance Measurement and Decision Making
The main aims of this course is understanding of cost accounting in relation to management functions, application of financial information for control purposes; development and interpretation of data for decision making techniques of performance appraisal and operational research.

ACC501 Advanced Financial Accounting
The course will enable students to understand and learn accounting aspects of topics in partnership, head office/branch relationship, installment sales, business combinations, foreign currency translation and bankruptcy and liquidation.

ACC502 Advanced Managerial Accounting
This course covers the use of accounting data for managerial decision, control and planning purposes and provides in-depth analysis of various techniques and methods used by managers.
ACC503  Taxation
Tax law is studied with a special emphasis on what constitutes taxable income and allowable deductions for individual tax payers. The course also includes a comprehensive coverage and treatment of taxes as related to business profits.
Pre-requisite:  ACC 201

ACC505  Auditing
This course covers the understanding of audit techniques, rules, principles and procedure and their application in the audit of financial statements, relevant records and source documents.
Pre-requisite:  ACC201/402

ACC506  Analysis of Financial Statements
The course begins by describing accounting standards of USA and international accounting standards with a special focus on developing students’ capability to standardize various companies’ financial statements.
Pre-requisite:  ACC 402/501, FIN202

Advertising

ADV401  Principles of Advertising
The course provides working knowledge of advertising while giving an insight into various tools used for advertising to sell goods and services. The students will analyze the current issues facing the business of advertising and the environment in which it operates.

ADV402  Advertising Management
The course investigates the nature & scope of advertising and its place within marketing strategy decisions and society. The students will learn the methods of planning, preparing, placing and evaluating an advertising message in the applicable media.
Pre-requisite:  ADV401, MKT401

ADV403  International Advertising and Promotions
An intensive analysis of theoretical concepts and the practice of international advertising. The course also covers environmental considerations in international advertising, planning and execution of advertising worldwide, and the role of media in the debate surrounding standardization versus localization of worldwide advertising campaigns for consumer/industrial products and services.
Pre-requisite:  MKT 401/509/532  ADV401/402

ADV406  Advertising Strategy
A study of the theoretical foundations and the process of developing advertising and promotional strategies; methods of utilizing research data for developing and evaluating advertising strategy.
Pre-requisite:  ADV401/402/405, MKT401/509

ADV407  Creative Production
The course gives an insight into the competing factors of “brilliant instinct” as opposed to the disciplines of the marketing process; the diligence of research & its interpretation; strategic thinking & an understanding of positioning and brand identity, the considerations for cost effectiveness and the necessity for teamwork.
Pre-requisite:  ADV401/402/405/406, MKT509

ADV408  Client Management
The course will provide opportunities to practice advertising management by analyzing and discussing situations that arise in the course of advertising management and create future advertisers who have good command over strategic thinking, creative analysis and client management.
Pre-requisite:  ADV401/402, MKT509/527

ADV409  Advertising Campaign
A presentation of the skills, necessary to design, implement and manage advertising campaigns, with an emphasis on planning and decision making procedures applied to specific advertising problems.

ADV501  Creative Management
The course provides an understanding of the purpose and process of developing creative work in an advertising agency and all relevant issues in the creative process from brief to market success.
Pre-requisite:  ADV401/402

ADV504  Advertising Management and Strategy
The course is designed to give students an appreciation of the critical role that strategy plays in advertising. The need for adopting a strategic perspective, in the contemporary context, and carrying it through the creative process, media planning, campaign implementation and monitoring of results shall be discussed. The course will include a practical approach towards developing advertising and promotional strategies, using selected cases and to understand the application of tools and techniques that make advertising more effective.
Pre-requisite:  MAN401, MKT532

ADV505  Creative Planning and Development
The course will help the students generate fresh, unique and appropriate ideas that can be used in advertising and learn tactics to improve on advertising campaigns including developing central selling points and creating a brand image. The course will give an insight into the steps involved in the process of creativity.

ADV506  Media Performance and Product Development
This course teaches the students about developing an entirely new media outlet, be it print or electronic. This course also teaches students to track the effectiveness, importance and challenges for media managers through case studies that encourage students to apply the text matter to contemporary issues.

Actuarial Science

ARM501  Stochastic Process/Modeling
The aim of the course is to acquaint students with the use of probability theory to study models of phenomena with a degree of unpredictability about them, such as queues and population growth. Discrete and continuous time Markov chains, Poisson processes, random walks, branching processes, first passage Probability generating functions. Limiting probabilities, Branching processes, Exponential distribution: definition and properties, memory less property. Continuous-time Markov chains: definition. Birth and death processes. Chapman-Kolmogorov and Kolmogorov equations. Limiting probabilities. Balance equations.
Pre-requisite:  STA205
ARM601/602 Models of Financial Economics I & II
This course aims to provide the complete understanding of pricing of various types of options, Modelling of stock prices, Binomial Tree distribution, Risk neutral Pricing, Brownian Motion, Interest rate Modelling. MFE is the compulsory exam (paper-III) for the Associate Actuaries exam conducting by Society of Actuaries (SOA) USA. After completing the course students are fully prepared for the SOA (USA) examination.
Pre-requisite: ARM601/FIN509

Communication

COM102 Business Communication I
This course provides students with the fundamentals of effective writing which can be applied in other courses, and in any correspondence required of them in their future occupations. Students will be able to create business messages for specific purposes and for solving real life business communication problems.
Pre-requisite: COM 101

COM103 Functional English I
The main objective of this course is to help students to write simple sentences correctly. The course gives students the opportunity to read topics of interest and simulate real life situations. It also aims at developing vocabulary, grammar and punctuation skills.

COM104 Functional English II
The objective of this course is to help students communicate effectively in English language through the correct use of grammar and mechanics. It will provide a basis for composition and comprehension through practical use of the above.

COM105 Business Communication and Behavioral Studies I
This course is designed to give students an understanding of behavior of individuals and groups in all types of organizations and as to how organizations to achieve their goals.

COM106 Business Communication and Behavioral Studies II
The course aims to introduce students to the key concepts of business communication and their application. The course also intends to incorporate an understanding of the concepts of organizational behavior to develop problem solving and negotiation skills as well as leadership qualities in students.

COM107 Academic English
This course has been designed to enhance the students’ understanding and use of writing and critical reading skills thereby inculcating a maturity of thought appropriate to students’ needs in the freshman year. It examines the relationship between critical reading, critical thinking and analysis of issues from multiple perspectives.

COM108 English I
The course has been designed to improve the four English language skills at the tertiary level. The course includes reading texts from newspapers and magazines to enable students to communicate with adequate fluency and accuracy.

COM109 English II
This course includes readings from selected contemporary literature and exposes students to a variety of writing styles in order to improve command over the English language.
Pre-requisite: COM 108

COM202 Business and Professional Speech
The course applies the theories and principles of informative and persuasive business speech. Students learn to apply these skills in public speaking, meetings, interviewing, and group interaction. The course also aims at developing arguments to persuade with logic and reason in business related issues.
Pre-requisite: COM 201/203

COM203 Methods in Business Writing
The course aims at developing business writing skills in order to produce effective letters, memos, job resumes, and short reports. It develops tools for critical thinking to improve business communication and decision-making.
Pre-requisite: COM 201

COM204 Interpersonal Communication Skills
This course is primarily designed for the practitioner who provides services to agencies, professionals, or organizations. The purpose of the course is to provide an understanding of the process of organizational consultation. The course focuses on the essential skills and abilities needed for successful consulting to organizations.
Computer Engineering

CME102  Fundamental of Computing
This course is designed to provide the computer and programming foundation for all computer science and engineering students. The language used in this course C++. Topics include: introduction to computers, computer programs, and C++, semantics and syntax, data types and variables, assignments, Boolean expression, programs testing and debugging, concepts of algorithms design and implementation, program structures: selection and control loops constructs, functions, arrays, pointers and strings.

CME104  Computer Programming and Problem Solving
The course includes the basic concepts of object-oriented programming, functions, classes, linked list, procedures, Data Abstraction, Inheritance and Polymorphism, Filing Concept, Data Retrieval and saving into Binary and Text files.

CME200  Computer Aided Engineering Design
Introduction to computer-aided design tools including AutoCAD, OrCAD, MATLAB, Lab VIEW, and PCAD. Provides an understanding of computer-aided drafting principles and practices, and provide knowledge of engineering drawing fundamentals using AutoCAD.

CME205  Microcontroller and Microprocessor Systems
Introduction to microprocessor and microcontrollers, basic concepts, control unit, internal registers, ALU of an 8-bit or 16-bit microprocessor, timing and sequencing, peripherals And interfacing, memoryand/Synchronization, waitstate, hardware single stepping, memory speed requirements, logic levels, loading and buffering. Understanding the instruction set, data transfer, logic operations and branching, programmed I/O interrupts, Microprocessor system design, machine code and assembly language programming.

Pre-requisite:  ELE201

CME301  Computer Communication and Networks
To help the students gain an understanding of the terminology and standards in modern day computer networks. To make the students understand communication basics, networking and network technologies; with emphasis on data and computer communication within the framework of the OSI and TCP/IP protocol architectures, internet and internetworking and how to apply these in the design and analysis of networks.

CME414  Digital Image Processing
This course emphasizes general principles of image processing, rather than specific applications. The topics covered are as image sampling and quantization, color, point operations, segmentation, morphological image processing, linear image filtering and correlation, image transforms, Eigenimages, multiresolution image processing, wavelets, noise reduction and restoration, feature extraction and recognition tasks, and image registration.

Pre-requisite:  TCE404

CME420  Multimedia Communication
To develop familiarity with the science and technology of multimedia communication.

Pre-requisite:  TCE200

Computer Science

CSC105/402  Data Structure and Algorithms Design
The course covers object oriented design, static and dynamic data structures [strings, stacks, queries, binary trees], recursion, searching and sorting.

CSC111  Introduction to Information and Communication Technology (ICT)
Introduction to computers, types, generation, units, methods of computing, algorithm development and number systems, flow of control, basic number codes, overview of computer systems, using computer software.

CSC112  Object Oriented Programming
The course includes the basic concepts of object-oriented programming, functions, classes, linked list, procedures, Data Abstraction, Inheritance and Polymorphism, Filing Concept, Data Retrieval and saving into Binary and Text files.

CSC113  Programming Fundamentals
The course enables students to develop short programs using conditional statements and loops and functions, structure, linked list and file processing. Students are required to complete a project at the end of the course using C language.

CSC205  Computer Architecture & Organizations
The course involves a study of information set architecture, processor performance and design, data path, control (hardware, micro programmed), pipelining, I/O memory organization with cache virtual memory.

CSC208  Network Programming Framework
This course presents an overview of the technology, architecture and software used by the systems of network connected computers. The course will cover data transmission, local area network architecture, network protocols, internet working, distributed systems, security, and World Wide Web technology. Students will write programs that run concurrently on multiple computers.

CSC217  Digital Logic Design
The course covers an introduction to switching logic and combination circuits, minimization techniques, Karanugh Map and Quin Mcclusky methods, Half Adders & Full Adders, Combination Circuits using MSI AND LSI Components and an introduction to Micro Programming.

CSC218  Operating Systems
Topics of the course include software organization, translation, linkage, loading and executing, control programs for batch processing, time sharing and real time application, accounting, communication between programs units, multiprogramming and multiprocessing system, etc.

Prerequisite:  CSC105, CSC205

CSC220  Introduction to Database Systems
This course develops an understanding of a database software package developed for microcomputer applications. Topics include how to design implement, and access a database.
CSC213  Computer Communication & Network  

CSC222  Computer Organization and Assembly Language  
Digital computer organization, machine language, instruction execution, addressing techniques, digital representation of data symbolic coding and assembly system; macros; conditional assembly; I/O control subroutine linkage.

CSC303  Computer Graphics  
This course discusses the introduction to computer graphics hardware, algorithms, and software. The topics include: line generators, affine transformations, line and polygon clipping, splines, interactive techniques, perspective projection, solid modeling, hidden surface algorithms, lighting models, shading, and animation. Substantial programming experience is required.

CSC305  System Analysis & Design  
This course provides study of structured techniques in data processing applications, objectives, investigation, system models, design effectiveness, procedures, etc. Physical models, data models, project dictionary and project management tools and techniques are also covered as part of the course.

CSC309  Microprocessor and Applications  
The course discusses the structure of Microprocessor, Bit slices and 8/16/32 bit microprocessors, processor architecture, registers, index and stack pointers, address modes, I/O interface adapters, interface devices, system clock, clock phase and bit rates, memory read-write and read only, memory mapping of I/O interrupts, handling of interrupts, direct memory access methodologies.

CSC315  Theory of Automata and Formal Language  
Automata and formal language, regular expressions, Turing machines, recursive functions, formal languages, non-deterministic automata and push down automata are the contents of this course.

CSC317  Introduction to Software Engineering  
This course intends to develop skills to move from personal software development methodologies to professional standards and practices. This course will help students to create programs that interact with their environment and human users according to standard professional norms. The course also intends to develop effective software testing skills, write code conforming to the API standards, to identify and evaluate trade-offs in design and implementation decisions for systems of an intermediate size. The course also will help students to read and write programs in Java using advanced features and to extend model of computation.

CSC318  Design and Analysis of Algorithm  
This course teaches techniques for the design and analysis of efficient algorithms, emphasizing methods useful in practice. Topics covered include: sorting; search trees, heaps, and hashing; divide-and-conquer; dynamic programming; amortized analysis; graph algorithms; shortest paths; network flow; computational geometry; number-theoretic algorithms; polynomial and matrix calculations; caching; and parallel computing.

CSC320  Human Computer Interaction  
It provides an introduction to human-computer interface design and evaluation, with an emphasis on graphical user interfaces for software products. It covers design principles and theory, usability engineering methods, and selected basic research in the areas of human factors and human cognition, hands-on application of learned principles using, NET or other languages. Pre-requisite: CSC305, CSC203.

CSC345  Digital Image Processing  
The course includes digital image fundamentals, image sampling & quantization problems, image modeling & geometry, image translation, rotation, convolution, FFT & DCT, Walsh transform, histogram modification, edge linking & boundary detection, image compression techniques.

CSC410  Data Communication & Networking  
The course focuses on Data Communications and network management view, review of computer network technology, standards, models, and language. Pre-requisite: CSC202, CSC304.

CSC411  Compiler Construction  
The course discusses the structure of compilers, Lexical analysis, syntax analysis, semantic analysis, abstract interpretation, Tree: pattern matching and parsing and code generation. Pre-requisite: CSC301.

CSC412  Artificial Intelligence  
The course introduces the overview of AI applications area, predicate calculus and structures and strategies for state of space search. It also discusses the Heuristic search, control and implementation of state apace search. An introduction to Prolog and LISP is also given. Other topics may also be covered such as Rule-based expert systems, knowledge representation and natural languages. Pre-requisite: CSC301, MTH201.
CSC422 Parallel Computing
The course includes the introduction to parallel computing, a review of parallel hardware, library-based and language-based approaches to parallel computing and basic concepts of parallel computing.
Pre-requisite: CSC435

CSC425 Advanced Operating Systems
This course covers many advanced topics in operating system design and implementation such as operating systems structuring, multi-threading and synchronization in detail and then moves on to systems issues in parallel and distributed computing systems.
Pre-requisite: CSC304.

CSC430 Decision Support Systems
An introduction to the analysis, design, and application of information systems used in the direct support of management decision making. This includes not only comprehending key ideas, concepts and facts, and the ability to restate them in different terms, but extends to the ability to evaluate, assess and choose among alternative concepts and ideas, to relate and reconcile among them, and apply them to new situations.
Pre-requisite: CSC305

CSC434/563 Software Quality Assurance
This course extends Software Engineering concepts to focus upon quality, from the perspective of the software, user, customer, and support staff. Topics included are software quality practices, user friendly systems design, modularity and structure, requirements coverage, systems architecture, designing from test maintainability, and an overview of languages and their fit toward various target applications.
Pre-requisite: CSC422

CSC 435/574 Distributed Systems
The aim of this course is to provide students with an understanding of the principles, techniques, and practice in the design and implementation of distributed systems, with a particular focus on infrastructure software.
Pre-requisite: CSC204, CSC427

CSC436 Business Process Re-Engineering
The course covers the concepts of business process re-engineering: guidelines, planning phase, redesign phase, transition phase, implementation phase. Total quality management (TQM) techniques, How TQM and Re-engineering are different, Desktop computing and LANs, how re-engineering improves an organization's efficiency; the ISO 9000 and TQM, Achieving TQM and the ISO 9000 directives.
Pre-requisite: CSC305

CSC443 Mobile Computing
The course includes Mobile Information Device Profile (MIDP 2.0) programming using J2ME (de facto standard for mobile devices) to supplement the introduction to wireless Internet (WAN, LAN and PAN) covered in the classes. By the end of this course, students will have acquired a deep understanding of various wireless programming concepts and APIs and developed extensive knowledge that you can use to develop sophisticated MIDP applications.
Pre-requisite: CSC410, CSC414, CSC425

CSC444 Electronic Commerce
This course emphasizes organizational issues related to electronic commerce such as business models for B2B or B2C e-commerce, technology infrastructure, electronic payment mechanisms, information privacy, and competitive advantage.
Pre-requisite: CSC102

CSC445 Network Security
Cryptology and simple cryptosystems; conventional encryption techniques; stream and block ciphers; DES; Block Ciphers; The Advanced Encryption Standard; confidentiality & message authentication: hash functions are the contents of the course.
Pre-requisite: CSC208

CSC448 Digital Signal Processing
One- and N-dimensional signals and systems, sampling theorem, discrete-time fourier transform, discrete fourier transform, fast fourier transform, z-transforms: stability and minimum phase signals/systems, linear filtering of signal: time domain: difference equations and convolution, impulse invariance, etc. are the contents of the course.
Pre-requisite: CSC313, CSC410

CSC451 Telecommunication Systems
The course includes introduction to media, bandwidth and noise. Twisted pair (UTP, STP), coaxial cables (types and specifications), optical fibres (types and losses), introduction to optical sources and detectors. Microwave links, satellite communication and infrared links, etc.
Pre-requisite: CSC410

CSC461/462 Project I and II
The aim of this project is to bridge the gap between the academic study and training needed by industry and businesses. Students are initiated to work under close faculty supervision, on real-world problems of sufficient magnitude. Project implementation and documentation are the main concerns.
Pre-requisite: CSC414, CSC305

CSC510 Wireless Communication
The course discusses the historic development of wireless communication, communication satellites and its systems, satellite frequency bands, satellite multiple access formats, brief treatment of modulation, encoding, decoding, satellite channels, protocols, application of satellite in data in computer communication.
Pre-requisite: CSC410
CSC531  Data Warehousing
This course provides an introduction to data warehouse design. Topics in data modeling, database design and database access are reviewed. Issues in data warehouse planning, design, implementation and administration are discussed in a seminar format.
Pre-requisite:  CSC204

CSC541  Advanced Research Methodology
Students will be given an in-depth analysis to the research methods used in the study of organizations and especially in the study of computer science issues. The course will cover the quantitative and qualitative research processes, which includes sampling techniques, measurement and measurement testing, generalizability and a practical seminar relating to questionnaire construction and data gathering and management.

CSC543  Advanced Computer Architecture
Design and evaluation of modern uni-processor computing systems, evaluation methodology/metrics and caveats, instruction set design, advanced pipelining, instruction level parallelism, prediction-based techniques, alternative architectures (VLIW, Vector and SIMD), memory hierarchy design and I/O. Case studies.

CSC545  Decision Theory
The course combines approaches to decision theory. It is intended for advanced undergraduates and graduates students in computer science. The course will cover basic decision theory, also known as “rational choice theory”; the limitations and problems with this theory, both as it applies to computers and to human agents.

CSC548  Advanced Analysis of Algorithm
Introduction to advanced techniques for designing and analyzing algorithms, including asymptotic notations, divide-and-conquer algorithms and recurrences, greedy algorithms, data structures, dynamic programming, graph algorithms and randomized algorithms.

CSC561  Advanced Software Engineering
System development using formal techniques, algebraic specification, abstract model specification, verification: proof systems, proof techniques, proof obligations, design: data refinement, operation refinement, design decomposition, software reliability and metrics, macro models: productivity, effort, defect reliability modeling, simple model, markov modeling, parameter estimation, comparison of models.

CSC562  Object Oriented Software Engineering
This short course with UML, Java, and Eclipse will expose students to the basics of object-oriented software engineering, including object-oriented analysis and design using UML (Unified Modeling Language), object-oriented programming using Java, all within the Eclipse environment. Laboratory sessions will equip participants with practical experience in object-oriented design, programming, and testing.

CSC563  Software Quality Assurance
This course provides an intermediate QA and Test. Students will acquire a thorough skill set for their respective roles in a QA or test team environment. They will also learn both the theoretical concepts of this matured discipline and the unique experiences and innovative practices from Microsoft.

CSC564  Software Requirement Engineering

CSC565  Software Testing Strategies
The course introduces the major concepts of software testing and develops technical proficiency in test case design and test plan development to covers techniques and tools for software requirements to support testing and test plan development. It presents software testing activities and products within the context of the software development cycle and addresses the role of inspections, walk-tough’s and reviews in support of software testing.

CSC571  Advanced Database Management Systems
This course begins with a study of advanced relational theory, followed by the SQL Application Programming Interface (API) standards. Students will also study Data Warehousing, OLTP and OLAP integration, and database distributed architectures.

CSC573  Data Mining
The objective of this course is to serve as an introduction to the techniques, tools and applications of data mining (DM). Also covered is the relationship between DM and other fields such as artificial intelligence, Knowledge Discovery for Databases (KDD), data warehousing and Online Analytical Processing (OLAP). By the end of the course, students should be able to learn any commercial DM tools easily and apply DM techniques to a variety of research and application projects.

CSC574  Distributed Systems
This course aims to provide students with a deeper understanding of distributed systems. In particular, we focus on the principles, techniques, and practices relevant to the design and implementation of such systems. The course takes a systems-oriented view of distributed systems, concentrating on infrastructure software and providing hands-on experience implementing distributed systems.

CSC575  Parallel and Distributed Computing
Parallel and distributed systems. Speedup and Amdahl’s Law, Hardware architectures: multiprocessors (shared memory), networks of workstations (distributed memory), clusters (latest variation). Software architectures: threads and shared memory, processes and message passing, Distributed Shared Memory (DSM), Distributed Shared Data (DSD), etc.

CSC576  Parallel and Distributed Algorithms
The topics to be covered are parallel/distributed algorithms, coarse-grain parallel algorithms and applications, parallel scientific computation, interconnection networks, parallel and distributed computing on network of workstations, scheduling, languages and compiler techniques for parallel programming and theory of parallel/distributed computing.
**CSC578 Communications and Information Policy**
This course provides an introduction to the technology and policy context of public communications networks, through critical discussion of current issues in communications policy and their historical roots. The course focuses on underlying rationales and models for government involvement and the complex dynamics introduced by co-evolving technologies, industry structure, and public policy objectives.

**CSC581 Neural Networks**
Basic Characteristics: The Processing Element; The Magic of the Transfer Function, Weight Adjustment Basics; Network Learning Types; Network Architectures, Comparison to Traditional Methods, Using Neural Networks with Data, Generalization, Validation and Sample Neural Networks Applications; Pattern Recognition Applications; Image Understanding NN’s; Spacecraft Structure Neuro control.

**CSC582 Pattern Recognition**
This course will introduce the fundamentals of statistical pattern recognition with examples from several application areas. Techniques for handling multidimensional data of various types and scales along with algorithms for clustering and classifying data will be explained. This is an advanced level course suited for graduate students in Computer Science and Engineering.

**CSC583 Fuzzy Systems**

**Economics**

**ECO101 Principles of Microeconomics**
The course focuses on the introduction to consumer behavior and the theory of the firm. Topics include the production, possibility frontier, the demand behavior of households, the supply behavior of business firms, the theory of costs, and an introduction to market structure and welfare economics.

**ECO102 Principles of Macroeconomics**
This course analyzes the determinants of aggregate economic activity. The main areas studied are the monetary and banking system, the composition and fluctuations of national income, and inflation, all as influenced by monetary fiscal and exchange rate policies. There is a special emphasis on the Pakistan government’s economic policies, financing the budget deficit, structural adjustment program (SAP), and privatization policies.

**ECO103/105 Intermediate Micro and Macroeconomics**
The objective of this course is twofold: first is to extend the students’ understanding of microeconomic theory and to introduce the use of mathematical and graphic models of macroeconomic process.

**ECO104/401 Micro and Macroeconomics**
The course analyzes the study of the working of a country’s economy in an international setting. It examining the interaction of households, business firms, government and the rest of the world in resource, product and financial business fluctuations, inflation, unemployment and monetary and fiscal policies, with a special emphasis on the Pakistan government’s economic policies, financing the budget deficit, structural adjustment program (SAP) and privatization policies.

**ECO106 Basic Economics**
This course is an introduction to the basic economic concepts. It will include both microeconomics and macroeconomics, and the economics of Pakistan.

**ECO202/203 Introduction to Economics and Finance I & II**
The objective of these courses is to enable candidates to equip themselves with the main economic concepts and their uses and relevance in economic analysis. The course aims to serve an introduction to the economic environment of trade, industry and banking as well as to methods of analysis relevant to the study of financial decisions.

**ECO204 The Pakistan Economy**
This course focuses on the structural change of employment, investment and external trade in Pakistan’s economy since 1947. It gives an insight into the GDP growth of various sectors encompassing expenditure and production.

**ECO205 Economic Development of Sindh**
This course highlights Sindh’s share in Pakistan’s economy. It also encompasses the development strategy of the government of Sindh and its fiscal policy. It strives to compare Sindh and the gulf economy and focuses on the demographics, environment and the economy of Karachi.

**ECO301 Managerial Economics**
The course aims to serve an introduction to optimization techniques and their application on the market behavior in terms of demand and supply, market equilibrium and forecasting market parameters. Pre-requisite: ECO 101, ECO 102

**ECO302 International Trade**
International Trade is primarily concerned with trade flows between nations and the resulting monetary flows that occur between nations. In this course students are exposed to theories that explain the current flow of trade, various commercial policies, foreign exchange markets, balance of payments, and macroeconomic policies that deal with various types of imbalances in the balance of payments of countries. Pre-requisite: ECO 103/105

**ECO303 Financial Economics**
Financial Economics introduces students to the process of investment in financial markets, both at a practical and theoretical level. This course discusses various types of financial instruments in common use and the economic theories that explain how they are priced. Pre-requisite: ECO 102
ECO304 Introduction to Econometrics
The course focuses on the role and uses of statistical inference in economic research; problem of spanning gap from an economic model to its statistical counterpart; measurement problems and their solutions arising from statistical model and nature of the data; limitations and interpretation of results of economic measurement from statistical techniques.
Pre-requisite: STA301

ECO305 Topics in Microeconomics
This course focuses on market structure and the economics of information. The course aims to make candidates comfortable enough with this area of microeconomics theory so that candidates can read applied papers in one's areas of application and use theoretical models appropriately in research.
Pre-requisite: ECO 103/105

ECO306 Topics in Macroeconomics
The course aims to provide an introduction to macroeconomic analysis. Long-run growth, business cycles, trade, and fiscal & monetary policies are analyzed using dynamic general equilibrium models. Classical, Keynesian and new classical models are used to examine inflation, unemployment, the open economy, and analysis of fiscal, monetary and exchange rate policies.
Pre-requisite: ECO 305

ECO307 Monetary Theory and Policy
The course is a study of the theoretical and empirical work in money demand, money supply, money multiplier, output effect of monetary policies, alternative techniques of monetary policy formulation and implementation, multi-asset financial markets, and inflation.
Pre-requisite: ECO 103/105

ECO308 Capital Investment Economic Analysis
The course aims to offer an analysis of economic merits of alternatives including interest and income tax consideration. Risk and sensitivity exploration techniques and an introduction to analytical techniques for multiple objectives or criteria.

ECO402 Pakistan Economic Policy
The course is an overview of structural change in the Pakistan economy 1947-2008. The topics include GDP in terms of production sectors and expenditure; structure of employment, investment and external trade; macroeconomic policies, planning (five years and ADP), fiscal policy, monetary policy, balance of payments policy, exchange rate policy, microeconomic policy, agricultural policy, industrial policy, labour policy, social sectors, poverty and income distribution.
Pre-requisite: ECO 101/201

ECO403 Macroeconomics
The course is a study of the operation of a country's economy in an international setting examining the interaction of households, business firms, government and the rest of the world in resource, product and financial business fluctuations, inflation, unemployment and monetary and fiscal policies, with special emphasis on the Pakistan government's economic policies, financing the budget deficit, structural adjustment program (SAP), and privatization policies.

ECO404 Micro and Managerial Economics
The course aims to provide an introduction to optimization techniques and their application on the market behavior in terms of demand and supply, market equilibrium, forecasting market parameters and application on business models; elasticity and risk, methods to calculate risk, risk analysis and capital budgeting and five approaches to competitive structure.
Pre-requisite: STA 403

ECO405 Seminar in Economic Policy
The course includes growth and structural change in the Pakistan economy, fiscal, monetary and exchange rate policies, the corporate sector, trade policy, foreign investment, structural adjustment. The role of the World Bank and International Monetary Fund (IMF), discussion on regional economic cooperation. Strategies in multinational corporations and issues in the international transfer of the technology are also discussed.
Pre-requisite: ECO 403, ECO 404

ECO406 Money and Banking
The course describes the monetary systems, financial markets, national income components and their relationship to business activity. Study of structure, regulation and performance of the banking industry.
Pre-requisite: ECO 401

ECO408 Applied Financial Economics
The course will describe the categories, within which financially important variables exist, and develop ways to encapsulate them using simple statistics drawn from the study of simple probability distributions. It will develop graphical tools to analyze market movements, financial history and models which every person interested in finance must know.
Pre-requisite: ECO401

ECO501 Microeconomics
Theory of the firm; market imperfections and failures with special reference to public goods, externalities, taxes and subsidies; Duality in consumption and production; general equilibrium, linear and non-linear models, fixed coefficient technology, contract curve and production possibility frontier; aggregation issues, decision-making under uncertainty, expected utility theory, competitive equilibrium; welfare analysis in a partial and general equilibrium setting; the Stolper-Samuelson theorem; the Rybcznski theorem; Walrasian competitive adjustment mechanism; Pareto optimality and game theory.

ECO502 Macroeconomics
The course will cover long-run and short-run macroeconomics; aggregate demand and national income accounts; saving and finance; investment and financial markets; investment and monetary policy; central bank and macroeconomic policy; money supply and interest rate transmission mechanisms; fiscal policy; discretionary fiscal policy; expectations, inflation, and interest rates; foreign exchange markets and foreign trade and international balance.
ECO503  Econometrics and Research Methods
literature reviews and data sources; overall design of a research project; equation misspecification, omitted variables, errors in variables, measurement error, simultaneous equation bias; instrumental variables; dynamic single equation models; static, dynamic and equilibrium-correction models; causality and endogeneity; co-integration tests, Johansen’s estimator; generalized linear models; random effect models and diagnostic testing.

ECO505  Theory and Practice of Economic Policy
The basic aim of this course is to analyze the international aspects of development policy pursued by developing countries, using the tools of open economy macroeconomics as well as international trade theory and policy to investigate issues of concern to policy-makers in developing countries.

ECO506  Monetary Economics
The course will focus on monetary issues. The principal aim will be to identify the major intellectual developments in monetary economics over the past two centuries. The course will help students examine key ideas, concepts and theories that have shaped the historical evolution of the subject with special emphasis placed on key articles in the literature. Major monetary schools, new classical Keynesian, stke flow consistency approached will be evaluated.

ECO507  Development Economics
This course will offer a brief overview of selected topics in development economics. Following a general introduction to the subject and to the data the course will focus on long-term processes of productivity growth and structural transformation. This will be followed by a critical presentation of the, still rapidly growing, literature on cross-country growth comparisons (Barro regressions). The last part of the course deals with modern economic growth and globalization.

ECO510  Mathematical Economics
The course includes study of mathematical concepts and tools such as functions, matrices and higher-order derivatives in cases of single and multiple independent variables. Emphasis is on the application of optimization, both with and without constraints, and introductory integral for understanding relationships of various economic variables and concepts, such as the relationship of aggregate, average and marginal functions. Other topics covered analyze market equilibria, impact of taxation and input-output models.

ECO601  Theory of Economic and Social Policy
The areas that the course covers are: moral and ethical foundations of economic and social policy, the role of state in policy making, economic policy; various economic systems including a) market-oriented economy, capitalism; liberalism, b) marxism, socialism including economic theory of socialism, and c) keynes and social democratic policies; an appraisal of contemporary social democratic regimes is included as well. The course also closely focuses on development policy including theoretical foundations.

Educational Management

EDM402  Applied Linguistics
This course addresses grammatical aspects of language such as syntax, semantics, and pragmatics and changes that have taken place in language over time. Stages of language acquisition and bilingual development will also be discussed.

EDM403  Critical Thinking and Reading
This course introduces participants to critical reading as a process of analyzing and evaluating the context and purpose of written texts by focusing on the four basic methods of critical thinking: analysis, interpretation, evaluation, and synthesis.

EDM406  Education Policy and Planning
This course introduces empirical and legal research in education policy issues at the local and state levels by facilitating communication between education leaders and policymakers.

EDM412  Marketing Education Services
This course offers a study of business and marketing trends, goals, teaching procedures, tests and measurements, academic administration, and technologies utilized in the field of education.

EDM414  Classroom Management
This course will provide participants with the conceptual and practical understanding of various components of classroom management. Furthermore, the participants will be given case studies to analyze the solutions for the problems faced in the classroom.

EDM415  Educational Philosophy and Ethics
This course focuses on aspects related to the learning process, the study of learning outcomes, student attributes, and instructional processes directly related to classroom and educational institutions. The course also educates the learners to function according to the ethical standards of the discipline.

EDM417  Educational Counseling
The course integrates issues of educational, pedagogical and organizational counseling in relation to the contemporary school situation. The focus is on work of school counseling centers, for e.g. counseling in the sphere of educational and behavioral problems and students’ career growth.

EDM418  Testing in Education
This course focuses on the use of tests as an instructional as well as an administrative tool, teacher attitudes towards testing, and teacher competency with regard to testing. The course will help participants use testing as an important tool in the process of teaching and learning.

EDM419  Managing Teaching and Learning
This course explores teaching methods and strategies, teaching and learning styles, classroom management, testing, and their application to a range of classroom contexts. It will also focus on teacher beliefs along with the practical application of peer observation, micro-teaching, and simulation.
EDM420  Academic Writing and Seminar Skills
This course will develop the participants’ skills in writing General English and the basics of APA (6th edition) writing style. It also aims to equip the participants with editing and proof reading strategies to help them refine their written drafts.

EDM421  Sociology of Education
The course takes an expanded view of education and focuses on learners within both community and educational institution settings and how it attends to the complex interrelations between schooling and the social, cultural, historical, political, and economic contexts within which learning institutions operate. It also includes the inter relationship between education, family, community and the society at large.

EDM422  Learners and Learning Styles
This course will orient participants with learners’ psychology and styles. The course will provide in depth understanding of various learner centered approaches. In addition, detail discussions will be held to explore the concept of multiple intelligence, developmentally appropriate curriculum, and individual oriented lesson planning. Particular attention will be given to the recent contemporary concepts of diversity, pluralism and globalization. For better understanding, participants will be given an opportunity to reflect on their teaching styles and its impact on learning styles.

EDM423  Reflective Inquiry in Education
This course introduces the concept of reflective inquiry in teaching. It will bring together essential perspectives of researchers, practitioners and theoreticians about reflective inquiry.

EDM424  Teacher Education
This course introduces participants to the best practices in teacher education and professional development. It focuses on relevant theories, current issues, and present-day practices in teacher development. It also focuses on pre-service and in-service models.

EDM425  Developing Leadership and Management Skills
This course introduces some of the basic theories and issues related to leadership and management in educational settings. It will focus on awareness and understanding of self as a leader and critique the nature and practice of leadership.

EDM426  Curriculum Management and Planned Change
This course will cover concepts, processes, and principles of curriculum planning, development, and evaluation. This will help the participants to develop their performance competencies needed to engage in curriculum planning and decision-making as an administrator, supervisor or teacher.

EDM427  Research Methods in Education I (Qualitative)
This course introduces qualitative research methods as they are applied in education. The primary purpose of the course is to develop awareness in the participants and facilitate the ability to carry out small scale action research in their own professional settings.

EDM428  Research Methods in Education II (Quantitative)
The course will focus on the process of defining research problems, the logic of research design, and a limited number of techniques for measurement, design and sampling, and for analysis of data in quantitative research.

EDM429  ICT in Education
This course will provide the participants with hands-on practice of understanding the appropriate use of technology in the milieu of education. Moreover, it will help participants to plan, design, integrate and evaluate the technology for educational program development by using webinars, moodles, blogs etc.

EDM439  Developing Research Project
This course will make the participants undergo the whole process of completing a research project starting from brain storming to writing a comprehensive research report. The course will be mainly practical with hands-on activities to contribute to the overall aim of the course.

EDM502  Managing Higher Education Systems
The course assesses the performance of higher education institutions and obstacles encountered in academic and administrative work. It will provide participants an opportunity to visit higher education institutions for a briefing to experience and critique the management systems in operation.

EDM503  Quality Assurance in Education
This course is based on the theoretical framework of quality control management as a model of modern management and its potential application in the educational field.

EDM504  Managing School and School Systems
This course is particularly based on elements of school systems by utilizing system analysis in identifying system input, operations, outputs, and feedback processes that offer clear criteria for development and improvement in both public and private school systems.

EDM508  Knowledge Management
This course introduces a range of organizational practices specifically to identify, create, represent, distribute and adopt insights and experiences. It will focus on application of knowledge management processes and student alumni services.

EDM511  Lifelong Learning in Changing Contexts
This course analyses the competing understandings and practices of lifelong learning against a background of rapid social, cultural, and organizational changes. Debates around the impact of globalization will be central to the analysis of lifelong learning.

EDM513  Strategic Management Issues in Education
This course will cover knowledge of strategic management models and theories and practices in the field of education. It examines concepts, information, and skills related to strategic planning. MS/ MPhil in Education Leading to PhD.
EDM14  Early Childhood Development
This course will orient participants with the basic concepts of early childhood education and development. It will help the participants to explore and analyze various models in place. Furthermore, the course will enhance the participants’ concepts and analysis pertinent to childhood studies in Pakistani and global contexts.

EDM50  Thesis Writing
The participants will be given guidance and readings to conduct a research project of approximately 6000-8000 words in their own work environment. The project is likely to be based on the investigation of a management issue leading to recommendations for improvement and action.

Electrical Power System Engineering

EPE101  Linear Circuit Analysis
The course introduces electrical engineering, basic circuit and systems concepts, and mathematical models of components, Kirchhoff’s laws, resistors, sources, capacitors, inductors, and operational amplifiers, solutions of first and second order linear differential equations associated with basic circuit forms.

EPE102  Electronic Workshop Practices
To develop practical skills in the use of workshop tools and equipment. Introduction to various technical facilities in the workshop including mechanical and electrical equipment. Concepts in electrical safety, safety regulations, earthling concepts, electric shocks and treatment.

EPE200  Electrical Network Analysis
Current and voltage transients, RLC circuits with DC and AC excitation, resonant circuit: series and parallel resonance in AC circuit, Q-Factor, mutual inductance and transformers, introduction to phasor representation of alternating voltage and current, single-phase circuit analysis, star-delta transformation for DC and AC circuits, poly-phase generators, phase sequence, vector diagrams for balance and unbalanced three phase networks, power in three phase circuits and different methods of its measurements. Two-port networks and their interconnections. Application of Laplace transform in circuit analysis.

EPE302  Electrical Machines
To understand the magnetic field and the reluctance of magnetic materials and air. Voltage-current characteristics and voltage regulation of generator. Torque speed characteristics and speed regulation of DC motors. To introduce the fundamentals of ac machine. Detailed operating principles of ac machines including induction motor, synchronous motors, alternators and Transformers have been included to develop thorough understanding of construction, characteristics, operation and proper application of ac machines being used in industries.
Pre-requisite:       EPE200

Electronic Engineering

ELE102  Basic Electronics Engineering
The course focuses on theory of electrical conductivity, metals and semiconductors, the physics of semiconductors, principles of, diodes, diode applications, and type of diodes, bipolar transistors, and transistor biasing.
Pre-requisite:       GSC103, EPE102

ELE200  Electronic Devices and Circuits
Transistors Modeling Techniques, Hybrid Equivalent Model, BJT Small Signal Analysis, AC Equivalent Circuits, FETs and MOSFETS construction and operation, FET Small Signal Analysis, AC Equivalent Circuits, Cascaded Systems and Compound Configurations, Differential pair of BJTs and MOSFET, Definition and amplifier types Class A, B, C and D amplifiers their operations and circuits Distortion and power considerations
Pre-requisite:       ELE102

ELE201  Digital Logic Design
Introduce the concepts and tools for the design of digitalelectronic circuits. Basic concepts to design digital hardware consisting of both combinational and sequential logic circuits, number systems, Boolean algebra, logic gates, combinational logic design, sequential circuits and logic design, memory and simple programmable logic devices (SPLDs), introduction to field programmable logic devices (FPLDs)/field programmable gate arrays (FPGAs).
Pre-requisite:       ELE102

ELE304  Electronic Circuit Design
Pre-requisite:       ELE102

ELE370  Instrumentation & Measurements
Introduces the concepts, methods and instruments for the measurement of electrical and non-electrical quantities.
Pre-requisite:       EPE200, ELE201

ELE403  Embedded Systems Design
Trends and challenges in embedded system design, The Microcontroller Architecture, Assembly Language programming, Addressing modes and Instruction Set, I/O Ports programming, TIMER and SERIAL and PARALLEL port programming, Interrupts, interfacing, A/D and D/A conversion. Interfacing and Application using PWM.
Pre-requisite:       CME100, ELE201
ELE415  Opto-Electronic
Nature of light, basic laws of light, optical fiber, types of optical fiber, fiber material, fabrication and components, Planner waveguides and applications, laser principle, operation, characterization and classes of lasers, optical transmitter, semiconductor light sources, light emitting diodes, semiconductor laser diodes (SLDs), Link Budget Analysis, optical receivers, wavelength division multiplexing (WDM), FDM versus benefits of WDM, dense wavelength division multiplexing and optical networks.
Pre-requisite:  GSC103

ELE417  Industrial Electronic
Pre-requisite:  ELE419

ELE419  Linear Control Systems
This course is aimed to build a comprehensive foundation in the analysis and design of control systems using classical and modern techniques.
Pre-requisite:  TCE205

ELE422  VLSI Design
Teach VLSI system design including system specification, verification, and fabrication.
Pre-requisite:  ELE302

ELE428  Digital Electronics
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, A/D and D/A converters, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.
Pre-requisite:  ELE419

ELE429  Introduction to Nanotechnology
Introduction, Nano scale phenomena, nanoparticles, carbon nanostructures, nanowires, nanostructured, materials, self-assembly, surface probe microscopy, other NANO scale characterization, nanolithography, Nano scale devices and systems, applications of nanotechnology.
Pre-requisite:  GSC103

ELE450  Senior Design Project I
To give students a chance for enhancing their Technical capabilities by implementing their theoretical & practical knowledge in the field of Research & Development. (For Semester VII)

ELE451  Senior Design Project II
To give students a chance for enhancing their Technical capabilities by implementing their theoretical & practical knowledge in the field of Research & Development. (For Semester VIII).

Engineering

ENG101  Workshop Practice
The course is focused on practical learning experiences. Students will develop their skills with materials/components, tools, machines/ equipment and related technology. The course will also include workshop safety, project planning and design, reading working drawings and surface finishing.

ENG102  Engineering Mechanics
The course discusses static of particles, kinematics of particles, kinetics of particles, rigid bodies, equilibrium of rigid bodies, kinematics of rigid bodies, plan motion of rigid bodies, friction and analysis of structures.
Pre-requisite:  MTH 202

ENG103  Engineering Drawing
This course extensively covers the drawing equipment and the use of instruments, basic drafting techniques and standards, freehand sketching of machine and engine components, concepts of working drawings of component parts of machines and engines, etc.

ENG105  Basic Industrial Engineering
This course is designed to introduce the fundamental concepts of industrial engineering and give answers to the very first questions that are usually asked by the prospective industrial engineering students. The course surveys both the traditional and modern topics of industrial engineering, providing a historical as well as an academic perspective of the whole profession.

ENG108  Introduction to Thermo-Fluids
To introduce basics of thermodynamic properties, laws of thermodynamics and their application to power and refrigeration cycles. Introduction of basic modes of heat transfer. Formulation of basic equations for Fluid Engineering problems. To determine the friction energy loss for various pipes/ducts geometries and fluid engineering applications. Introduction of hydraulic machinery.

ENG109  Industrial Chemistry
The course aims to introduce student to the general concepts of chemical engineering by laying the foundation to establish material and energy balances of chemical processes. Fundamental knowledge of stoichiometry and chemical equilibrium is applied to simple combustion and separation processes.

ENG201  Design of Machine Elements
The course content includes the choice of material, component design, shaft design and shafting, gear design, introduction to design of simple machine elements, governors and gyroscopes, design of springs and design/selection components.
Pre-requisite:  ENG 101/102
ENG202  Production System Design
The course focuses on the structure and operation of production planning, scheduling and control systems; emphasis on system structure, capacity planning, master production scheduling, shop loading and supply chain; investigation of current trends, cellular manufacturing, group tech, flexible manufacturing systems and introduction to robot anatomy.
Pre-requisite:  ENG 201

ENG203  Engineering Economics
The course includes the economic environment, cost concepts and analysis, time value of money, depreciation and depletion, comparing alternatives; production concepts and mathematical models and capital financing and budgeting.
Pre-requisite:  ECO 104

ENG204  Plant Engineering
The course content comprises thermal power plants, steam generators and turbines, air-conditioning and ventilation, pumps and compressors, etc.

ENG 206  Manufacturing Process
The course is designed to focus on analytical study and design of manufacturing engineering with emphasis on manufacturing and processes; the interaction of design, materials, and processing, laboratory instruction and hands-on experience in metrology, machining, process planning, economic justification, current manufacturing methodologies and expendable and non-expendable casting processes.

ENG209  CAD/CAM Application
The course focuses on modular software development for interactive CAD. The topics include human interface for interactive design, programming structure for modular entity creation, storing and retrieving object data, utilizing peripheral input and output devices, attribute regulation and control, and software transfer and documentation specifications.
Pre-requisite:  MIS 001/104

ENG216  Reliability Analysis
The course introduces the system reliability, focuses on analysis of deterministic, probabilistic and stochastic reliability models. The topics covered include coherent structures, minimum path representations, computing system reliability, systems with associated components, bounds on system reliability, classes of life distributions, optimal management of systems by replacement and preventive maintenance.
Pre-requisite:  STA204

ENG217  Materials Engineering
To familiarize the students with various industrial materials, their applications, properties and structural changes during manufacturing processes.
Pre-requisite:  GSC101 / ENG101

ENG218  Metrology & Statistical Quality Control
The course exposes the students to the principles of measurement, gauges and modern quality concepts and their practical use, the basic statistical & probability techniques and their usages in quality applications.
Pre-requisite:  STA204

ENG219  Industrial Maintenance and Safety
To up keep the plant and machines by removing every type of trouble and providing safe atmosphere in the organization to improve productivity and to enhance the efficiency and economy of the organization. Importance of plant maintenance, factors influencing the maintenance. Considerations in designing plant maintenance, economic aspects of maintenance, care and maintenance of common industrial equipment, maintenance linkage to safety, different systems/types of maintenance, laws of accident proneness, accidents preventions. Legal, humanitarian & economic reasons to prevent accidents, safety measures, analysis & procedures, safety equipment.
Pre-requisite:  ENG206

ENG220  Mechanics of Materials
Simple tension, compression and shear, biaxial tension and compression, torsion, stress of beams, analysis of plane stress and strain. Deflection of beams, mechanical properties of materials.
Pre-requisite:  ENG217

ENG300  Electrical Technology and Instrumentation
The course focuses on an index study of electrical technology and instrumentation. The course content includes electricity fundamentals and basic laws, A.C. fundamentals, electric machines fundamentals and measuring instruments.

ENG302  Industrial Maintenance
This course is designed to develop an understanding about Industrial maintenance. It includes basic considerations for industrial maintenance, maintenance management and replacement analysis.
Pre-requisite:  ENG 301

ENG303  Production Planning and Control
The course is designed to provide the basics of production planning and control with the need of modern manufacturing organizations in mind. The topics covered in the first course are: production and operations strategy, subjective and objective forecasting -such as Delphi method, trend-based methods, and methods for seasonal series, deterministic inventory planning and control, etc.
Pre-requisite:  MAN 304

ENG304  Automation and Robotics
The course focuses on the general principles of operation and programming of automated systems, automated assembly, automated manufacturing, and inspection systems. Control of automated manufacturing, industrial logic systems and programmable logic controllers, etc. are also a part of the course.
Pre-requisite:  MIS 001/104
ENG305 Work Study and Methods Engineering
This course is designed to teach the fundamentals of Work Study and Methods Engineering, which are both used for the examination of human and human work in all their contexts. Work Study topics include: methods study, charting techniques, time study, workplace design principles, job evaluation and compensation.

ENG306 Basic Machine Design
The course focuses on normal design procedure, strength & properties, metallurgical aspects, choice of materials, component design, gear design, design of springs, design/selection of screw, bolts, rivets and other joining components and power screws.

ENG307 Basic Electronics
The course is designed to understand and troubleshoot electrical and electronic circuits found in modern applications of technology. The types of work environments that use the skills of electronics technicians include telecommunications service providers, TV and satellite service organizations, computer network sales and entertainment industries.

ENG310 Computer Simulations
The course enables the students to become proficient in simulation model building and use of computer simulation as problem solving technique. Hands-on experience on computer simulation using any suitable software.
Pre-requisite: MIS104

ENG401 Computer Integrated Manufacturing (CIM)
The course is designed to help students to define computer integrated manufacturing (CIM), use manufacturer’s reference manuals to determine the system’s normal operating characteristics, set-up, program, and troubleshoot a system. The course provides them an opportunity to study the integration of robots, CNC, CAD/CAM, databases, and automated systems into the manufacturing environment.
Pre-requisite: ENG 209

ENG402 Manufacturing Strategies
This course deals with strategic implications of alternative methods of product cost measurement. The discussions will primarily be case-based and will cover cost measurement issues in both conventional and modern manufacturing environments.
Pre-requisite: ENG 207

ENG403 Human Factor Engineering
The course focuses on the analysis and design of work systems considering human capabilities and limitations, human anatomy and physiology, and occupational safety and health, an emphasis on understanding how human factor should be considered in design processes to maximize system effectiveness and safety.
Pre-requisite: HRM 301

ENG404 Tool Design
Tool designing is a division of manufacturing or industrial engineering. This course includes lab work where jigs, fixtures, molds, and dies will be designed, built and operated. It also involves both theoretical and practical tooling design and experimentation, lab work, reporting and class discussion.
Pre-requisite: ENG 209

ENG405 Environmental Impact Assessment and Management
The goal of the course is to promote an understanding of how environmental impact assessment is conducted and used as a valuable tool in the engineering project management decision-making process. Students learn to prepare an environmental impact assessment, review and critically analyze an environmental impact statement, use mathematical models for environmental impact prediction, and apply environmental impact assessment as a tool in management decision-making. Case studies of environmental impact assessment for several types of engineering projects will be also be discussed in the course.

ENG408 Facilities Planning
The course includes fundamentals in developing efficient layouts for single-story and multi-story production and service facilities, manual procedures and micro-computer based layout algorithms; algorithms to determine the optimum locations of facilities and special considerations for multi-period and dynamic layout problems.

ENG410 Maintenance Management
This course is designed to help students gain a perspective regarding the maintenance of buildings, industries, and facilities management. Administrative tools and methodology specific to maintenance activities are introduced. Students learn how to manage finance, equipment, materials, and personnel to carry out maintenance functions.

ENG412 Manufacturing Processes & Systems
The course includes manufacturing processes and systems, defines role of manufacturing in a world-class organization by improving operational processes. This is done by identifying internal and external customers in the manufacturing cycle, reducing lead-time in production of quality products and services, integrating supply chain & by understanding working and benefits of CNC machines and automated processes.

ENG501 Technology Management
This course examines external environmental factors essential to manage organizations involved in new technologies. It considers the adoption of technologies and innovative processes. The students develop skills in acquiring and interpreting information about the external environment to facilitate technology management. The course analyzes the issues associated with resource management for a technology-based firm. This includes manufacturing technologies, information technologies, work force and materials.

Environment and Energy Management

EEM401 Environmental Issues and Management
What is environment? What is pollution? Classification of pollution, nature of pollutants, who is responsible for pollution? Effect of pollution, how to prevent and manage them? Health impact, environmental policy and its compliance, environmental protection agency role and is responsibilities, industries and citizens responsibilities towards pollution prevention, analytical methods for measurement of selected parameters of NEQS, case studies and plant visits will be part of this course.
EEM402 Air and Noise Pollution Management
Definitions and types of pollutions, causes, sources and effects of air pollution, particulate matters, measurement of air pollutants and particulate matters, green houses gases, global warming, causes, sources and effects, ozone depletion, acid rain, causes, sources and effects, air pollution prevention and control, strategies/methodology compliance of NEQS standards for air pollutants, nature of noise, propagation of noise in air, noise characterization, sources of noise, effect of noise pollution, health impact of noise pollution, noise measuring techniques and methodology, etc. will be covered in this course.

EEM403 Energy Sources and Management
The course will cover basic concept of energy, forms of energy, fundamental of renewable/non-renewable energy sources, energy and environment renewable energy sources, energy scenario in Pakistan, renewable energy potential in Pakistan, basic heat transfer mechanism, etc. Students will learn about the best practices in these areas, includes case studies and visit to plants.

EEM404 Industrial and Municipal Waste Management
The course will cover waste classification, sources, characteristics, generation, onsite handling and storage, collection, transfer, recycling and disposal techniques of solid and hazardous waste. It also covers history of waste disposal, dumping, and burning, land filling, composting and incinerating techniques. Various methods for the treatment of liquid effluents from municipalities and industries. Pre-requisite: EEM401

EEM405 Renewable Energy
The course will cover a brief history of energy, reasons of shortage and load shedding, fuel problems for energy, alternative fuels and its problems, power from wind, its environmental impact, costs and economics of alternative fuels, energy from bio-mass and solid waste its problems and environmental impact etc. Pre-requisite: EEM403

EEM406 Coastal Environment and Management
Products of direct economic value such as fish, hydrocarbons, minerals, dieseline water, etc., products of natural system (intangible), supply of rich nutrients to support productivity, nursery and breeding grounds of fish and shellfish, mangrove ecosystem, coast-dependent activities such as coastal aquaculture, marine transport and shipping, beach related activities, ports and harbor, etc. will be part of this course.

EEM407 Green Technology and Energy Analysis
This course is multidisciplinary and examines Environmental Management Systems (EMS), including their planning and organization. The course also studies how businesses can manage their interactions with the environment in a systematic strategic management approach. Since awareness of environmental issues has increased the need for product eco-compatibility. Students will learn a new methodological approach to design for the environment.

EEM408 Safety, Health and Environmental Management
The course is based on OSHA 18000 and is designed for students to understand the concept of EHS management, its importance and principles, hazards and risks at work place, causes and solutions, importance of EHS in industries, purpose and policy, developing safety policy, EHS auditing and inspections, safety training and employee’s motivation and involvement, Plant visit is part of the course.

EEM409 Risk and Disaster Management
This course is designed to enable students to develop management skills to operate and understand the complex techniques and key concepts of disaster and risk management pertaining to floods, earthquakes, etc. Students will develop critical evaluation and the application of key elements of business planning and the management of risk and disaster.

EEM410 Environmental Impact Assessment (EIA)
The course is designed to provide a critical overview of the theory and practice of EIA as per international standard to those students who need to understand pollution impacts on the environment and how to do its assessment. EIA is one of the major requirements of environmental regulations and the course would cover the impact of development on environment.

EEM411 Environmental Rules, Laws and Regulations
The course provides students various regulations of environmental laws of Pakistan and international practices, theory and enforcement, including policy making, analysis of policy, needs of environmental law, implementation of legislations, etc.

EEM412 Research and Survey Methodology
The course is designed for those students who are new comers to research and who may have barrier with regard to the research methods and having difficulties in writing thesis or a research project report. The course will give students a sound knowledge of research methodology which is essential for writing thesis, research project conceptualization, elements of a research proposal and formulation of research design.

EEM501 Climatic Changes and its Impact
Climate change is today’s most pressing issue, receiving international attention from political leaders, media, corporations and the general public. Students will learn about strategic frameworks for assessing the impact of climatic changes on markets and customer demand.

EEM502 Natural Resources Management
Students will learn qualities of ecosystems and critically review environmental issues such as climate change, water shortage and forest preservation, etc. The course includes social-ecological system concepts, ecosystem based management, global and regional governance through multilateral agreements, sustainable development, poverty versus environment.
EEM503  Hospital Waste Management
The course covers the general awareness of the health and environmental risks resulting from poor care of hospital waste management practices. It will provide the knowledge about handling, disposal and effect of infections hazardous health care waste, including hospital waste disposal problems and solutions. The course focuses on proper planning and organized approach necessary to improve the system for hospital waste management.

EEM504  Solid and Hazardous Waste Management
The basic goal of this course is to manage community and industrial waste in a manner that meets public health and environmental concerns and public desires to reuse and recycle waste materials. The students will learn how to manage solid and hazardous waste properly and efficiently. The course covers different modern methods of waste disposal, composting and incinerating etc.

EEM505  Energy Audit
This course covers the need for energy consumption, monitoring, designing and starting energy consumption control program, energy accounting, targeting and reporting, energy audit process, preparations, facility inspections, audit procedure and action plan, audit report, recommendations, implementation and follow ups of energy conservation schemes, understanding energy bills, electric rate structure, natural gas rate schedule, steam and chilled water rate, cost of water and waste water, monthly energy bill analysis, actions to reduce electricity utility costs.

EEM506  Energy Conservation
The course will cover areas of energy consumption and conservation, conservation scheme, and implementation, major areas of energy conservation, lighting, components of lighting system, lamp types, luminaries and types, maintenance of the lighting system and schedule, luminaries dirt depreciation factor, re-lamping strategies, spot replacement and group re-lamping strategies and costs, lighting survey, measuring light levels, regulatory/safety issues, lighting safety issues, energy policy Act 1992, lamp substitution, lighting control technologies, selection of lights for new facility, EPA green lights program, electrical motors and transformers-factor involving selection and installation, maintenance and overhaul scheduling, performance tests, depreciation factors, energy system maintenance, transmission and distribution networks, HVAC systems, boilers, steam distribution systems.

EEM507  Energy Planning
The course will cover energy economics and planning, energy economics, the nature and cause of the energy problems, demand side and supply side issues, commercial and traditional energy determinants externalities, policy issues, pricing and distribution policies, energy balances formulation and execution, natural energy statistics, definitions, of primary, secondary, delivered and useful energy, problems of interpolation and comparison of energy statistics, rural energy planning, pattern of energy demand and supply, socio-economic aspects of energy utilization, survey methods, identifying potential solutions, project planning, monitoring and execution, financial evaluation projects, project analysis and financial appraisal, discounted cash flow, time preference discount rates inflation and interested rates, project evaluation in term of present values and internal.

EEM508  Environmental Ethics
The course focuses on the understanding of the natural environment and human relationship to it. The course provides strong coverage of major ethical theories such as moral, relativism, ethical egoism and discussion about the tragedy of the commons, etc.

EEM509  Public Awareness for Environment and Energy Sector
This course will focus on the importance, scope and application of the public relation and public information as regard to environment and energy in the private and public sectors, the local, regional, national and international levels.

EEM510  Economics of Energy Management
This course examines the economics of markets for various energy sources (such as oil, coal, natural gas, and electricity), and their interactions with each other and with the rest of the economy. We will look at how energy markets have historically developed and why they have been subject to extensive government intervention. We will analyze the effects of traditional policy measures such as price controls and regulation; and we will examine current policy issues arising from the relationships among energy use, economic growth, and the environment (carbon storage and the policy measures). The course will also look at energy demand and supply analysis, efficiency measures as well as current issues both local and international. The course is designed both for students interested in energy economics specifically, and for those interested in applied economics as well as oil and gas sector in general.

EEM601  Environmental Management and Green Technology
The world is facing increasing environmental and climatic threats which are posing severe scientific, social and economic challenges to the human race. These challenges include: the depletion of natural resources, the loss of diversity and the need to develop new forms of energy generation whilst efficiently utilizing existing energy sources. Tackling these environmental problems and establishing a sustainable environment requires the adoption of appropriate policies and managerial strategies. The interdisciplinary nature of this course provides a broad understanding of environmental problems. The course aims to provide basic managerial and generic skills for a career in the environmental sustainability sector.

EEM602  Green Marketing Strategy: A Challenge for a New Era
The course is designed to introduce a framework for Green marketing management in light of the socio-economic, cultural and legislative changes related to environmental sustainability. The course provides an overview of concepts and techniques as they relate to marketing opportunities, marketing strategies and communicating effective marketing programs within the context of sustainability. Students will be challenged to critically analyze marketing strategies, plans and decisions. The students will also analyze the social shift that makes green marketing a key aspect of business strategy in light of the changing environmental scenario.
EEM701  Methods and Issues in Advanced Qualitative Research
The course focuses on developing a working knowledge of a range of qualitative methods, methodological approaches, and theoretical framework of research to enable the participants to conduct qualitative research within the social sciences. Through lectures and seminars, current methodological issues are analyzed and discussed. The participants will conduct an empirical investigation designed to evaluate the usefulness of a research method that they select. The research method itself should thus be the focus of inquiry. Academic writing skills will be developed to enable participants to write effective academic papers.

EEM702  Methods and Issues in Advanced Quantitative Research
The primary goal of the course is to help participants to develop a conceptual background and practical skills needed to critically evaluate statistics and to conduct statistical analyses of empirical data independently (e.g., independent study projects, etc.). This course will also introduce computer applications for data analysis, including construction of data files, SPSS for data analysis, and development of an analysis plan. In addition, participants are expected to learn how to document and communicate the results of the analysis efficiently. APA writing style will be introduced to enable participants to write their thesis.

EEM703  Current Advancement and trends in Environment, and Energy Management
The student will be required to undertake course work that fulfills the requirement of current advancement and trends in environmental science and policy. The breadth requirement may be fulfilled by using a wide spectrum of environmentally related courses, including areas such as economics, law, and management, Environmental management and sustainable development of resources, linking green economy with social development. The course evaluates social well being, and economic prosperity. Economic evaluation of environmental impacts, and environmental and social assessments, concepts and methodologies are introduced. Topics include sustainability and management of resources. Socioeconomic developments and Sustainable Management of ecologically sensitive areas, Communities etc.

EEM704  Independent Study in Environment and Renewable Energy Management
This course will provide space to the participants coming from different scientific disciplines to propose a research topic in their field of interest. The research work should be completed within one semester for publication preferably in an impact factor journal. For independent study, the participants will be provided a suitable adjunct faculty member of the university, who is able to facilitate in completing the process of research and publication. This independent study course will be different from the main Ph.D. research study and will be beneficial for the candidate in providing them with experience to pursue their major work of investigations, providing an exposure to plan, conduct and publish a small scale research project in their area of interest.

EEM705  Advance Environmental Toxicology and Epidemiology and its Management
The course will help develop concepts of adverse toxic effects of environmental chemicals and biological solid/liquid effluents from natural and anthropological sources present in air, water and soil on human and other living organisms. It will examine the overall toxicological and epidemiological management approaches and learn to maintain a balanced approach and balanced public expenditure on environmental health (preventive health) and curative health. The course will expand understanding of percepts that the environmental diseases do not necessarily occur at random and without reason and require taking proactive preventive approaches.

EEM706  Advanced Pollution Control Technologies and Mitigation Options
Advanced pollution control technologies are of concern from two overlapping but distinct point of view of human health and the health of aquatic ecosystems. The course is designed to develop understanding of environmental quality and its control technologies vis-a-vis advanced pollution control technologies and mitigation options in environmental profession. It will entail understanding about different types of pollution, including properties, industrial production, uses, environmental releases, fate, health impacts and mitigation options. Pollution categorization into air, water and soil pollution, organic/inorganic pollutants, pesticides and other toxicants.

EEM707  Advances in Green Technology Mechanism
Green technology being relatively new field is mushrooming its growth in length and breadth exponentially. The course is designed to understand the conceptual development of greening technical strategy, branding/communicating strategy and overall management systems. The course will provide in-depth understanding of what is unfolding green agenda means to all aspect of technologies. The green initiatives benefit from the newer green economic landscape and reap advantage of being a trend setter in the development of continuously improved environmental friendly concepts and technologies and consequently help in introducing of new/improved national/international legislation of improved productivity and profitability.

EEM708  Disaster Risk Management and Mitigation Strategies
There is growing national and international concern at the rising frequency and severity of natural hazards and disasters, in part due to factors related to climate change, there is increased impetus in many countries to put in place policy, legal, technical, financial and institutional measures that will reduce the destructive effects on the lives and livelihoods of individuals and communities.

EEM709  Trade and Environment
The objective of Trade & Environment course is to raise awareness on the linkages between trade, the environment and sustainable development, to promote greater dialogue between trade and environment policy makers. WTO, Introduction to environmental economics. Impact of trade on the environment, Impact of environmental regulation on trade, CBD and the Biosafety Protocol, CITES. Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal.
EEM710  Sustainability and Conservation of Major Ecosystems
The course introduces the concept and practice of sustainable development (SD). It examines the environmental, economic, and social dimensions of SD by focusing on changing patterns of consumption, production, and distribution of resources. Evaluation of resources. Tropical, Temperate and Polar Ecoregions. Forest, Mountains, deserts, riverine, rangeland areas. Understanding world’s oceans and their environments.

Finance and Banking

FIN101  Financial Markets in Pakistan
The course gives an insight into the theory of financial development, dynamics of finance and the real economy, financial development in Pakistan, financial infrastructure and financial sector policy (specially monetary policy). The money market (including the foreign exchange market) is also discussed. The capital market (equity and bond), the informal financial system, microfinance and Islamic Finance are also part of this course.

FIN201  Introduction to Business Finance
The course explains the basic concepts of time value of money, valuation of current assets, financial forecasting and planning, ratio analysis and common size statements, and capital budgeting techniques.
Pre-requisite: ACC101/102/103/201

FIN202  Financial Management
This course covers the basics of finance like fundamentals of financial management, discounted cash flows, capital budgeting techniques, leverage, capital structure determination, etc.
Pre-requisite: ACC102/103/402, FIN201

FIN301  Financial Institutions
The course provides an analysis of the working and interaction among various types of financial institutions, financial markets and the economy. The topics include policies of financial institutions, interest rate structure and the security and mortgage markets.
Pre-requisite: FIN 201

FIN305  Internet Banking and EPS
In this course, students will study topics which include: e-commerce, e-business, digital commerce, B2B, B2C, internet advertising, internet auctions, internet banking, internet marketing. Case studies that give students great experiential knowledge to be effective in the market will also be a part of the course.
Pre-requisite: ACC201

FIN306  Introduction to Insurance
Insurance draws principles from finance, law, and ethics to address the issues that face individuals, companies, and society in general. The course will help the students to differentiate between the relatively narrow field of insurance and the broader discipline of risk management. Upon completion the students will have the vocabulary and basic understanding of the various methods of handling exposure to loss.

FIN307  Mathematics of Financial Derivatives
The course will begin with the development of the basic ideas of hedging and pricing by arbitrage in the discrete time setting of binomial tree models. Key probabilistic concepts of conditional expectation, martingale, change of measure, and representation, will all be introduced first in this simple framework as a bridge to the continuous model setting.
Pre-requisite: MTH 104, MTH 105

FIN308/407  Financial Engineering
Financial engineering is a body of knowledge encompassing conceptualization and implementation of financial innovations. This course introduces financial engineering innovations within the context of managerial decisions and solving vexing problems of investment management and corporate finance.

FIN402  Money and Banking
The course describes the monetary systems, financial markets, national income components and their relationship to business activity. It also includes the study of structure, regulation and performance of the banking industry focusing on the strategy and procedures of the Central Bank.
Pre-requisite: ECO 401, FIN 401

FIN403  Islamic Banking and Finance
The course covers the operations and role of banking institutions in an economy. The different types of financial institutions, local as well as multilateral, and their distinct functions are reviewed. The course also covers the concepts of Islamic banking and similarities and conflicts between Islamic and conventional banking. The requirements to be met by a sharia compliant financial instruments and established Islamic financial instruments (e.g., Musharika, Modarba, Morabaha, leasing etc.) are also covered.
Pre-requisite: ECO 401

FIN404  Financial Management
The course explains the basic concepts of time value of money, Management of current assets, financial forecasting and planning, ratio analysis and common size statements, and capital budgeting techniques.

FIN405  Banking Laws and Regulatory Environment
The course discusses the role and significance of laws related to banks/financial institutions, including laws applicable to international trade and banking. The role/functions of important regulatory institutions such as State Bank of Pakistan, Securities and Exchange Commission of Pakistan, Ministry of Finance, etc. are also covered. The purpose and critical evaluation of important regulations will also be a part of the course.
Pre-requisite: ECO 401, FIN 404
FIN406  Financial Econometrics
This course provides an intensive introduction of basic principles of econometric analysis that may help students understand finance theories and their empirical applications. In addition, it also equips students with appropriate statistical techniques for doing applied financial research. The emphasis will be on developing and applying regression-based techniques in both cross-sectional and time-series contexts. Their usefulness will also be examined in the light of financial studies.
Pre-requisite:  ECO304, FIN404, FIN501

FIN408/627  Investment Banking and Security Analysis I & II
The course deals with merchant banking activities preformed by banks/DFIs inclusive of non-fund based and fund-based activities that bring in windfall profits to financial institutions. The course provides a detailed study of valuing corporate equity instruments discusses the use of earnings, dividends, risk, cost of money and future growth rate in valuation, it also discusses applications like bond valuation, SWAP funds, arbitrage, etc.

FIN409  Working Capital Management
This course equips students with generic, technical, computational, analytical, critical and evaluative skills relevant to financial management and the commercial bank treasury department function. The course also educates the students on the role of State Bank of Pakistan with close reference to money and capital market.

FIN501  Advanced Financial Management
The objective of this course is to introduce the basic asset valuation models, risk management system, ways to acquire and allocate funds in the most economical and profitable manner, concepts and principles governing investment decisions, etc.
Pre-requisite:  FIN 404

FIN502  Strategic Financial Management
Giving a review of the fundamentals of financial management, this course enables students to understand the various areas of decision-making in the broad field of financial management in a non-financial sector company. Hence, this course focuses on the dynamics of the entire financial management process, emphasizing the skills to take risk-return profile decisions for the business in the presence of a myriad of complexities.
Pre-requisite:  FIN 202/404

FIN503  Corporate Finance
This course covers the valuation of corporate liabilities and other securities under uncertainty. The capital asset pricing model is presented and is compared with more recent theories of asset pricing such as, the arbitrage pricing theory and the option pricing model.
Pre-requisite:  FIN202/404

FIN504  International Finance
The course deals with the factors affecting currency values and the forecasting of future currency prices; describes foreign exchange products, markets, and participants and examines foreign currency exposure from a corporate point of view.
Pre-requisite:  FIN 202/404

FIN505  Treasury and Fund Management
The course equips students with generic, technical, computational, analytical, critical and evaluative skills relevant to financial management and the commercial bank treasury department function; the role of State Bank of Pakistan with close reference to money and capital markets.
Pre-requisite:  FIN202/404

FIN506  Investment Banking and Security Analysis
This course enables the students to recognize the ways to select securities and to act prudently with respect to diversification and management of fund for investment. It contains topics like valuation, sale and purchase of companies, assets management theory, mutual funds management and security analysis.
Pre-requisite:  FIN202/404

FIN507  Portfolio Management
The course covers the application of portfolio theory to investment decisions and performance evaluation to cover both the fundamentals of investment theory and the most recent developments in academic research involving the practical implementation and analysis of modern portfolio strategies.
Pre-requisite:  FIN202/404

FIN508  Risk Management
This course explores various aspects of management of risk associated with operating multinational enterprise and emphasizes on evaluating and hedging financial risks (fixed-income, equity, commodity, and foreign exchange risk exposures).
Pre-requisite:  FIN202/404

FIN509  Financial Derivatives
The course covers a wide range of financial derivatives, including forwards, futures, swaps and options. The working of various derivative markets and the pricing of derivatives are discussed. The course also covers trading/investment strategies that involve these derivatives.
Pre-requisite:  FIN202/401

FIN510  Investment Analysis
The course includes alternative investment theories and decision making under differing uncertainties and constraints. Formulation of objectives and strategies, development of conceptual managerial perspectives for investment environment and security analysis will also be covered in this course.
Pre-requisite:  FIN 202/401/404

FIN511  Analysis of Financial Statements
The course begins by describing accounting standards of USA and international accounting standards with special focus on developing students’ capability to standardize various companies’ financial statements. It develops a road map of financial analysis from both the creditor’s and equity investor’s point of view.
Pre-requisite:  FIN 202/404/501/502
FIN512 Money and Capital Markets
This course covers the fundamentals of money and capital markets, like market instruments and mechanisms and various risk management techniques.
Pre-requisite: FIN 202/404

FIN513 Project Appraisal
The course teaches formulation of projects and financial projections into the future. Balance sheet, profit and loss accounts and cash flows are prepared for future years depending on the need and nature of the projects. Economic analysis like internal economic rate of return, Bruno’s ratio and the economic rate of return are also described. The course equips students with the understanding of nuances of consortium and syndicate finances.
Pre-requisite: FIN 202/404

FIN514 Asset Liability Management
The course gives an insight into the traditional functions of Asset Liability Management (ALM). It gives a comprehensive review of ALM hedging techniques that encompass all assets and liabilities of financial institutions. Regulatory environment prevailing in the Pakistani financial market and how the State Bank of Pakistan and the Securities and Exchange Commission are regulating financial institutions in Pakistan is also discussed in this course.
Pre-requisite: FIN 401/501/502

FIN515 Foreign Trade and Banking
The course aims at discussing the technicalities of foreign trade covering basic concept, difference between local and foreign trade and documentary requirements of banks.
Pre-requisite: FIN 501/502

FIN517 Theory and Practice of Finance
The course will cover overview of risk and return, stochastic dominance, portfolio theory, mean variance decision model, other statistical methods, efficient markets, skewness, limits of arbitrage, attention, corruption, political connections, corporate governance and the role of the government, financial econometrics, market microstructure, informational efficient markets, managerial behavior, agency cost and capital structure, corporate finance and compensation and networking etc.

FIN518 Current Issues in Islamic Finance
The course covers the history of Islamic Banking, market perceptions & performance of Islamic finance industry, analysis on Islamic interest free banking, current economical system & its problems, comparison of capitalism & socialism and philosophy of Islamic economical system. This course gives an in depth study of sources of sharia, ijtihad, riba & its types, commercial interest, usury, simple & compound interests, markup, profit, gharar and gambling.
Pre-requisite: FIN601

FIN519 Industrial and Financial Economics
This course provides a basis in the neoclassical theory of finance that underlies other finance courses. This course is primarily concerned with static, i.e., one period, theories of finance. This course will convey more conceptual understanding of finance than exercise complicated mathematical derivations. It starts with examining the data and then develops basic finance theory to explain the data. Following this course, students should be prepared for advanced courses in finance, such as dynamic theories, continuous time finance, empirical finance, and advanced corporate finance.

FIN520 Financial Risk Management
This course deals with the theoretical and practical approaches to effective financial management. Planning, analyzing and controlling investment and short and long term financing are examined for decision-making purposes. Emphasis is placed on the application of risk, the methods in today’s business environment and related industries. Topics include: Capital budgeting, risk and diversification, asset liability management, financial derivatives and financial engineering, swaps, options and financial future.

FIN521 International Financial Management
Students taking this elective course should expect to learn the nature and purposes of financial management in the international context. They will gain skills in international investment and financing techniques and in exchange risk management, including accounting and taxation aspects. They will learn, through hands-on case studies and simulations, how to judge the riskiness of a currency from a firm’s perspective, and how to measure and manage the company’s exposure to exchange rate and international interest rate risks.

FIN601 Strategic Financial Analysis and Design
The objective of this course is to enhance the candidate’s conceptual financial management knowledge and its modern application practices with focus on real world business finance decisions. The course attempts to develop strategic decision making abilities, in all major areas of finance, through reinforcement of financial management concepts and their practical application in case studies and scenario based questions.

FIN602 Behavioral Finance
Initially field of finance was based on efficient market hypothesis stating that investors and managers are rational participants and prices are efficient. However the last decade negated this paradigm to be the only feature to describe actual financial markets. Researches prove that mistakes in financial decisions are at times caused by biasness of the decision maker. The course examines the psychological influence of investor behavior while making investing decisions.
Pre-requisite: FIN601
FIN603  Entrepreneurial Finance
This course is intended for students who wish to enhance their skills and knowledge in those financial areas of business that lead to successful entrepreneurship and/or small business management. The focus will be on those financial issues and decisions of particular concern to sole proprietors, partnerships and family-owned businesses. This will also include the financial aspects of the relationship between the firm and financial institutions.
Pre-requisite: FIN601

FIN605  Financial Modeling for Investment Decisions
Financial modeling course enhance the skills required to test different scenarios leading to company’s future growth. The course will enable the students in identifying company’s key value drivers and would also help them in developing spreadsheet valuation models. The course also shed light on evaluation of financial returns and their relationship with resource constraints.

FIN606  SME & Micro Financing
This course is designed for students willing to become entrepreneurs or considering working in banks, NGOs, and multinational donor agencies. After the course, they will be able to develop and put into practice analytical skills, tools and techniques used in appraising and taking financing decisions. The course also explores the best practices and paradigms in design and management of MSMEs.
Pre-requisite: FIN 523

Finance and Risk Management

FRM201/401 Principles of Risk Management
This course aims to introduce students to the rationale, principles, process and major tools of risk management. A holistic/integrated view of risk management is adopted throughout the course. Covered topics include the concept of risk, risk theory, risk measurement, corporate risks and the rationales of corporate risk management, risk management organization and process, and some major tools of risk management. A lot of the course content reflects the latest developments & industry practices in the discipline of risk management.
Pre-requisite:  MAN401 / STA402

FRM202  Life and Other Contingencies
Survival distributions and life tables. Construction of mortality, sickness, multiple decrement and other similar tables for graduated data. Determination of the probability and monetary functions based on mortality, sickness, multiple decrement and other similar rates. Values for premiums for single life annuities and assurances. Determination of policy values, surrender values and paid-up policy values.
Pre-requisite:  MTH211

FRM204  Enterprise Risk Management
This course is designed to provide information to actuaries who do not yet regularly practice in enterprise risk management (ERM), but want to know more about it to help expand existing skills or meet professional development requirements. The course content is designed to be introductory, and provides less hard–core mathematics and more conceptual understanding and learning. ERM has been a hot topic for several years and the Society of Actuaries and its members have worked with other actuarial organizations around the world to develop best practices and share them within the actuarial community.
Pre-requisite:  FRM201

FRM206  Institutional Investments
The course will start by reviewing basic investment practice, with a discussion about the differentiating institutional features of markets, instruments and benchmarks around the world. It will focus on investment theory, by reviewing the benefits of adding international securities to a domestic portfolio and the key elements of an investment program, starting with the definition of a philosophy and continuing with the construction of a process for managing international equity portfolios.
Pre-requisite:  FIN507

FRM302/402 Computational Methods in Risk
A historical perspective of market risk measurement, including the Markowitz, CAPM, and APT models; investigation of the value-at-risk approach and its variants and extensions, and a survey of other methods for evaluating risk, including multivariate methods for evaluating portfolios requiring copula tools.
Pre-requisite:  MTH210, MTH410
FRM304/404 Risk Financing Techniques
The Risk Financing course explores the selection, implementation and monitoring of risk financing techniques — ways in which an organization can obtain funds to pay for accidental losses which strike it. Topics include risk financing objectives, various types of risk financing plans, insurance as a risk financing technique, capital market products for risk financing, forecasting accidental losses and risk financing needs, accounting and income tax aspects of risk management, and allocating risk management costs.
Pre-requisite: FRM302/402

FRM403 Introduction to Financial Risk Management
This course covers the principles of financial risk management and financial engineering from the perspective of non-financial corporations. The first part of the course discusses how to measure risks and risk exposures, why firms should or should not hedged, and how to hedge basic exposures. You will also learn how to manage foreign exchange rate risk, interest rate risk, commodity price risk and credit risk. The second part of the course demonstrates how financial engineering, i.e., the issuance of complex financial securities, can increase shareholder value.
Pre-requisite: FRM401

FRM405 Advanced Financial Risk Management
This course is tailored to provide financial risk professionals with the necessary groundwork required to become a financial risk specialist including the latest standards that represent best practice. The course is essential for any person currently in or planning to enter careers in the financial sector, retail banking, investment & merchant banking, asset management, corporate finance, risk analytics and strategic consultancy.
Pre-requisite: FRM403

FRM503 Corporate Risk Management
This course provides an introduction to modern methods of risk management. Lectures cover risk metrics, measurement and estimation of extreme risks, management and control of risk exposures, and monitoring of risk positions. The impact of risk management tools, such as derivative securities will be examined. Issues pertaining to the efficiency of communication architectures within the firm will be discussed. Regulatory constraints and their impact on risk management will be assessed.

FRM504 Theory of Risk and Insurance

FRM505 Risk Management in Corporate Treasury
The role of the treasurer has grown from the traditional financial risk management role to one with a much wider remit. This module aims to explore the theoretical and practical issues in the discipline of treasury risk management as applied to listed non-bank corporate. The subject matter will be of interest to potential corporate treasurers, and to those in banks who require an insight into what major corporate customers require from banks.

FRM506 Financial Regulation and Supervision
The area of financial regulation has been even demanding after financial turmoil of 2008 and another looming financial crisis given the instability of global financial institutions. The aim of the course is to build knowledge and skills among the students to produce quality risk management professionals who can add value to the existing regulatory framework of the country while help commercial banks at the same time with implementation and compliance of the regulatory requirements.

FRM508 Financial Markets Issues and Crisis
The financial markets have gone leveraged manifold during the last decade. This increased leverage with complex structured products demands in-depth understanding of the issues in financial markets. The course is aimed to produce professionals with clear understanding of structured products and issues with them. Development of financial markets, anticipating a financial crisis and taking necessary steps to avoid one are key elements of this course.

FRM510 Energy Risk Management
Today, that industry is still growing. Through organizations such as the Professional Risk Managers’ International Association we can see its growth every day. This course aimed to understand the risk in trading strategies in Oil risk developed into gas risk, and now on a global scale. Electric power risk management was the next market to develop. The weather derivatives markets followed that. Threatening larger than all these markets is the global environmental financial risk management market for emissions trading.

FRM512 International Risk & Financial Reporting
This course is designed in two parts. Part one containing the Risk Reporting standards prevailing in the current International market. Risk Reporting is currently gaining high importance in the financial markets sand become vital after the financial crisis. Basel banking risk reporting standards are also discussed. In part two student will get the understanding on International Reporting standards (IAS). International Reporting Standards regulated by Financial Accounting Standard Board (FASB).

FRM513 Project Risk Management
This course provides the background reason for existence of the project finance to understand the mechanism of financial market to provide the capital on large scale projects.
FRM514  Takaful & Risk Management In Islamic Products
This course covers risk management issues for Islamic financial products and services, considering all of their unique characteristics that are underlined by the Shariah principles and law. In addition to what conventional finance is providing, Islamic banks are providing specific financial products (contracts) which make them perform as investors, instead of only as creditors.

FRM516  International Financial Reporting & Standards
This course aims to provide wider understanding of International Financial Reporting Standards. This course discusses the issues and problems of financial reporting both, either in general or through the specific regulatory requirements of the International Accounting Issues.

FRM517  Property Risk Management
Insurance company operations and management, including statutory accounting principles, financial management, underwriting, claims and reinsurance. Discussion of commercial property coverages and risk management techniques, including basic property insurance, consequential loss coverage, fidelity and surety bonding and crime coverage.

FRM518  Management of Insurance Institutions
This course applies principles of economics and finance to the management of and creation of value in the insurance enterprise. Course topics encompass: 1) the theory of the firm as applied to the insurance enterprise; 2) the operational risk management of insurance institutions as a class of financial institutions; 3) the industrial organization of insurance markets within an integrated financial services industry; and 4) principal insurance business functions with an emphasis on significant issues and innovative strategies.

General Sciences

GSC101  Physics
The course aims to cover vector review, Coulomb's law, electric fields, Gauss's law, electric potential, capacitors and dielectrics, d.c. circuits, Kirchhoff law, RC and RL Circuits, magnetic fields, Ampere's and Farady's laws, energy stored in electric and magnetic fields, Biot and Savart law, electromagnetic oscillations, a.c in resistive, inductive and capacitive, elements.

GSC103  Applied Physics

Health Management

MHM401  Introduction to Health Policy, Planning and Management
This course provides students with an overview of the health system in Pakistan and introduces them to the concepts of public health and the basis of public health programs in the country. The course also covers the planning methodologies and role of health planners within the health care sector. Concepts and techniques of health planning as applied to community and institutional health systems are analyzed.

MHM402  Quantitative Analysis
The course includes introductory as well as advanced study of stochastic and quantitative analytical tools and concepts which can be used to compute vital statistical rates applicable to problems in public health. Topics such as regression analysis, anova, chi-square are also discussed.
Pre-requisite:  MHM 401 / MIS401

MHM403  Health Management Information Systems
Applications of computer technology for designing management information system for health care institutions. Topics include data collection, reporting and transmission, file design, record structure, report formats, processing requirements, medical records and statistical audit. Principles of managing the acquisition and development of health management information system are also discussed.
Pre-requisite:  MIS401 / Mhm404 / Mhm402

MHM404  Research and Survey Methodology
This course is designed to familiarize students with basic concepts surrounding surveys. It intends to expose students to the various components, techniques and methods of developing survey instruments and modes of survey conduction. It defines the basic concepts of research methodology and designing of sample survey, including data presentation through tables and graphs.
Pre-requisite:  MHM 401 / MIS401

MHM405  Pharmaceutical Management
This course explores the major areas of operations and departments of the pharmaceutical industry including marketing, sales, human resource, regulatory, pharmacovigilance, demand, distribution, production and finance. Coursework often includes an in-depth study of several hospitals to examine how they function. By the end of the course, the students are expected to have a comprehension of the main issues involving the management of a pharmaceutical organization and the interdependent units associated with it.
Pre-requisite:  MAN401

MHM501  Pharmaceutical Branding
This course emphasizes on the expression area of promotion and capitalizes on the functional area as well. Students will be able to launch new brands, create strategy for brand equity with long-term sustainability, handle multi-brand portfolios and conduct evaluation of brands.
Pre-requisite:  MKT401 / Mhm405
MHM502 Health Economics
This course deliberates on and applies general theoretical principles of economics to health care sector. The basic approach is to recognize the importance of scarcity and incentive allowing for any differences peculiar to health.
Pre-requisite: ECO401

MHM503 Financial Management of Health Services
The course exposes students to basic financial ratios and a general understanding of financial statements and some productivity, tracking systems and measurements typically utilized in health care organizations.
Pre-requisite: FIN401

MHM504 Strategic Management of Health Services
The content of the course is developed around several health care trends including restructuring, innovation of health care delivery and finance and an increased emphasis on performance. It addresses basic theory, strategic plan development, organizational analysis and specific appropriate analytical techniques, implementation strategies and case studies.
Pre-requisite: MAN401

MHM505 Concepts of Primary Health Care
The course familiarizes students with the basic concepts surrounding primary health care. It aims to provide the basic conceptual understanding of public health problems pertaining to the availability, accessibility and affordability of primary health care services.
Pre-requisite: MHM 401

MHM506 Managing Professional Health Care Organizations
The course includes application of management theory and concepts to health services systems and organizations. It characterizes functions, organizational structures of delivery system, fiscal management, personnel management and planning procedures.
Pre-requisite: MAN 401, MHM 401

MHM507 Introduction to Epidemiology
The course includes definitions, principles and factors related to the manifestation of infectious and non-infectious diseases, including tracing their sources, modes of survey conduction, controlling spread and initiating measures to prevent recurrences.
Pre-requisite: MHM402 / MHM404

MHM508 Pharmaceutical Marketing & Quality Assurance
This course examines the nature of pharmaceutical industrial market and analyses of customer procurement strategy, product policy, pricing, distributing strategy and sales force management strategy.
Pre-requisite: MKT401 / MHM405

MHM509 Marketing of Health Services
The course aims to familiarize the students with methods most commonly used in marketing of health services. It focuses on the critical links between health service marketing as it relates to customers, competitors, market segmentation and definition of target markets.
Pre-requisite: MKT401

MHM510 Introduction to Demography Methods
An introduction to the fundamental methods employed in the statistical study of human populations, especially their size, distribution and number of births/deaths and their health consequences. Students will also learn to apply computer technology to demographic studies.
Pre-requisite: MHM402, MHM404

MHM511 Population and Health
The course studies the impact of population growth on the health of the populace and its effect on the health care delivery system.

MHM512 Economics and Management of Pharmaceutical Industry
The course focuses on the nature of economic systems and how they constrain, control and impact the operational effectiveness of pharmaceutical organizations. Deliberation on contemporary management tools utilized by pharmaceutical organizations to overcome economic, financial, managerial and industrial constraints are also discussed.
Pre-requisite: ECO401 / MHM405

MHM513 Managing Physicians
The course content examines the strategic advantage of attracting and retaining competent medical staff members as it relates to higher occupancy and decreased litigation. Simultaneously, it assesses physician co-operation in making cost effective and high quality care service delivery decisions
Pre-requisite: MHM401 / MHM405

MHM514 Environmental Health Assessment and Management
The objective of this course is to study the impact of environmental pollution and degradation on the health of populace. It provides theoretical instructions with a focus on environmental health assessment and knowledge of managing environmental health problems.
Pre-requisite: MHM401 / MHM404

MHM515 Hospital Administration
The course addresses major functions and issues surrounding supervision of hospitals; organization and management of hospitals, relationships/differences between line and staff functions. Likert Scale, Peter Principle, McGregor’s Theory X and Y are also discussed. Strengths and weaknesses of employee performance appraisal are identified.
Pre-requisite: MAN401 / MHM401

MHM516 Health Program Evaluation
The course prepares students to discuss components of program evaluation and formulate credible evaluation questions. Students will be able to construct evaluation designs, recognize limitations of each, report evaluative results and critically assess evaluation reports.
Pre-requisite: MHM 402 / MHM404

MHM517 Capstone Project (Part 1 & 2)
A Capstone Project course of 6 credit hours is a supervised research, which applies curricular concepts and skills to the problems in an organizational setting.
Pre-requisite: MHM402 / MHM404
MHM518  Regulatory Affairs at Healthcare Industry
Healthcare is a highly regulated industry and the course provides an insight into the important laws and regulations controlling business in the healthcare sector. Upon completion of the course, students will be well versed with drug laws, good manufacturing practices, and laws governing operation of blood banks, breast feeding ordinance, 2002, and environmental concerns.
Pre-requisite:  MHM405 / MHM401

MHM519  Financial Applications in Pharmaceutical Marketing
The course is designed to reach financial justification on acceptable accounting principles. Success of marketing activities, whether aimed at consumer satisfaction or otherwise, are measured in terms of “revenue and profit”. This course introduces students to marketing activities involving financial justification.
Pre-requisite:  FIN401 / MHM405

MHM520  Product Management
This course focuses on creating and managing product and brand portfolios in pharmaceutical industry for long-term profitability, as established and mature products and brands are critical to an organization’s financial stability and strategic posture. Students will apply strategic frameworks for managing mature products for profitability, transferring existing competencies to new products and evolving market opportunities of a product portfolio.
Pre-requisites:  MAN401 / MHM405

MHM521  Pharmaceutical Sales Management
This course enables the students to develop analytical and managerial skills for estimating sales potential, forecasting sales, manning territories and controlling sales force in the pharmaceutical sector. Furthermore the students will learn to apply these concepts for solving problems, through case studies, training and motivational exercises.
Pre-requisites:  MAN401 / MHM405

MHM522  Project Management of Health Services
In this course, students will be able to learn planning for quality, performing quality assurances activities, and closing project contracts keeping in view ethics, professional knowledge, stakeholder’s interests and cultural diversities. By the end of the course, students will be proficient in organizing and executing complex healthcare projects using techniques of project management software tools.
Pre-requisites:  MAN 401, MIS 401

MHM523  Health Ethics
In this course, students will be able to learn the principles and theories of ethics related to health care delivery/administration and legal issues surrounding the relationships of patient, provider, and health care institution. This course also focuses on principles of autonomy and informed consent, confidentiality, truthfulness, professional standards and institutional ethics, corporate liability, medical malpractice, medical staff bylaws, patients’ rights, medical records and governmental regulation of personnel and health facilities.
Pre-requisites:  MHM401

MHM524  Healthcare Human Resource Management
This course aims to provide students with a solid grounding in the fundamentals of human resource management and labor relations concepts and practices in health care. It also looks into the role of HR and its strategy in underpinning organizational viability and its potential to contribute to competitive advantage in the health care industry. The course is especially tailor made to suit the complexity and diversity management of policies and strategies of the human resource working in health care.
Pre-requisites:  MAN401 / HRM401 / MHM401

MHM525  Management issues in Health Psychology
Health psychology is an exciting interdisciplinary field of study that bridges the worlds of biology, psychology, and sociology. In this course, will have the opportunity to explore how psychological, social, behavioural, individual and biological influences contribute to health, illness, and reactions to illness. We will also try to answer how these elements interact and influence our health.
Pre-requisites:  MAN401 / MHM401

MHM526  Healthcare Leadership
This course introduces the basics principles of leadership and direction for those who are interested in supervision and management of health programs. The course content explores difference theories of Leadership with examples in the health care industry. The teaching methodology will inculcate the aptitude of entrepreneurial roles and risk taking in leadership.
Pre-requisites:  MAN401 / MHM401

MHM527  Supply Chain and Production Management in Pharmaceutical Industry
This course is an introduction to the supply chain concept and will explore the management of supply chains to improve an organization’s overall efficiency in the pharmaceutical industry. Other concepts included are the definitions, identification procedures, and an overview of methods, processes, and systems that are used in the operation of supply chains to improve performance.
Pre-requisites:  MAN401 / MHM405

MHM528  Quality Management in Health Care
Quality Management in Health Care prepares managers and health care professionals to plan, develop and implement successful continuous quality improvement/management programs in the health care industry. Graduates enhance their ability to move into integrated delivery of quality health care services that are accountable to clients of the health care system. In addition the graduates learn to manage and lead quality improvement and analyze information related to quality improvement, risk management and utilization, apply problem-solving skills to analyze problems and determine appropriate personnel and structures to solve quality problems and facilitate organizational change.
Pre-requisites: MAN401 / MHM401
Human Resource Management

HRM301/401 Human Resource Management
The course includes a wealth of conventional wisdom related to traditional human resource management challenges of recruitment and placement, training and development, compensation and labor relations. In addition, contemporary management challenges related to such issues as the strategic role of HRM & global HRM are included. Overall, the course is carefully crafted to present traditional HR management concepts, important contemporary HR management issues and insights so as to ensure organizational success.
Pre-requisite: MAN 301/302/401/402

HRM400 Foundation of Human Resource Management
This course is a study of approaches and theories of human resource management; an overview of the human resource profession, including emerging trends, professional roles and professional competencies.

HRM405 Research Methods in HRM
This course focuses on description, analysis and application of research methods for HRM professionals, studied in the context of key business and organizational decision-making processes.
Pre-requisite: STA 400, HRM 400, MAN 402

HRM406 Conflict Management and Negotiation
This course examines the nature and effects of conflict in organizations and relationships in the workplace, making conflict and negotiation productive and constructive. The course includes theories supporting effective conflict management strategies and tactics for use and resolution, practice of conflict resolution, negotiation and mediation methods.
Pre-requisites: HRM 400, MAN 400/402

HRM407 Seminar in Human Resource Management
This course focuses on discussions of current theory and research in human resource management and related topics. It is based on high quality contemporary research, case studies, discussion forums and available literature on human resource function as it relates to the overall strategy of the company. This course provides students the opportunity to apply knowledge acquired in prerequisite courses to resolve real-life workplace issues.

HRM408 Human Resource Issues in Pakistan
This course focuses on five key issues that present the greatest opportunities and challenges for HR professionals today and examines their implications in Pakistan. The course explores ways to realign HR and to explain the professional competencies needed to play a leadership role in realizing organizational change; examines the opportunities and benefits of planning for and managing a diverse workforce; defines the role of HR in managing a team environment; evaluates ways to design and implement alternative work schedules, reward system, human capital metrics and long term human resource strategies with a variety of organizations from not-for-profit to government organizations and local companies.

HRM409 Management of Excellence & Innovation in Organization
This course aims to enhance students’ understanding of innovation processes in the organization and how to manage such processes effectively. It introduces the key concepts, models, and techniques of innovation and organizational change management. Particular areas of emphasis will be the nature of innovation, innovation process, innovation typologies, changes in the external environment and drivers for change, models of organizational innovation and change, individual and group creativity, factors associated with innovation, practices for developing innovative organizations, organizational culture and transformational leadership.

HRM501 Recruitment and Selection
This course offers an understanding of effective techniques of the recruitment and selection process. It equips students with generic, technical, analytical and evaluative skills relevant to recruitment and selection. The course encompasses an in-depth knowledge of the entire recruitment process, right from the planning of staff requirement to designing of the job descriptions and advertisements, interviewing and testing applicants till the final selection and job offer. It encapsulates relevant information about the candidate through effective methodologies applied in the interviewing procedure.
Pre-requisite: HRM 301/401/402

HRM502 Industrial Relations and Labor Laws
The course deals with relationship issues arising from interaction between parties in the workplace. It develops an understanding of the principles & philosophy of industrial relations; labor-management relationship and labor administration; industrial relations attitudes and approaches; development and objectives of trade unions; their federations; employers’ associations, collective agreements; trade & consideration and process of collective bargaining.
Pre-requisite: HRM 301/401/402

HRM503 Employee Training and Development
The course emphasizes the changing role of training as a tool in giving organizations a competitive advantage in the highly competitive business environment. It covers a broad understanding of strategic training models, need assessment techniques, learning theories and program design evaluation. Traditional training methods, use of new technologies in training and interactive training.
Pre-requisite: HRM 301/401/402

HRM504 Negotiation Skills and Collective Bargaining
Explains the principles of exchange and develops confidence and skills to conduct negotiations and achieve a mutually acceptable outcome. It covers the method of negotiation developed by the Harvard negotiating project, known as Principled Method of Negotiation. The course covers the whole process of negotiations and collective bargaining in the context of business labor laws, industrial relations and practices; from preparation to closing a deal and includes essential guidelines for devising a negotiation strategy; how to reach consensus; what to do when negotiation breaks down and how to make use of a third party to break deadlock and resolve conflict.
Pre-requisite: HRM 301/401/402
Pre-requisite: HRM 301/401/402

Compensation.

The purpose of this course is to understand the links between human resource planning, performance and desired results. The success of an organization depends on its results, which are achieved by its employees. Unless organizations select, develop & retain the best talent, they cannot succeed. Organizations plan, coordinate and review the activities of employees so as to achieve the desired results. The purpose of this course is to understand the links between human resource planning, performance and compensation.

Pre-requisite: HRM 301/401/402

Strategic HRM

The course provides an in-depth understanding of how the major components of the HR practice fit in with each other in order to develop a “high-performance working environment”. This course will give first-hand experience about the hidden traps that hinder HR-effectiveness in real life situations and what options does an organization has to avoid these traps.

Pre-requisite: HRM 301/401/402

Public Relations and Event Management

The course focuses on public relations as management process in business, government and society; decision-making constraints, use of authority, power play of social, political, economic, technological, and moral issues in decision-making and the limitation and abuse of authority.

Pre-requisite: HRM 301/401/402

Salary and Compensation

The course analyzes compensation strategies and practices from the perspective of the industry as well as an individual. It addresses the flexibility propositions in a compensation package which enables a company to adapt to the changing environment.

Pre-requisite: HRM 301/401/402

Leadership Studies

This course is designed to cope with the rapid change which the world has been undergoing for the past five decades; more stringent and varying demands are being placed on management leadership for the growth of their organizations, if not for their actual survival.

Pre-requisite: HRM 301/401/402

Personnel Development

This course extends training in the area of performance appraisals and is an integral part of Human Resource Development (HRD). It highlights the procedures for assessment of training needs, employee feedback and counseling, career planning and growth, and ways to enable companies to fulfill the intrinsic needs of its employees.

Pre-requisite: HRM 301/401/402

Performance Appraisal and Management

The success of an organization depends on its results, which are achieved by its employees. Unless organizations select, develop & retain the best talent, they cannot succeed. Organizations plan, coordinate and review the activities of employees so as to achieve the desired results. The purpose of this course is to understand the links between human resource planning, performance and compensation.

Pre-requisite: HRM 301/401/402

Personnel Management & Industrial Relations

This course aims to cover the theoretical foundations and empirical practice of HRM and IR. It provides students exposure to a wide variety of organizational practices; to manage and develop employees, ensure their welfare and understand changing employment legislation essential to business survival. This course enables students to develop practical skills in the subject area to equip them for a career in HR/IR.

Pre-requisite: HRM 301/401/402

Coaching Skills and Techniques

This course builds and/or refines the student’s repertoire of basic coaching skills applicable to most executive coaching situations (e.g. self-awareness, empathy, listening, questioning, giving and receiving feedback, confrontation, limit setting, demonstrating leadership, etc.). It seeks to develop the specialized techniques of executive coaching, peer coaching, management coaching, leadership coaching and individualized skill. Students learn how to coach and understand organizational culture to develop high-performing cultures that strengthen business results.

Pre-requisite: HRM 301/401/402

International HRM

The course will review the theories, models and concepts developed in the areas of international management, international organizational behavior, cross-cultural management, and study their implications on international HRM practices. A major focus of the course will be on international human resource management & development issues of recruitment and selection, compensation and reward systems, training and development, performance appraisal, expatriation, repatriation and career development.

Pre-requisite: HRM 301/401/402

Research Practicum in HRM

The practicum prepares students to practice industrial/organizational psychology with the understanding of organizational cultures critical to effective professional practice in the workplace. Independent work under the direction of faculty advisor topics includes assessing, analyzing, or appraising performance, aptitudes, skills, preferences, needs, or personality factors required for job/task analysis, personnel recruitment, selection and placement, or performance evaluation.

Pre-requisite: HRM 301/401/402

Pay for Performance & Reward

This course familiarizes students with the concepts of performance management within the wider context of human resource management. It provides students with an understanding of the reward management process which includes pay survey, job evaluation, and the design of pay structure. The concept of equal opportunity in compensation and performance management will be emphasized throughout the course.

Pre-requisite: HRM 301/401/402

Performance Management

This course develops the theoretical and practical skills necessary to plan, monitor, measure, motivate, and improve performance. Students learn how to define and develop individual and organizational performance goals and objectives, measure and track performance, diagnose performance deficiencies, and develop and implement group and individually tailored performance improvement systems.
Languages

LAN101  Introduction to Arabic
This course is designed for those who do not have any prior knowledge of this language. It enables students to carry out basic conversation in Arabic. Students are prepared in a manner that they can put the message across. This course is designed to bring about awareness about the business taking place between Pakistan and the Arab countries. This course also enables students to understand and appreciate language and culture. The main objective of this course is to bring the students to a level where they can read, write, speak and understand basic Arabic.

LAN102  Introduction to French
This course is designed for those who do not have any prior knowledge of the language. It enables students to carry out basic conversation in French. Students are prepared in a manner that they can put the message across. This course is designed to bring about awareness about the business taking place between Pakistan and France. This course also gives some knowledge about French culture. The main objective of this course is to bring students to a level where they can read, write, speak and understand a foreign language and comprehend and appreciate foreign cultures.

LAN103  Introduction to Spanish
This is an introductory course in Spanish. It is structured for those who have no prior knowledge of the Spanish language. It starts from the basics and brings the students to a level at which they can develop phrases and understand spoken Spanish.

LAN104  Introduction to German
This is an introductory course in German language. It is structured for those who have no prior knowledge of the German language. It starts from the basics and brings students to a level at which they can develop phrases and understand spoken German.

LAN105  Introduction to Japanese
This is an introductory course in the Japanese language. It is structured for those who have no prior knowledge of the Japanese language. It starts from basics and brings students to a level at which they can develop phrases and understand spoken Japanese.

LAN106  Introduction to Italian
This is an introductory course in Italian. It is structured for those who have no prior knowledge of the Italian language. It starts from basics and brings the students to a level at which they can develop phrases and understand spoken Italian.

LAN107  Introduction to Russian
Introductory course structured for beginners. Students will learn basic grammar, pronunciation and dialogue interaction so as to develop phrases and understand spoken language.

LAN108  Introduction to Chinese
This course is designed for those who do not have any prior knowledge of this language. It enables students to carry out basic conversation in Chinese. Students are prepared in a manner that they can put the message across. This course is designed to bring about awareness about the business taking place between Pakistan and the Chinese countries. This course also enables students to understand and appreciate Chinese language and culture. The main objective of this course is to bring the students to a level where they can read, write, speak and understand basic Chinese.

LAN112/LAN113  Urdu I & II
Urdu I, the foundation level course, aims to stimulate students’ interest in the language. Reading of short essays, poems, articles and practicing of writing skills will be used. Urdu II is geared to enhance the students’ language competency by introducing them to classical and contemporary literature, and encouraging structured discussion and debate in class. Writing exercises will be more extensive and challenging.

Pre-requisite: LAN112 for LAN113

LAN201  Intermediate Arabic
This course is designed for those who have basic knowledge of the language and are able to make simple conversation. It further enables students to converse in Arabic on a higher level for specific dealing purposes. This course is designed to give general knowledge of how to communicate in different environments in Arabic. It prepares students in a manner that they can deal with different situations while traveling and corresponding with Arabic natives by letter or e-mail. The main objective of this course is to bring students to a level where they can communicate well and deal with different situations in basic business Arabic.

Pre-requisite: LAN 101

LAN202  Intermediate French
This course is designed for those who have basic knowledge of the language and are able to make simple conversation. It further enables students to converse in French on a higher level for specific dealing purposes. This course is designed to give general knowledge of how to communicate in different environments in French. It prepares students in a manner that they can deal with different situations while traveling and corresponding with French natives by letter or e-mail. The main objective of this course is to bring students to a level where they can communicate well and deal with different situations in basic business French.

Pre-requisite: LAN 102

LAN203  Intermediate Spanish
This course is for those who have a basic understanding and command of the Spanish language. It is oriented towards advanced sentence structuring and composition while improving one’s speech style.

Pre-requisite: LAN 103

LAN204  Intermediate German
This is an advanced course for those who know the basics of the German language. It teaches advanced sentence structuring and composition while improving one’s speech style.

Pre-requisite: LAN 104
LAN205 Intermediate Japanese
This course is for those who have a basic understanding and command of Japanese language. It is oriented towards advanced sentence structuring and composition while improving one’s speech style.
Pre-requisite: LAN 105

LAN206 Intermediate Italian
This course is for those who have basic understanding and command of the Italian language. It is oriented towards advanced sentence structuring and composition while improving one’s speech style.
Pre-requisite: LAN106

LAN207 Intermediate Russian
The course is oriented towards advanced sentence structuring and composition while improving dialogue interaction.
Pre-requisite: LAN107

LAN208 Intermediate Chinese
This course is designed for those who have basic knowledge of the language and are able to make simple conversation. It further enables students to converse in Chinese on a higher level for specific dealing purposes. This course is designed to give general knowledge of how to communicate in different environments in Chinese. It prepares students in a manner that they can deal with different situations while traveling and corresponding with Chinese natives by letter or e-mail. The main objective of this course is to bring students to a level where they can communicate well and deal with different situations in basic business Chinese.
Pre-requisite: LAN108

LAN401 Functional Urdu
The course will give an insight into the basics of Urdu language. Students will be able to shape language to communicate effectively, while applying appropriate conventions of language usage and grammar. The course will also focus on vocabulary and reading, writing and speaking skills.

LAW301 Intellectual Property, Patents, Copyrights
This course emphasizes on patents and copyrights and a briefer look at trade secrets and trademarks. Current issues relating to information technologies and business methods will be highlighted. The seminar has no prerequisites, and is designed for both graduate students and undergraduates.

LAW400 Company Secretarial Practices
This course introduces participants to the duties and responsibilities of the corporate secretary in organizations. Students will explore the role and functions of the corporate secretary and the application of best practice in the conduct of meetings and in ensuring compliance with legal and regulatory requirements.

LAW401 Business Law
The course provides study of law relating to commercial associations/entities. The topics includes an introduction to the concepts and sources of laws; different aspects of contract laws, the selected parts of partnership laws, sale of goods laws etc.

LAW402 Corporate Law
The aim of the course is to provide knowledge about the practical aspects in the areas of the Companies Ordinance, 1984, e.g., incorporating/registering different types of companies, raising finances, managing company meetings; powers, duties & responsibilities of directors.
Pre-requisite: ACC101 / 402

LAW403 Business & Insurance Law
The legal environment should be an exciting, contemporary, and interesting. This course includes new statutes, regulations, and cases, as well as the most recent developments in cyber, Insurance Law, and Takaful regulations. Course today explicitly addresses the Schools of Business’s (AACSB’s) broad array of curriculum requirements.

LAW404 Arbitration
The course consists of a theoretical and a practical component. It is a skills-orientated course, designed specifically not only to expose students to the practical skills required during arbitration but also to provide a theoretical context for such skills.

LAW405 Media Law and Business Ethics
This course is based on interaction between media and the public sphere and examines the way moral criteria have been used to underpin the legitimate ethics of journalistic practice. It aims to develop a new framework, which can take an account of the way in which information is produced and distributed in the new environment.
Pre-requisite: MMM438

LAW406 Professional Ethics and Legal Issues
This course addresses the legal and ethical issues in organizations from a multicultural perspective. The emphasis is on the study of multiple perspectives on an issue, analysis and problem solving strategies to create policy and sustain practices that conform to the spirit of ethics codes in its applicability both domestically and globally.
Management

MAN101/301/401 Principles of Management
The purpose of this course is to prepare students to be managers. The course includes a wealth of conventional wisdom related to traditional management challenges of planning, organizing, leading and controlling. In addition, the contemporary management challenges related to such issues as people, quality, diversity, ethics and the global environment are included. Overall, the course is carefully crafted to present traditional management concepts, important contemporary management issues and insights so as to ensure organizational success. The pedagogical objective of the course is to impart specific actionable skills to the student.

Pre-requisite: MAN 101/301/401

MAN201 Personal Management
The importance of self-management is stressed for productive results. Topics include time management, stress and conflict handling. Development of emotional maturity is discussed and interpersonal skills are developed through transactional analysis.

Pre-requisite: MAN 101/301/401

MAN302/402 Organizational Behavior
Organizational behavior is a study of how people behave as individuals, in groups and how groups behave as parts of organizations. An effective organization is the one that understands and manages optimum levels of these three types of behavior. The course includes a wealth of conventional wisdom related to traditional organizational behavior issues of the individual, the group and the organization. In addition, the contemporary management challenges related to such issues as the design of HR practices, technology, work design and organizational dynamics are included.

Pre-requisite: MAN 101/301/401

MAN303/406 Production and Operations Management
The course will provide a student-oriented presentation of the subject. It will reflect current production and operations management practices and techniques. An integrated approach featuring management process, resource conversion and concepts, models, and behavior applications within the production/operations function will be followed.

Pre-requisite: MAN 101/301/401, STA 202, MTH 103

MAN305 International Relations
This course aims at providing basic knowledge of international relations. In this course, the key theoretical concepts and terms of the field will be discussed such as level of analysis of international relations, theory and theory building, important actors in the international arena and the world system, and relations between states. Students will also be introduced to contemporary and future problems and issues in international politics.

Pre-requisite: MAN 201

MAN321 Organizational Behavior & HRM
This management area focuses on (1) individual, group, and organizational attributes and behavior to describe and explain the functioning and structuring of work organizations, and (2) the practical aspects of human resource management. Students seeking managerial careers in any business function can valuably learn about leadership, motivation, morale, performance, teams, organizational culture, and organizational design.

MAN403 Entrepreneurship & Small Business Management
To provide an understanding of the person and the process of creating and growing a new venture, this course introduces the entrepreneurial perspective and focuses on all the elements in the entrepreneurial process that are part of creating a new venture. It introduces a new venture through alternative sources of capital in financing.

Pre-requisite: MAN 101/301/401, MKT 302/402, FIN 202

MAN404 Operations Research and Management
The course aims to enhance the capability of decision-making through application of modern methods of mathematical science to complex problems. The topics include linear programming, transportation and assignment models, network models, queuing models, simulation, replacement models, etc.

Pre-requisite: MKT 303, MAN 303

MAN405 Strategic Management
The course is intended to be a challenging and exciting capstone course for a graduate business school curriculum. It is the first course about strategy and its implementation. Students will be exposed to the state of the art of strategy analysis, formulation, implementation and control.

Pre-requisite: MKT 302/402, MAN 301/401, 302/402, HRM /401/402

MAN407 Organizational Management
This course is a study of the entire process of management. It gives an insight into the development of managerial skills for effective running of business operations. Along with the in-depth knowledge of the functions of management it serves as a basis for understanding motivation techniques for human resource which is critical for synergies in business.

MAN408 Analysis of Pakistani Industries
Students get a micro and a macro environmental exposure and understanding of the various issues facing the industry. This course also aims at benchmarks the various functional processes so as to achieve organizational excellence.

Pre-requisite: MAN 302, HRM 301, ECO 402
MAN409 Principles of Management & Human Resource Management
This course highlights management concepts, principles, processes and functions of management, namely, planning, organizing, leading and controlling which provides a sound basis for carrying out required tasks and successfully achieving goals in any organization today. In this environment, effective management, of human resource is one of the few levels that managers have at their disposal to accomplish their organizations strategic objectives.

MAN410 Introduction to Industrial Management
The course introduces industrial management operation system & includes objectives; entrepreneurship, project identification, evaluation, project & operation cost, productivity, breakeven analysis, process management, operations strategy, competitive strategy framework for competitor analysis, structural analysis of industry, total quality management, capacity planning & facility location, inventory management, supply chain management, project management, project control and technology management.

MAN411 Project Management
The course covers project initiation, discovery and analysis, time and cost estimates, project planning, network diagram, critical path, recourse management plan, project execution, monitoring and managing, project control, project closure plan, managing operation transfer plan.

MAN413 Corporate Social Responsibility
CSR is the commitment of businesses to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve their lives in ways that are good for business and for development.
Pre-requisite: MAN 401

MAN415 Entrepreneurial Leadership and Motivation
The Course aims at aspiring students to become successful entrepreneurs and attain leadership in their respective fields of endeavours. By enabling them to overcome their fear and problems of start-up businesses the Course involves presentations by renowned entrepreneurs to arouse passion and provide “mentorship” for successful implementation of entrepreneurial projects.

MAN416 Corporate Governance
Corporate Governance is the system by which business corporations are directed and controlled. The Corporate Governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders and spells out the rules and procedures for making decisions on corporate affairs.
Pre-requisite: MAN 401

MAN417 Services Management
This course focuses on service industries such as dealing with intangibility and inseparability. It also examines the problems faced by professional, not-for-profit, social and financial services marketers.

MAN501 Total Quality Management
This course revolves around the customer satisfaction model and deals with the areas of benchmarking, ISO-9000 (quality management systems), ISO-14000 (environmental quality systems), statistical process control, customer satisfaction approaches/models (management tools). There is special emphasis on research project & case studies in this course.
Pre-requisite: MAN 101/301/401, MAN 303

MAN502 Business Process Re-engineering
This course is designed to develop an understanding about organizing, managing & improving the ongoing process & systems essential for sustained growth of the organization.
Pre-requisite: MAN 101/301/401, MAN 303

MAN503 Supply Chain Management
This course covers essentials of Supply Chain Management and is divided into foundations of SCM, enabling concepts, the requirement process, strategic sourcing, strategic cost management relationship management and world class supply chain management.
Pre-requisite: MAN 101/301/401, MKT 301/401

MAN504 Business Balanced Scorecard
This course is a set of measures that provide a comprehensive business overview. It includes not only measures that track past actions, but also those that drive future performance. In this course, students will build the skills to create a strategy map and a Balanced Scorecard for an organization.

MAN507 Business Etiquette
The course deals with the ingredients necessary for career growth, apart from technical competence, e.g., protocol in the office, personal grooming and dress, relationship with colleagues and customers, etc.

MAN508 Comparative Management
This course exposes students to the different work-related values and norms prevalent in various countries of the world. The main aim of this course is to expose students to different cultural mindsets and the effective leadership styles which have been developed in different parts of the world.

MAN509 Logistics and Inventory Control
The course is a based on analysis and designing of domestic and international logistics systems. Topics include transportation, warehousing, inventory control, materials handling and packaging, and plant and warehouse locations. The course may serve as preparation for the American Society of Transportation and Logistics Certification examination in logistics systems management.
Pre-requisite: MAN 304

MAN510 Management Infrastructure
This course is a study of the entire process of management. It gives an insight into the development of managerial skills for effective running of business operations. Along with the in-depth knowledge of the function of management it serves as a basis for understanding the motivation techniques for human resource which is critical for synergies in business.
MAN605 Seminar in Business Policy
Business Policy is a multidisciplinary Capstone Course which focuses on all aspects of business including organizational strategies and practical and emerging trends relating to successful organizations around the world. It will cover policy, rationale and practices relating to business of successful organizations with particular emphasis on latest and emerging trends. It would involve case studies of selected business issues such as globalization of strategy, role of multinationals and internationalization, collaborative and competitive advantage strategy formulation and its implementation. Focus would be on in-depth analysis of business policy from a multidisciplinary perspective involving corporate marketing, management, Finance technology, economics, politics, regulation and social environment.

MAN601 Advanced Qualitative Research
This course introduces students to issues involved in developing appropriate research strategies for investigation business and organizational issues and concerns. Extensive literature review, presentation and research article summaries constitute its essential part. Quantitative research techniques are discussed at a higher level and software such as SPSS, Minitab and Eviews are used to analyze secondary data. The unit is also designed to facilitate the completion of an applied research project.

MAN602 Survey of Current Research Literature in Management
The course provides a review of management research literature under the supervision of PhD faculty. It provides an opportunity to analyze quality research published in different professional journals in the field of Management. The course concentrates on organizational behavior, business policy, human resource management, behavioral sciences.

MAN603 Technology, Innovation and Strategy
The course covers the evolving technological trends and their impact on current and future business strategies, operations and environment. These new challenges require innovation and creative strategies to successfully lead through the transformation. The Course focuses on innovations and technology as drivers of business strategy in emerging scenario.

MAN604 Management Strategies and Emerging Organizations
The course aims to equip students in the art and science of conceiving, developing and implementing management strategies to attain and retain competitive business advantage particularly in the emerging organizations. As organizations become global and increase their reach through internet and digital technologies, they are undergoing transformation of their organizational structures, mode of communication, control and management of resources.

Management Information Systems

MIS001 Introduction to Computers
The course is an overview of computers, understanding the machines, binary (bits and bytes), different goals, different machines and their sizes, history of computers and parts of computers.

MIS102 Computer Concepts
The course provides an overview of computers, understanding the machines, binary (bits and bytes), different goals, different machines and their size, history of computers and parts of computers. Problem solving techniques using computers, flowcharting and algorithm design, processing methods and programs, types of computer languages, types of computer software and an introduction to operating systems is also part of the course.

MIS103 Computer Applications I
The course is a study of microcomputer applications software, including operating systems, word processing, presentation graphics, spreadsheet, and implementation of solutions using appropriate application software.
Pre-requisite: MIS 102

MIS104 Computer Programming and Graphics
This is the first course in computer programming for engineers, involving an extensive development of programming skills required in engineering disciplines, the concepts of source and object programs, compilation, data and program distinction.

MIS106 Computer Applications in Business
The course is a study of microcomputer applications software, including operating systems, word processing, presentation graphics, spreadsheet, and implementation of solution using appropriate application software. The course helps to develop integrated business microcomputer based applications.

MIS201 Computer Applications II
The course helps to develop integrated business microcomputer-based applications. It emphasizes on design principles of transaction processing, management reporting, decision support, and executive support.
Pre-requisite: MIS 103

MIS301 Graphics I
Graphics I course divided into 4 main sections – elements of design, principles of design, typography and color theory as applied to print, TV and digital media. In this course, students learn the fundamentals of design by way of interactive exercises, group/individual assignments, presentations and studio work and develop their portfolio.

MIS302 Graphics II
Graphics II takes the students’ understanding of visual graphics to a higher level through the use of Photoshop, Illustrator and allied software. This is an applicative course requiring students to work on specific design projects using a variety of creative tools and treatments, to create original print and brand design work including logo designs, art posters, commercial posters, and book designing.
MIS305 CRM Systems and Applications
This course examines customer relationship management (CRM) as a key strategic process within all organizations and serves as a foundation course in the Service Management Program. CRM is defined as the overall process of building and maintaining profitable customer relationships by delivering value and satisfaction to the customer. Focusing on process, strategy and technology, this course leads students from understanding the fundamentals of CRM through the implementation of CRM systems and analysis of customer data.

MIS401 Computer Applications
The course is a study of information technology used in business information systems, including input, processing, storage and retrieval, output hardware and software, including operating systems and management reporting, decision support, and executive support systems. It emphasizes on microcomputer applications software, including operating system, word processing, presentation graphics, spreadsheet, database software, design principles of transaction processing and executive support systems.

MIS402 Computer Concepts and Applications
This course has been designed for students to learn basic concepts of Management Information Systems, components and types of MIS, relationship between information technology and MIS; information about software, their types and application, hardware components of a computer system; devices attached to a computer, use of internet, e-mail and e-commerce.

MIS403 Web Authoring
The course provides an introduction to IIS, internet architecture, creating simple web document, HTML, DHTML, linking web pages together, advanced formatting options, adding images to web document, CGI forms, etc.
Pre-requisite: MIS 401, MIS 402, MKT 301/401

MIS404 Computer Programming Language
The course includes computer cultural impact, its history and uses the essential features of computers and computing systems, problem analysis, development of basic algorithms, introduction to a high level language with general applications, digital computer organization, machine language, instruction execution, addressing techniques, digital representation of data symbolic coding and assembly system, macros, conditional assembly; I/O control subroutine linkage, system and utility programs.
Pre-requisite: MIS 401

MIS405 Computer Applications - E-Business

MIS406 Operations Research
The course focuses on the nature of operations research, formulating problems and objective analysis, types of problems, risk situation, sequential decisions models, linear programming model, graphical method, simplex method, etc.
Pre-requisite: MIS 401

MIS407 Programming in JAVA
Introduction to object oriented methods, fundamental programming structure in JAVA, GUIs, apples, application, script programming, JAVA database connectivity, JAVA beans, etc.
Pre-requisite: MIS 401, MIS 404

MIS408 Web Page Development and Adobe Photoshop
The course includes an introduction to World Wide Web, hypertext and browser; basic HTML and WWW linking web page together; creating simple web documents, advanced formatting options, adding tables to web pages, adding images to web documents; working with URLs, using external media and plug-ins, linked windows and frames; uploading web pages on internet server, CGI and forms, image maps and dynamic documents.

MIS409 Computer Applications and MIS
This course has been designed to teach basic concepts of Management Information Systems, components and types of MIS, relationship between information technology and MIS, information about software, their types and application, hardware components of a computer system; devices attached to a computer and the use of internet, e-mail and e-commerce.

MIS411 Graphics and Animation
This is a practical course which aims to make the student familiar with the use of software to produce different types of graphics and animation in their films and presentations.

MIS413 Information Technology I
The objective of this course is to provide students with adequate knowledge of computer hardware and software; important elements and concepts of information systems; basic principles of computer programming and computer software application. It also gives an insight in the IT Security and controls; focuses on practical experience on performing various general procedures and the use of standard packages.

MIS416 Information Technology II
The course will advance students' IT knowledge and also allow them to expand into new areas. It offers students the opportunity to study new and emerging areas of advanced information technology (IT). Students will have a sound theoretical and practical basis for beginning or continuing a professional IT career.
Pre-requisite: MIS 413

MIS501 Information Systems Management
The course covers information systems planning techniques, information systems portfolio analysis and management control and auditing techniques related to information systems. In addition, it focuses on organizing and managing international information systems.
Pre-requisite: MIS 103/401
MIS502  Electronic Commerce
The course covers information systems that provide services to multiple organizations linking many buyers and sellers electronically. The topics include telecommunications, electronic data interchange, and doing business on the internet. It emphasizes international information policy issues affecting electronic commerce.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS503  System Analysis and Design
The course focuses on the methodologies and software tools in analyzing business processes. Topics include business re-engineering and information systems cost-benefit concepts; total quality management concepts; systems-building methods, including the system life cycle, prototypes, and end-user development techniques.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS504  Oracle/ Developer 2000
The course teaches design, implementation and management of relational database systems. The basic topics such as creation of tables, indexes, constraints (referential integrity), views and querying data and advanced topics such as rollback segments, parallel processing options and triggers are covered in the course.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS505  Software Engineering
The course introduces the architectural make up of some well-known operating systems (from micro to mini to mainframe systems). It also introduces different programming techniques using fifth-generation languages such as C++ to visual basic.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS506  Data Communication and Networking
This course is designed to teach from the very basic to advanced network design methodologies and modern trends in data communications. Design and implementation of windows NT server 4.0 covering topics such as installation of user accounts, groups, domains and trust relationships, sharing of drives, directories and files are taught. It also covers network protocols, such as NetBeui, IPX/SPX and TCP/IP and communication protocols.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS507  Relational Database Management Systems
The course includes continuation of data structure covering file structures & databases, random, indexed sequential inverted & multilist file structures, concept of data models, data security and data integrity, etc.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS508  Programming in C++
The course includes the basic concepts of object oriented programming, functions, classes, linked list and procedures.
Pre-requisite:  MIS 103, MIS 201, MIS 401

MIS509  Software Project Management
The course emphasizes the use of Computer-Aided Software Engineering (CASE) tools and object-oriented design and programming; configuration management and simulated project management; examination of software design issues and techniques. It includes a survey of design representation and a comparison of design methods; planning, scheduling and control of projects including cost estimating techniques; network analysis, time analysis, CPM and PERT, resource allocation, constraining & leveling; review of commercially available software and the use of PC based project management package.
Pre-requisite:  MIS 401, MIS 406, MIS 505

MIS510  Object Oriented Systems Analysis and Design Elective
The course introduces an object-oriented and web-based software focusing upon the object model describing classes, their relationships to other objects, and their attributes and operations.
Pre-requisite:  MIS 407, MIS 503

MIS511  E-Commerce, Web Design and Graphic Design
The course introduces students to the multi-disciplinary field of electronic commerce; basic e-commerce concepts; a review of relevant internet technologies; LANS, internet, DNS, web browsers, HTML, HTTP, databases, server architectures; commerce workflow models, business models for e-commerce, the value chain, roles and functional architectures; protocol architectures, issues of compatibility portability, transaction processing: database integrity, transaction processing (local key cryptosystem, internet security and security applications for e-commerce.
Pre-requisite:  MIS 401

MIS521  Record Management
This course particularly caters to the needs of management responsibilities; IT professionals and perspective on some of the unique issues facing the management of IT professionals. Organization Leaders often set the tone and establish the benchmarks for success. In this course, the focus is on developing a successful leadership style that facilitates team-building, collaboration, and a corporate culture that promotes success. Different decision-making techniques will be explored in the context of successful leadership styles.
Pre-requisite:  MIS102/MIS401/MIS402

MIS522  Business Information Systems
The course provides strategic views of information systems in modern business as well as the opportunity to examine and build IS solutions. It also provides ample opportunities to gain practical programming skills necessary for successfully developing business applications using modern development technologies and methodologies which constitute the core of this course.
Pre-requisite:  MIS102/MIS401/MIS402
MIS523  Decision Systems
The course helps to gain an insight into different decision levels and practical problems of organizations. The course emphasizes the study of decision theory, decision systems development and enabling technologies. The course includes the application and critical evaluation of methods and technologies in the decision-making path in current business scenarios.
Pre-requisite:    MIS522

MIS524  Decision Support Systems
This course provides a review of the literature in the area of decision support systems (DSS) and DSS frameworks, the process of decision-making and issues involved in the design, implementation and evaluation of DSS. Additional topics include data mining, user interfaces, knowledge-based DSS, and research directions in DSS; the design and implementation of a DSS prototype.
Pre-requisite:    MIS523

MIS525  Enterprise Systems
This course examines enterprise systems from the perspectives of information systems and operations management. It examines cross-functional integrated computer-based information systems, commonly referred to as Enterprise Resource Planning (ERP) systems, designed to support an organization’s information needs and operations. Common business processes, re-engineering/change management, and enterprise reference models are introduced from a holistic perspective. The course considers issues associated with the selection, analysis, design, implementation, and configuration of such enterprise systems. It investigates how such systems implement transaction processing, management information, and decision support across an organization’s various business processes. Strategic issues relating to success/failure and human aspects will also be introduced.
Pre-requisite:    MIS501

MIS526  Enterprise Resource Planning Systems
This course examines the cross-functional integrated computer-based information systems, commonly referred to as Enterprise Resource Planning (ERP) systems. Systems, common business processes, re-engineering/change management, and enterprise reference models are introduced with a holistic and research-oriented perspective. It focuses on issues associated with the analysis, design, implementation, and configuration of such enterprise systems and investigates topics such as supply chain, planning and control systems, optimization, scheduling systems, electronic commerce and business information warehousing.
Pre-requisite:    MIS525

MIS527  Information Security
The course presents technical arrangements for making information systems more secure. The process starts with defining the proper security requirements that are usually stated as a data security policy. Other topics include: identification and authentication, access control, security kernel, physical security, eavesdropping, hardware security, system software security, encryption techniques, public key infrastructure, security protocols and handling subversive software.
Pre-requisite:    MIS506

MIS528  Advanced Information Security
The course addresses concerns regarding confidentiality, privacy and the volatility of information resulting from the use of information technology. It emphasizes such managerial security issues as system security and controls, legal and ethical issues arising from protecting computer files both from a Pakistan and world perspective, disaster recovery and contingency planning and other tools used for protecting information system resources.
Pre-requisite:    MIS527

MIS530  Information Systems Research
The course provides an opportunity for a substantive review of research in the discipline of information systems as the essential part. Behavioral, strategic and social issues relating to the design, implementation and impact of information technology applications will also be studied.
Pre-requisite:    MIS501, MKT404

MIS532  New Perspectives on Organizations and Information Systems
The course investigates the major issues facing organizations in adopting, implementing and using information systems for competitive advantage. It also provides an opportunity to explore a set of critical issues from both an academic and practical perspective. The topics include strategic information systems, e-commerce, knowledge management, the emergence of the business process, ERP implementation, virtual teams and global IT, IS and developing countries, etc.
Pre-requisite:    MIS522, MIS525
Marketing

MKT301/401 Principles of Marketing
The course is an introduction to the language and issues of marketing. The course focuses on basic marketing concepts, the role of marketing in the organization, and the role of marketing in society. Topics include market segmentation, product development, promotion, distribution, and pricing.

Pre-requisite: MKT 302/402

MKT302/402 Marketing Management
This is an intermediate level marketing course that incorporates a mix of lecture and case study approaches, rounding it off with a term-project aimed at understanding the practice of marketing management in the real business world.

Pre-requisite: MKT 301/401

MKT403 Sales Management
This course enlightens students on how organizations sales goals can be met in an effective & efficient manner through planning, staffing, training, leading & controlling organizational resources. The course teaches students to prepare sales plans and forecasting, territory planning, and time management among other topics.

Pre-requisite: MKT 301/401, 302/402

MKT404 Methods in Business Research
Objective of this course is to introduce students with fundamental business research process and to provide them with the necessary skills in designing and conducting basic quantitative and qualitative research which can be applied to practical problems encountered in a business organization.

Pre-requisite: MKT 301/401, 302/402, STA 202/403/404

MKT405 Marketing Research
An Applied Orientation takes a unique functional and marketing approach that illustrates the interaction between marketing research decisions and marketing management decisions. This course is comprehensive, practical, and presents a balanced coverage of both qualitative and quantitative material around marketing research.

Pre-requisite: MKT 301/401, 302/402

MKT501 Strategic Marketing and Planning
This course will provide a general understanding of the strategic marketing process, its relationship to the corporate strategy and the particular role of market driven strategies. It will provide understanding of the concept of market orientation and role of distinctive capabilities to deliver value to different product-markets.

Pre-requisite: MKT 301/401, 302/402

MKT502 Graphic Design
This course prepares students to make marketing decision based on knowledge of visual/aesthetics and business considerations. It also covers paper proportioning and structural designing using different material vis-à-vis steel, aluminum, plastic, paper, etc and hence translating the brand concept to the final sales package. This module provides an appreciation of the factors affecting style, design, color perception, etc., in packaging.

Pre-requisite: MKT 302/402

MKT504 Advertising
Advertising is a creative, and at times, controversial communicative genre that plays a central role in consumer culture. This course will challenge students to consider not only the creative dimensions of advertising but also to consider a sustainable social role for advertising.

Pre-requisite: MKT 302/402

MKT505 Industrial Marketing
The course includes the nature of the industrial market, analysis of customer procurement strategy, product policy, pricing, distribution strategy, sales force management and key account selling strategy.

Pre-requisite: MKT 302/402

MKT506 International Marketing
This course analyses opportunities, distinctive characteristics, and emerging trends in foreign markets; explores alternative methods and strategies for entering foreign markets; organizational planning and control; and impact of social, cultural and economic.

Pre-requisite: MKT 302/402

MKT507 Services Marketing
This course provides an in-depth appreciation and understanding of the unique challenges inherent in managing and delivering quality services. Students will have the opportunity to work with tools and strategies that address these challenges.

Pre-requisite: MKT 302/402

MKT508 Personal Selling
In this course students are taught the art of oral communication with potential buyers of a product with the intention of making a sale. Among marketing jobs, more people are employed in selling than any other field, hence this course gives good textbook knowledge to equip the student for such a position in the practical field.

Pre-requisite: MKT 302/402

MKT509 Consumer Behavior
The course begins with providing an orientation on the concept of consumer behavior and its evolution with changing times with a cus on emerging segmentation and targeting.

MKT510 Direct and Digital Marketing
This course gives an insight into the nature and purpose of direct marketing and how companies can use the various promotional tools to gain a competitive edge. It differentiates the various elements of communication mix and explains where these are used to access targeted consumers.

Pre-requisite: MKT 302/402

MKT511 Brand Management
This course is designed to introduce the concept of brands, brand equity, brand identities, the value of brand as an asset and how they deliver value to all the stakeholders including the company. Students will develop appreciation of brand architectures, brand-product relationships, brand vision and brand positioning.

Pre-requisite: MAN401, MKT 302/402
MKP512 Export Marketing
The course offers a guide to the practicalities of entering international markets. The topics include international trade and regional comparative advantage, soliciting markets, documentation and financing of exports.
Pre-requisite: MKT 302/402

MKP514 Public Relations and Event Management
Courses on event management are the talk of the town nowadays because of the element of glitz, glamour, flamboyance and style associated with important social and corporate events like marriages, company conferences, seminars, workshops, product launches and a host of other activities.

MKP517 Media Marketing
This course teaches techniques which are used by marketers to sell media as well as methods employed to convince advertisers of how their applications can be used to obtain optimum results. Often this takes the form of presentations to advertisers and could include the preparation of a media plan for each campaign to help clients.

MKP519 Marketing of Financial Services
The growth and diversification of the financial services market has led to increasing competition for customers and the constant creation of new products. Significant regulatory developments, impact of technology and new entrants from the global arena and the challenge of retaining an ever so mobile consumer have a profound impact of competition in the sector hence the role of marketing is of creating and sustaining a competitive advantage.
Pre-requisite: MKT 301/401, 302/402

MKP520 Merchandising and Sales Promotion
The course aims to touch upon a frequently overlooked facet of marketing; visual marketing and the role it plays in sales promotions. The course will explore the definition and use of visual merchandising with an emphasis on local companies and then move on to the role it plays in sales promotion.
Pre-requisite: MKT 301/401, 302/402

MKP521 Distribution and Channel Management
The battle of consumer products is now fought in the field of distribution. Even the best advertising and communication and positioning strategy will not be capitalizing on the investments made until there are operational executions in the battlefield, i.e., distribution. Hence, this course has been designed to prepare students with a framework as well as operational plan for the execution of a successful distribution strategies related to the local multi-national and national environment, keeping in view the key elements of Pakistani markets.
Pre-requisite: MAN 101/301/401, MKT 301/401, 302/402

MKP526 Public Relations and Event Management
Public relations is increasingly being recognized as an important business function. Accordingly, this course prepares students to acquire a full understanding of the function of public relations in a complex, social, economic and political environment. This course will also familiarize the students with the processes, tools and techniques required for effective public relations.

MKP527 Integrated Marketing Communication
The objective of this course is to provide students with an understanding of integrated marketing communication from a conceptual point of view as well as its practical application in business organizations. It will focus on essential concepts such as the impact of communication and buying behavior, the role of promotional activities and tools, as well as provide insight into more advanced concepts and guiding principles of value-based IMC planning.
Pre-requisite: COM402, MKT401

MKP530 New Product Development
This course educates students on the whole cycle of launching a new product. It engulfs areas right from conceptualization to research, design, testing, manufacturing and finally at the heart of it-marketing the new product.

MKP531 Retail Management
This course provides a good understanding of the concepts, strategies, and trends associated with a retail operation in the marketplace. It explores the current retail environment and key retail management strategies from managing merchandise and employees, to advertising and promotion.

MKP607 International Branding
This innovative course of International Branding is intended to strategically extend international marketing practices and strategies in companies desirous to explore global market opportunities outside their home country. This course would help them understand the tremendous global business opportunities available for them which are not yet explored.

MKP605 Pricing Models and Strategies
The Strategy and Tactics of Pricing show how to manage markets strategically—rather than simply calculate pricing based on product and profit—in order to improve their competitiveness and the profitability of their offers.

MKP606 Non-Profit Marketing
The course focuses on the impact of non-profit marketing in the social sector and the growing intersection between non-profit management and the business world.

MKP607 Islamic Marketing
The course takes an integrated business approach to the application of Sharia principles in the marketing of pure, halal/holy products and services. It shows students how to integrate the timeless principles of enviable Muslim ethics especially to pricing and advertising.

MKP608 Small Business Marketing
The course is specially designed to help small businesses with limited resources to design effective and competitive marketing programs.
Mathematics

MTH101 College Algebra
The course is a review of exponents, equations and inequalities, function notation, composition and inverse, linear, quadratic, polynomial, exponential and logarithmic functions and their graphs.

MTH102 Pre-Calculus
The course helps student to learn basic mathematics like algebra, factorization, geometry and trigonometry, introduction to functions and matrices.

MTH103 Calculus for Business Decisions
The course includes the concepts and business application of functions, differential and integral calculus, optimization methodology, transformation and assignment model.
Pre-requisite: MTH 101

MTH107 Calculus and Analytical Geometry
The course includes functions, limit, derivatives, integral calculus with applications, vector algebra, vector calculus, introduction to analytical geometry, straight line in R3, planes, cylindrical and spherical coordinates, surfaces, cylinders and spherical trigonometry.

MTH109 Applied Calculus
Introduction to functions, introduction to limit, derivatives and their applications, integral calculus with applications, vector algebra, vector calculus, introduction to analytical geometry, straight line in R3, planes, cylindrical and spherical coordinates, surfaces, cylinders and cones, spheres, spherical trigonometry.

MTH202 Engineering Mathematics
The course covers vector algebra, dot & cross product, gradient, divergence & curl, functions limits, derivative, slope & rate of change, techniques of differentiations, higher derivatives, maxima/minima, optimization, integration techniques, matrices, solution of system of equations, fourier series, sequences & their convergence.

MTH204 Linear Algebra
Algebra of matrices; determinants, vectors in plane and in three dimensions; vector spaces; subspaces; span and linear independence; basis and dimension; homogeneous systems; eigenvalues and eigenvectors; systems of linear differential equations; orthogonal transformations; least square problems.

MTH205 Financial Mathematics
Considering the problem of derivates pricing in finance the necessary tools from probability theory and stochastic processes will be introduced in the course. The first part presents the main objects of interest from finance in the context of discrete models. Discrete probability spaces will be reviewed and fundamental results on Martingale theory will also be discussed including the optimal stopping problem applied to American options. The second part helps to move from discrete to continuous models. The course will include the celebrated Brownian motion and the associated Ito's stochastic calculus.
Pre-requisite: STA 301

MTH206 Multivariate Analysis
This course is designed to provide an integrated, in-depth, but applied approach to multivariate data analysis and linear statistical models in behavioral science research. The topics will include regression analysis, univariate and multivariate ANOVA and ANCOVA, disarrangement analysis, logistic regression, canonical co-relation analysis. Principal components, will also be covered.
Pre-requisite: MTH 204

MTH207 Stochastic Models and Math. Finance
The course is an introduction to mathematical modeling, analysis, and solution procedures applicable to uncertain (stochastic) production systems, including probability theory and stochastic processes.
Pre-requisite: MTH 205

MTH208 Differential Equations and Complex Variables
Solution of first order ODEs, Second and Higher order Linear ODEs, System of DEs, Homogeneous linear systems, Series Solution of ODE. PDEs methods with applications and complex numbers.
Pre-requisite: MTH 202

MTH209/409 Financial Mathematics I
The measurement of interest, Solution of problems in interest, Basic annuities, More general annuities, Amortization schedules and sinking funds.
Pre-requisite: MTH104

MTH210/410 Financial Mathematics II
Bonds and other securities, Yield rates, Practical applications, More advanced financial analysis, The term structure of interest rates, Duration, convexity and immunization, Stochastic approaches to interest.
Pre-requisite: MTH209/409

MTH211 Actuarial Mathematics
Advanced problems in life contingencies; force and laws of mortality; premiums and reserves for insurance and annuities based on a single life; joint life probabilities, annuities and insurances; multiple-decrement theory; pension fund mathematics are a part of this course.
Pre-requisite: STA203/205

MTH215 Differential Equations
Solution of first order differential equations by various methods and their applications, Second and Higher order Linear differential equations with engineering applications, System of Differential Equations, Homogeneous linear systems with constant coefficients, Series Solution of Differential Equations.
Pre-requisite: MTH 107

MTH216 Complex Variable and Transforms
Pre-requisite: MTH 215
MTH222  Discrete Structure
The topics covers proposition calculus, predicate calculus inference imprecation, recursive functions, sequences and series, inclusion/exclusion, recurrence relations, graphs and trees, Boolean algebras, and ordered sets, computer related arithmetic.

MTH224  Multivariable Calculus
The course includes techniques of integration, areas between curves, continuity of functions of several variables, partial differentiation, line integral, multiple integral, calculus of variations.
Pre-requisite: MTH104/401

MTH400  Mathematics for Business
This course is designed for all business students. It will assist students in reaching a level of increased competence in mathematics and expanded understanding of the applications of mathematical concepts in business activities. Emphasis is placed upon learning mathematical concepts through practical application to common business problems.

MTH401  Calculus I
The course covers functions, system of linear equations, Crammer’s rule, sequences, limits and continuity, differentiation, mean value theorem, maxima and minima and integration of simple functions.

MTH403  Numerical Computing/Analysis
The course covers errors, calculations and importance in numerical computing; various methods of solution of non-linear equations, Newton’s method and condition of convergence, interpolating polynomials, forward differences (), Newton’s Forward (NF) polynomial, backward differences (), Newton’s Backward (NB) polynomial; error analysis, unequal spaced values, inverse interpolation; numerical differentiation, formula for higher derivatives, numerical integration, rectangular rules; trapezoidal rule, simpson’s 1/3, 3/8 and 14/15 rule, romberg’s approximation, gauss’s quadrature, and multiple integrals. MATLAB and a programming language will be used to teach all topics.
Pre-requisite: MTH 105/ MTH 208

MTH406  Finite Element Analysis (FEA)
The course includes variation function, interpolation function, one-dimensional finite elements, two-dimensional finite elements; boundary-value problems, variational principles, Galerken approximation; partial differential equations, initial value problems and numerical integration.
Pre-requisite: MTH 208

MTH407  Mathematics for Business
This course is designed for all business students. It will assist students in reaching a level of increased competence in mathematics and expanded understanding of the applications of mathematical concepts in business activities.

Mathematics & Statistics (Scientific Computing)

MTS610  Calculus of Variations
Calculus of variations concerns problems in which one wishes to find the extrema (usually the minima) of some quantity over a system that has functional degrees of freedom. In this course it is shown that such variational problems give rise to a system of differential equations, the Euler-Lagrange equations. These equations, which have far reaching applications, and the techniques for their solution, will be studied in detail.

MTS611  Statistical Inference
The theory of statistical inference underpins statistical design, estimation and hypothesis testing. Topics covered include, Frequentist and Bayesian approaches, sampling distributions, Sufficiency, likelihood, asymptotic properties of estimators, Bayesian Inference and Likelihood ratio tests.

MTS612  Numerical Methods for ODEs and PDEs
This course will cover numerical solution of (PDEs) and (ODEs). Applications will include the Poisson equation, heat equation, wave equation, and nonlinear equations of fluid, solid, and gas dynamics.

MTS613  Design of Experiments
Introduction to linear models; experimental design; fixed, random, and mixed models. Factorial and fractional factorial designs. Taguchi designs and applications. Incomplete block designs, Response surface designs with applications and Mixture experiments.

MTS614  Mathematical Statistics
This course covers Probability theory, marginal and conditional distributions. Introduction to stochastic processes, Markov chain, generating functions, functions of random variables and derived distributions, sampling distributions, methods of estimation.

MTS615  Dynamical Systems
This component aims to give an overview of the main aspects of nonlinear systems and to provide definitions and theoretical background. This course will address issues under Continuous Dynamical Systems, Discrete Dynamical systems, and Non-linear waves.

MTS616  Advanced Numerical Analysis
Direct and indirect methods for solving linear equations and matrix inversion, conditioning eigenvalues and eigenvectors. Functional approximation, methods for ordinary differential equations. The student is also introduced to use some software packages.

MTS617  Multivariate Statistics
Topics include matrix algebra, random sampling, multivariate normal distributions, multivariate regression, MANOVA, principal components, factor analysis, Discriminant analysis. Statistical software, such as SAS or R, will be utilized.
MTS618  Statistical Modeling & Computation
This course describes how to use R to build statistical models and use them to analyze data. Multiple regression, followed by logistic regression, is applied to Poisson model for count data. Computational techniques such as Monte Carlo, Jackknife and Bootstrap using R, will be discussed.

MTS619  Time Series Analysis
Studies the basic time series models in both the time domain (ARMA models) and the frequency domain (spectral models), emphasizing application to real data sets.

MTS620  Asymptotic Analysis
Topics covered may include Asymptotic expansions, (non) convergence, algebraic equations with small parameters, eigen value problems, Asymptotic evaluation of integrals: Laplace's method, method of stationary phase, Boundary layers, principle of dominant balance, matched asymptotics with applications to physical problems, Boundary layers in PDE's, Method of multiple scales, WKB theory, and Exponentially ill conditioning.

MTS621  Stochastic Processes
This course covers probability theory, models with unpredictability, queues and population growth. Markov chains, Poisson processes, random walks, branching processes, first passage times, recurrence and transience, stationary and limiting probabilities.

MTS623  Applied Regression Analysis
This course explores, applied methods in regression analysis. Topics include linear and multiple regression and model building, ANOVA as regression analysis, analysis of covariance, model selection and diagnostic checking techniques, nonlinear regression, and logistic regression.

MTS625  Theory and Practices of Forecasting
Time series data properties and analysis, temporal dependencies, and applications in areas such as economics, engineering and the natural and social sciences.

MTS626  Advance Convex Analysis
In this course we shall cover the elements at the heart of convex analysis: sub gradients, optimality conditions, the Fenchel conjugate, and duality.

MTS627  Statistical Quality Control
Statistical quality control courses introduce students to the product design and control process. Course assignments may include creating sample quality control plans. Students examine a company’s production and processing capacity, along with the product quality loss when production exceeds that capacity.

MTS628  Advance Numerical Optimization
Topics may include, Karush-Kuhn-Tucker optimality conditions; Convergence, Newton and quasi-Newton methods; Nonlinear conjugate gradient methods; Levenberg-Marquardt methods; quadratic programming and nonlinear programming; penalty- and barrier-function methods.

MTS629  Machine Learning & Pattern Recognition
This course is a foundational course for anyone pursuing machine learning, or interested in the intelligent utilization of machine learning methods. The primary aim of the course is enable the student to think coherently and confidently about machine learning problems, and present the student with a set of practical tools that can be applied to solve real-world problems in machine learning, coupled with an appropriate, principled approach to formulating a solution.

MTS630  Information Retrieval & Data Mining
The course will cover the techniques used by most successful software engineers to address problems of quality and complexity. Goal is to learn how to write software that is robust, reusable, and maintainable by practicing the craft thoughtfully and critically through assignments and code reviews. Topics covered include, The Java Language - Overview, features, and best-practices., Concurrency - The Java Memory Model and thread-safety. Object-Oriented Design - Guidelines for good designs. Design Patterns - Solutions for common software design problems. Refactoring - When to modify existing code and how to do so safely. Test-Driven Development - Ensure your code works the way you expect and doesn’t break when you change it.

MTS631  Production Quality Software
The theory of variational inequalities treats optimization problems over convex sets. In this course we study the existence, uniqueness and regularity of the solution of a variational inequality. Applications and numerical methods will also be discussed.

MTS632  Advance Variational Inequalities
This course is an introductory course in algorithms. We will cover standard topics such as sorting, divide-and-conquer, various data structures, graph algorithms, dynamic programming, greedy algorithms, and - time permitting - NP-completeness and basic approximation algorithms. The emphasis will be given to arguing the correctness of algorithms and performing the analysis of their running time.

MTS633  Fundamental Algorithms
Matrix computations lie at the heart of most scientific computer codes. In this course, we will study how to perform such computations efficiently and accurately. Topics will include Gaussian elimination, singular value decomposition, eigenvalue solvers and iterative methods for linear systems.

MTS634  Advance Numerical Linear Algebra
Studies the basic time series models in both the time domain (ARMA models) and the frequency domain (spectral models), emphasizing application to real data sets.
MTS636 Advance Hilbert Space

MTS637 Simulation and Modeling
This course describes analytical and simulation techniques, probability distributions and their properties, Introduction to modeling and simulation concentrating on building business cases. Matlab and/or R will be used to solve formal problems and explore knowledge management.

MTS639 Principles in Parallel Computing
This course is designed for both academic and industrial scientists interested in parallel computing and its applications to large-scale scientific and engineering problems. It focuses on the three main issues in parallel computing: analysis of parallel hardware and software systems, design and implementation of parallel algorithms, and applications of parallel computing to selected problems in physical science and engineering. The course emphasizes hands-on practice and understanding of algorithmic concepts of parallel computing.

MTS641 Continuum Mechanics
Topics will include kinematics, stress analysis, balance laws (mass, momentum, and energy), the entropy inequality, and constitutive equations in the framework of Cartesian vectors and tensors. Emphasis will be placed on mechanical principles that apply to all materials by using the unifying mathematical framework of Cartesian vectors and tensors.

MTS642 Geometric Methods in Mechanics and Physics

Media Studies

MMM301 Photo Journalism
This hands-on, advanced level course for students majoring in Journalism draws on and develops their skills of visual storytelling, enhances their capacity to research and structure impactful stories, and communicate ideas through pictures and words, in a manner expected of a trained photojournalist.
Pre-requisite: MMM332

MMM302 Logic and Critical Thinking
This course seeks to develop the faculties of reasoning and critical thinking. It is designed to train students in analyzing arguments critically, using classical and current logic tools and applying them to real life contexts.
Pre-requisite: SSC101

MMM303 Outline of Political Science
This course is designed to take students through the process of evolution of political ideas and development of political institutions. Discussions relate to the rise of the state, its institutions such as legislature, executive and judiciary, and their working in different countries.
Pre-requisite: SSC104

MMM304 Media Literacy
Offered early in the program, this course will develop students’ skills for critically analyzing media content, and understanding the purpose and meaning of messages disseminated by traditional and contemporary media.
Pre-requisite: MPY301

MMM307 World Civilization and Culture
This course focuses on the impact of past civilizations on human culture and society. Starting with the Egyptian, Babylonian, Greek, and Roman civilizations, the discussion hones in on the evolution of Western and Islamic culture as reflected in the arts, music, literature, scientific and philosophical thinking of the last two centuries.
Pre-requisite: MMM303

MMM308 Contemporary World Media
This course brings out the richness and diversity of media at a global level and the universal concern with regard to its role as the fourth estate. It also highlights problems encountered by or attributed to media, and the challenges faced by it in satisfying a public that is not only better informed, but also holds media accountable for its actions.
Pre-requisite: MMM305

MMM310 News Writing and Reporting
This first news writing course familiarizes students with what news is, how to identify a possible news story, how to gather all the information related to it, and how to present it effectively. It also seeks to acquaint them with reporting techniques for stories related to crime, court cases, political and social issues, education, etc.
Pre-requisite: MMM304

MMM311 Introduction to Broadcast Media
This course introduces students to the world of broadcast media and the internet. It aims to provide comprehensive understanding of the historical, technical, legal and commercial aspects of radio and TV as well as new media. Apart from covering the theoretical dimension, this course also provides ample opportunity for practical, hands-on learning.
Pre-requisite: MMM310

MMM312 Introduction to Advertising and PR
This introductory course exposes students to the structure and working of advertising and PR agencies. Students learn about the concepts, practices, principles, tools and techniques of the two interrelated fields, as well as gain insight into the benefits of integrating advertising & PR.
Pre-requisite: MMM304
MMM313 Theater Arts
This course is designed to increase student’s understanding of theater as a performing art form. Students will explore and experience dramatic structures and styles, acting and directing, theater design and architecture. They will view and critique one or more live play productions, and present their own plays as their term project.
Pre-requisite: LAN113

MMM314 Online Journalism
This course exposes students to the practice of web journalism and its capacity to reach vast audiences with speed and alacrity. Students learn to research, write, edit and publish news on the web, through blogs and websites, and to assess their impact.
Pre-requisite: MMM310

MMM315 Feature, Article and Column Writing
This course is intended to develop specialized writing skill among students of journalism. It is a practical course that trains students to write as a professional for newspapers, magazines, and other media platforms.
Pre-requisite: MMM316

MMM316 Sub Editing
The purpose of this practical course is to train students in the techniques of copy editing, headline making, page layout construction, besides rewriting, restructuring and improving copy, that make up a Sub-Editor’s job. Students also use their knowledge of InDesign software for designing of page layouts.
Pre-requisites: MMM310 & MMM363

MMM318 Economic Journalism
This course seeks to develop students’ ability to understand and report on news related to economics, finance and trade. Students learn to analyze financial statements, and understand the operation of banks, financial institutions, stock exchange, and to communicate complex financial news and information in simple laymen’s terms.
Pre-requisite: ECO106

MMM321 Development Communication
This course highlights the importance of socio-economic development, and provides a strong theoretical basis for scrutinizing a country’s development projects and commenting on developmental issues in a constructive manner.
Pre-requisite: MMM307

MMM322 Current Affairs
In this course students improve their understanding of current affairs, engage in critical thinking, and develop comparative perspectives on issues. They enhance their debating skills, and the ability to write on current affairs topics for traditional as well as new media (Facebook, Twitter, and blogs).
Pre-requisite: MMM318

MMM324 Media Management and Marketing
This course examines the different approaches to business management in media organizations, with a focus on their common as well as differentiated marketing strategies and practices.
Pre-requisite: MMM328

MMM327 Studio Production
This practical course introduces students to a real-life, production studio environment, as well as to the craft of writing, editing and producing news, talk-shows, and other programs for TV. Students learn by playing the roles of news and script writers, anchors, producers, directors, actors and studio crew under professional guidance.
Pre-requisite: MMM310

MMM328 Methods in Media Research
This comprehensive course seeks to develop students’ understanding of the tools and techniques of qualitative and quantitative research such as questionnaires, interview and discussion guides. It also teaches them to identify credible data sources and use them as the basis of creating impactful news stories.

MMM329 Creative Writing Workshop
This is a mid-level course aimed at optimizing the writing skills of students. It is built around extensive reading and writing assignments. Readings will cover classical and contemporary writers, specializing in fiction and nonfiction genres. Emphasis will be placed on developing the capacity for creating original writings of an elevated standard.
Pre-requisite: COM109

MMM330 Appreciation of Vernacular Literature
This course is specifically designed to develop deeper understanding of the cultural and historical evolution of languages in South Asia, focusing primarily on Urdu. It will use a variety of literary genres to arouse students’ interest in discovering the nuances of the language, and its development along cultural and historical timelines.
Pre-requisite: LAN113

MMM332 News Production / News Anchoring
This advanced level, studio-based course for Journalism majors, aims to develop the required skills for producing news packages for, and anchoring on television. The course teaches the students to do stand-ups, interviews, voice-overs, sound bites, and cutaways, in order to tell the journalistic story effectively and professionally.
Pre-requisite: MMM327

MMM333 Sports Journalism
This specialized course familiarizes students with the tools and techniques of sports journalism. Class discussions focus on a variety of major sporting events and review their coverage in print and electronic media. Students visit field locations for real time news coverage, where they also interact with and learn from professional journalists.
Pre-requisite: MMM315

MMM335 Magazine Production
This course covers magazine design fundamentals i.e. typography, image research assignments, pre-press and manufacturing process, using traditional and computer-based tools and techniques. Every student must produce a sample online magazine during the term, going through a series of workshops, presentations and revision sessions.
Pre-requisite: MMM316
MMM336 Human Rights and Gender Reporting
This course is designed to familiarize students with the nuances of reporting on human rights violations. It relies on lectures, assignments and field visits to develop deeper understanding of issues related to the vulnerable segments of society i.e. women, children, religious minorities, and to enhance students’ ability to write on these issues. Pre-requisite: MMM310

MMM337 Thesis (Journalism)
This capstone project for Journalism majors will test their understanding of the tools and techniques of academic research, as they go through the process of selecting a research topic, developing a formal research design, undertaking literature review, collating, analyzing and interpreting field data and writing the final research report. Pre-requisite: MMM328

MMM338 Cinematography I
This introductory course provides the technical foundation for developing students’ understanding and skill in the art of “visual storytelling”. Students will learn to work with camera and light in a variety of conditions. Pre-requisite: MMM363

MMM342 Advanced Filmmaking – The Art & Craft I
This course is designed as “a commissioned project” where students will work for an “external client” based on their brief. This will include all aspects of filmmaking including idea creation, screenwriting, story-boarding, and selection of music and sound. Pre-requisite: MMM355

MMM344 Screenwriting for Film & TV
This dedicated course will enhance the students’ screenwriting skills i.e. “writing from a visual point of view”, for TV. The thrust of the course will be on learning from the work of professional scriptwriters, and cover the principal genres and formats. Written assignments will be used to measure progress, and grade the work of students. Pre-requisite: MMM329

MMM349 Radio I
This course will introduce students to contemporary radio broadcasting. They will learn about radio journalism, broadcasting qualities and responsibilities, radio news style, magazine programs and interviewing for radio. Pre-requisite: MMM332

MMM350 Radio II
In the Radio II course, students will practically experience radio broadcasting in a fully functional FM radio station, under faculty supervision. They will take on diverse roles and responsibilities and be graded on their assignments related to developing and broadcasting programs, live news bulletins as well as covering on-campus activities. Pre-requisite: MMM349

MMM351 Production Management
This course is designed to familiarize students with essential pre-production areas such as script development, budgeting, casting, set construction, and scouting for locations, required to produce video films for television. Pre-requisite: MMM363

MMM352 Advanced Production Management
This advanced course aims at equipping students with the required skills of a TV Producer. This would include hiring/ managing cast and crew, organizing studio and equipment, communicating ideas for production, as well as the film’s promotional aspects. Class lectures and practical assignments will be the methodology used. Pre-requisite: MMM351

MMM353 Lighting Design
This course will introduce students to the fundamentals of lighting design and use of studio lighting equipment. Students’ own skills will be developed through observing, questioning and working with an experienced lighting technician. Pre-requisite: MMM361

MMM354 Introduction to Editing & Sound Design
This initial course will focus on two interdependent areas of digital editing and sound design. Students will practice their skill in non-linear video editing using FCP software, to edit different types of production such as action, dialogues, comedy etc., and experiment with sound tracks to enhance the impact of the edit. Pre-requisite: MMM363

MMM355 Production of Documentary
This introductory course in nonfiction production will take students through the stages of conceptualizing, researching, scriptwriting, and producing video documentaries. It will focus on learning through observation, discussion and practicing with different treatments, styles, and production techniques. Pre-requisite: MMM338

MMM356 Ad-Film Production
The focus of this course will be on the “ad-film genre”, taking students through the creative process, starting off with idea generation or scripting o copywriting, storyboarding, casting, choice of locations, set-designing/ construction, shooting, editing, post-production and sound mixing to arrive at the finished “station material”. Pre-requisite: MMM355

MMM357 Advanced Editing & Sound Design
In this course students will aim at polishing their picture competency and sound competency skills. They will learn about sound track creation for film/TV, working with several strata of sound possibilities, ranging from music to general ambience, and perfect their skills in field-recording and sound editing. Pre-requisite: MMM354
MMM358 Advanced Cinematography
This advanced level course will provide students with a deeper understanding of the technical properties of lenses, filters, and lighting through lecture sessions, workshops, and screenings. Students will develop their technical skills, practice video image making, develop critical thinking skills, and their own film language and style.
Pre-requisite: MMM338

MMM359 Graphics and Animation for Web
This course covers the concepts and application of graphic design for the Web. Students will create and maintain their own websites paying attention to design fundamentals such as color, typography, imagery and composition. Web publishing software, simple animation and basic XHTML will be covered.
Pre-requisite: MMM342

MMM360 Introduction to Photography
This basic photography course will introduce students to the essentials of professional digital photography. It will teach them the techniques of digital photography in a practical and interactive manner, enabling them to obtain optimum results using varied themes, under different conditions.

MMM361 Fashion Journalism
This course covers various aspect of fashion journalism, from understanding fashion trends, to generating ideas for fashion features, reviewing shows, taking catwalk notes, working with photographers and photographs, interviewing designers, and writing reviews and pitching them to magazine editors.
Pre-requisite: MMM301

MMM362 History of Filmmaking
This course aims at creating an appreciation of how filmmaking has evolved over the years into a powerful visual medium. Students will not only discover how sound, light, camera, and music come together to create the magic of film, but also how critical are passion, creativity, commitment, and teamwork to succeed in this vocation.
Pre-requisite: MMM313

MMM363 Introduction to Design Tools
This course will introduce students to three practical graphic design software viz. Adobe Photoshop, Illustrator and InDesign, along with their application in photo-editing, web graphics, motion graphics, special effects, vector illustrations, and editorial design and page-making for books and magazines.

MMM364 Introduction to Mass communication
This is an introductory level course designed to provide students with an overview of print, broadcast and new media in terms of its structure and dynamics. The course takes students through the different stages of development of mass communication, and its impact on human society.

MMM365 Advanced Filmmaking – The Art & Craft II (Studio)
The “Studio” component of the final Advertising Filmmaking course will be divided between guest lecture sessions and preparation for the thesis/ creative project. High-caliber guest lecturers drawn from the industry will share first-hand knowledge of the challenges of practical filmmaking and project management. Dedicated studio sessions will concentrate on refining students’ technical skills required for accomplishing the thesis.
Pre-requisite: MMM342

MMM366 Advanced Filmmaking – The Art & Craft II (Thesis)
This capstone course will draw on students’ integrated knowledge, skill and understanding of digital filmmaking. Each student will produce two short films of 20-30 minutes duration. Out of the 90 hours scheduled for this course, a third will be used for lab and review sessions, and two-thirds for fieldwork, editing and post-production.
Pre-requisite: MMM365

Media Management

MMM423 Specialized Communication Skills
The course is designed to train and equip students with specialized verbal and written communication acumen required in efficient and effective information and entertainment dissemination through print and electronic media and advertising and public relations.

MMM427 Citizen Journalism
Students are familiarized with such aspects of Citizen Journalism as civic and social issues or problems pertaining to education, health planning, vehicular traffic, public utilities, etc. This course does not only identify issues and problem as regards social and civil life but also enables students to devise and apply practical models to address them through media efficiently and effectively.
Pre-requisite: MMM435/438

MMM428 Script Writing
The art of script writing is best learnt through professionals in various fields of print and electronic media in terms of conceiving an idea, developing a plan, devising convincing headlines, scripting the idea and concluding with an exclamation, if not a consensus.
Pre-requisite: MMM435/438

MMM429 Digital Media
Digital Media includes interactive multimedia, digital video and film production, web design, image creation, digital animation, 3D modeling, digital sound technology, graphic designing, basically pertaining to digital technology as a part and parcel of electronic media.
Pre-requisite: MIS401
MMM430 Time, Priorities and Conflict Management
This course aims at providing fresh ideas and insights for media personnel to manage time and priorities in tough and tedious routine and special conditions by delegating work responsibilities or by skillful multiple tasks adjustments. Time and priorities management are intensively addressed in all media forms relating to radio, TV, newspapers and magazines as well as in advertising, public relations and event management, of course, according to local and indigenous conditions.
Pre-requisite: MAN401

 MMM434 Media Planning
The course prepares the student for the changing media scenario by enabling them to specialize in the handling and effective selection of media. The course elaborates how the advertising budget can be used optimally across various media.
Pre-requisite: MAN401, MKT401

 MMM435 Print Media
The objective of the course is to provide specific study of print media for those students who aspire for a career in newspapers, magazines, periodicals and other publications. The course teaches students about process and production of print media, printing technologies, production strategies, thus equipping the students with knowledge and skills to enter the print media industry.
Pre-requisite: MMM438

 MMM436 Electronic Media
This course prepares students to acquire a full understanding of the function of radio and television in all its modern manifestations, including cable TV. Students will learn how to formulate advertising plans & monitor results taking cognizance of problems, opportunities and regulatory matters.
Pre-requisite: MMM438

 MMM437 Role of Media in World Affairs
This course teaches students the importance of media as a vehicle for creating an atmosphere conducive to international relations. It teaches the students how the media has undergone significant changes over the years and the power it has on the formation of public opinion and affecting the external environment for marketers and others.
Pre-requisite: MMM438

 MMM438 Introduction to Media in Pakistan
This course comprehensively covers contents like print, electronic, out-of-home media in Pakistan. The course also discusses the Pakistani environment in the context of media laws & ethics, the role it plays in world affairs, and marketing, planning and research processes prevalent in the country.

 MMM439 Media Research and Public Opinion
Mass media research introduces graduate students to applied audience research for electronic media. The emphasis will be on Pakistan’s media market and students will gain hands on experience with syndicated and custom audience research for print and electronic media. Students will be exposed to various aspects of media audience research including Gallup ratings for TV, radio and cable TV and other music research. Students are expected to become familiar with the Pakistan media market specially in electronic media, based on TV, radio, cable systems and cinema through mass media research based on research process, research approaches, data analysis and research application.
Pre-requisite: MMM435/438

 MMM511 Multimedia and Film Production
The course focuses on aspects of multi-media, video and film production. This course provides the student hands-on knowledge of planning, organizing, directing, controlling and promoting, provided by professionals from the field. The work-like atmosphere enables students to prepare for careers in this area.

 MPhil in Business Management

 MPM601 Advanced Qualitative Research
The course focuses on developing a working knowledge of a range of qualitative methods, methodological approaches, and theoretical framework of research to enable the participants to conduct qualitative research. Students will read research articles and case studies to propose and plan a study of their own selected inquiry.

 MPM603 Advanced Quantitative Research
This course aims to provide students with a broad range of quantitative research methods and skills that are relevant across business psychology, business management, human resources, marketing, economics, finance and social sciences.

 MPM605 Survey of Current Research Literature in Management
This course will enable students to explore recent research conducted in Business Management discipline and reported in reputed scientific journals. It will also aim at guiding research students to write literature reviews at the early stage of their research design, which form an important part of dissertation.

 MPM607 Corporate Governance and Strategy
The course brings together a coherent research based set of concepts, tools and practices for training integrators (general managers / directors) to handle cross-functional and cross-product sets of decisions. For advanced management researchers, this course aims to develop a useful set of examples and a rich source of research questions.

 MPM608 Project / Research Practicum
The practicum course aims to provide students with real experience in a workplace environment, working on a challenging project. The practicum provides opportunities for students from all disciplines, including management, human resource management, finance, and marketing research.
**MPM609  Seminar in Human Resource Management**
The aim of the course is to equip the students with the latest concepts, techniques and practices of HRM and strategic HRM in a modern corporate environment. The course provides opportunities based on case studies to practically integrate HR functions with overall strategy of national and global organizations.

**MPM610  Independent Study**
This course will provide space to the participants coming from different disciplines to propose a research topic in their field on unpublished major work and complete the research in one semester for publication in any HEC recognized journal or read at conferences of international repute.

**MPM611  Advanced Corporate Finance**
The course has been designed to give extended / advanced knowledge about Corporate Finance. Extended topics like option valuation, risk and real options in capital budgeting, financing and dividend policies will be studied at length.

**MPM614  Advanced Marketing Strategy**
This course focuses on a relative connectivity of changing concepts and philosophy of marketing with application examples created by corporations to handle their complex marketing tasks to achieve intended results.

**MPM616  Econometrics**
The course provides the students with the fundamental econometric theory and concepts, and practical training to become sound applied economists who know what econometric methods to use in different circumstances and how to interpret and appraise the results of the empirical analysis.

**MPM716  Hospital Planning and Organization**
This course provides an overview of the evolution, structure and current issues in the health care system. It examines the unique features of health care as a product, and the changing relationships between patients, physicians, hospitals, insurers, employers, communities, and government. This course covers history and organization of the health care system, financing and utilization of health services, health status of the population, disease occurrence, legal aspects of health care and medical sociology. Government health policy formulation and implementation and its impact on health care.

**MPM717  Health Institutions, System and Policy Management**
This course focuses on managed care and market structure of the healthcare industry as a whole. It covers strategic planning and marketing of managed care services, operational issues in developing a managed care network, actuarial issues, and the management of physician behavior. In addition the course analyzes strategies of vertical integration and horizontal integration, and their attempt to alter the balance of power in local healthcare markets. This course highlights the operational issues in managing cost and quality in an integrated system, integration along the supply chain, and the performance of these systems, and the bargaining and negotiation between hospitals, physicians, and health plans.

**MPM718  Global Perspective of Health Care Marketing**
This course is aimed at creating better understanding an increasingly complex market environment for Healthcare product development and commercialization. It explores the facts and clarify the implications of ongoing thematic changes - the 5 D's - that are fundamentally transforming commercial decision making in health care markets from insurance and care delivery to pharmaceuticals, biotechnology, and devices.

**MPM719  Integrated Leadership in HealthCare**
This course describes the critical knowledge and skills needed to be effective leaders in today's complex healthcare environment. It covers conflict resolution, leadership and negotiation skills, strategic planning, and ethics. Within the context of healthcare advocacy, the course examines the organizational and individual issues that impact success in promoting and advocating for a healthcare agenda.

**MPM723  Primary Health Care Management**
In this course, students are introduced to philosophies and models of primary health care. Capacity building and community development are presented in relation to the socio-political environment in which care is delivered. Community nursing and midwifery are profiled as examples of primary health care initiatives.

**MPM724  Managing Healthcare Ethics**
This course provides an introduction to the relationship of law to health care, including liability, government regulation, financial and ethical issues, contracting and negotiation and dispute resolution. This course presents an overview of legal and ethical issues facing managers and providers in health care. It provides students with a foundation of health law and ethics and reviews a wide variety of health care legal and ethical situations and dilemmas.

**MPM725  Managing Regulatory Affairs of Healthcare Industry**
This course provides students with a basic understanding of the areas of regulatory affairs and quality operations within various health-care industries, including pharmaceutical companies. Students are prepared for occupations involving drug or medical device submissions and quality assurance functions and roles. The issues of regulatory compliance in Pakistan as well as in other areas of the world are covered in the course.

**MPhil Leading to PhD in Organizational Psychology**

**MPP601  Qualitative Research Methods in Psychology**
This course provides an introduction to the qualitative research paradigm, issues of ontology, epistemology and methodology, research design using qualitative research methods, and theory building and theory testing. It focuses on several selected research approaches that will prepare students to undertake sound qualitative research.
MPP603  Quantitative Research Methods in Psychology
This course adopts a practical approach to teaching the analytical aspects of quantitative research techniques in psychology. It is designed to provide students with the basic background in research design and data analysis. The logic of statistical inference and scientific explanation, the merits and limitations of quantitative approaches to the study of psychological phenomena, and research ethics will all be discussed.

MPP605  Psychological Testing & Measurement
This course surveys the major concepts and techniques in the field of psychometrics, and provides students with some practical experience with commonly used tests. Topics covered include: the testing process; test standardization; reliability and validity; personality assessment; occupational applications; large-scale measurements; ethics and prospects.

MPP607  Independent Study in Organizational Psychology
This course is designed to propose a research topic in the field of Organizational Psychology in unpublished major work and to complete the research and publish it in HEC recognized journal. For independent study, the participants will be provided a suitable adjunct faculty member of the university, who is able to facilitate in completing the process of research and publication.

MPP609  Personnel Psychology in the Work Place
This course explores the application of psychological theory and practice to human resources activities in organizations. Topics include job analysis and design, employee selection and placement, performance management and appraisal, and legal and ethical considerations in human resources management.

MPP611  Human Factors in Work Environment
This course includes evaluation of human factors in man-machine relationships, with an emphasis on automation, systems analysis, displays, and adaptive problems to stress. It is designed to provide the principles of human factors in work environment; provide guidance into the means of optimizing the design of the workplace and the work system in order to maximize individual outputs.

MPP613  Organizational Conflict & Management
This course is based on the foundation that conflict is both “inevitable and beneficial” in successful organizations. We will examine interpersonal conflict, the role of organizational culture in conflict resolution and the impact of diversity on conflict. Skill development in conflict management and resolution will be based on a collaborative approach involving team- work, case analysis, and role-play.

MPP615  Project Practicum in Organizational Psychology
This course introduces students to work settings such as businesses corporations, banks, governmental and non-governmental organizations in which they will have an opportunity to apply the theories and subject matter of industrial/organizational psychology in the “real world”.

MS/MPhil in Education Leading to PhD

MPE503  Education in Pakistan
The topics in the course include empirical and legal research on educational issues of Pakistan at the local and state, critical appraisal of Pakistani policies, facilitating communication between education leaders and policymakers, statutes and case law related to liability, student rights, employee relations and property use.

MPE601  Advanced Qualitative Research Methodology
The course focuses on developing a working knowledge of a range of qualitative methods, approaches, and theoretical framework of research. The course also introduces the participants to APA writing style and concepts of academic writing.

MPE602/ MPM603 Advanced Quantitative Research Methods
This course aims to provide students with a broad range of quantitative research methods and skills that are relevant across business psychology, business management, human resources, marketing, economics, finance and social sciences.

MPE604  Developing a Research Project
This course will enable the candidates to identify their own area of research interest in the field of Education to develop a synopsis for their projected thesis.

MPE605  Economics of Education
This course is designed to introduce participants to economic principles, theory, and practice as it pertains to educational systems and their impact on economic growth (e.g., investment, labor, productivity, cost, efficiency, supply and demand) to the context of education.

MPE606  Global Issues in Education
This course introduces the fundamental, conceptual, and ethical questions that global change is bringing about in contemporary education. The students will understand the importance, commonalities, differences, and connections between global and comparative education.

MPE610  Philosophical Foundation in Education
This course introduces the fundamental conceptual and ethical questions that global change is bringing about in contemporary education. Participants will learn the global dimensions of several crucial contemporary issues, including international security and human rights, the problems of global conflict, the hopes of global cooperation, and the complexity of educational accountability, authority, and professionalism. The course will understand the commonalities, differences, and connections between global and comparative education, and the meaning and significance of globalization for both fields. One distinctive characteristic of the course is the service learning element, i.e., practical experience in educational institutions with focus on issues of change juxtaposing nationalism and globalism. This will enable the participants to apply the philosophical knowledge they gain in a practical context.
MPE611  Readings in Education
This course will introduce the participants to a collection of readings together with some widely-read contemporary theorists to correlate with their goals and stimulate thinking, debating and further reading. The course will also provide an opportunity to the participants to critique books and articles.

Policy Studies

PLY101  Policy Making in a Globalized World
The course focuses on theory of policy – liberal, socialist and nationalist approaches. The state, the market and the individual in capitalist order; global policy makers – multinational, financiers, multilateral agencies and private sector raters; the surveillance standardization regime, the system pegemon and global policy; policy making in Pakistan, state policy makers; the State Bank; the impact of de-regulation and privatization. Private sector policy makers associations NGO’s, the media and the influence of global policy on national policy making in Pakistan.

Pakistan / Islamic Studies

PRL301  Pakistan / Islamic Studies
The course covers various movements which led to the creation of the Islamic Republic of Pakistan. The history of Pakistan is discussed with an analysis of the various leaders and their contributions to the development process. The course discusses how different messengers of Allah came to spread His word. It further discusses the need for Islam: its five pillars, the life of the Prophet Muhammad (PBUH), the companions of the Prophet (PBUH), and the several Surahs, Ahadiths, and Ayats.

Political Sciences

PSC301  Pakistan Studies
The course on Pakistan Studies is an in-depth course covering various movements which led to the creation of the Islamic Republic of Pakistan. The history of Pakistan is discussed with an analysis of the various leaders and their contributions to the process of national development. It also discusses the two nation theory in detail.

PSC401  Pakistan Studies and Current Affairs
The course is an in-depth study covering the various movements which led to the creation of the Islamic Republic of Pakistan. The history of Pakistan is discussed with an analysis of the various leaders and their contributions to the development process. Issues related to current affairs will also be discussed.

PhD (Business Management)

PBM701  Philosophy of Business Management
The objective of the course is to link the philosophy of the researcher’s area of specialization to the theoretical and philosophical foundations of management sciences. It links the selected area with the classical, modern and postmodern discourses and sources of management. It explores past and present of management sciences in terms of epistemology, metaphysics, ethics, knowledge systems and political economy and helps in developing a sound and productive vision of future in the area of research.

PBM703  Multivariate Analysis
The course enables the identification of a set of techniques for analyzing data sets with more than one variable in the student’s chosen area of research. Students would explore and identify relevant techniques from univariate analysis, bivariate analysis, analysis of variance, categorical data analysis, multivariate linear regression, discriminant analysis, canonical correlation, multivariate analysis of variance, principal component analysis, factor analysis, cluster analysis and logistic regression. This would lead the student to develop multivariate analysis techniques for their area of research and their justification.

PBM705  Readings in Business Research
This course enables the students to study high quality PhD dissertations and their research methodology in their chosen area of research. The students are expected to study the qualitative and quantitative research methodologies undertaken in their field and develop a template that they would use for their research plans, methodology, outcomes, results and research writing.

PBM707  Replication of Business Research Design and Results
Replication involves the process of repeating a study using the same methods, different subjects, and different experimenters. A qualitative assessment of the result comparison is carried out to identify similarities and differences and to discover assumptions or parameters underlying any variances. The applied research leads to the proposal of how the selected research may be extended and enhanced.

PBM801  Marketing Models
This course describes theoretical and empirical models used to analyze marketing management issues in the areas of product introduction and positioning, pricing, advertising, and distribution channels. The theoretical structure in the course comes from microeconomics of firm and consumer decision making, with special consideration of competitive issues. Theoretical, operational models in marketing, with emphasis on recent advances; in-depth criticism of models, participation in model development project. The empirical work draws from conjoint analysis, choice modeling, and multivariate techniques.
PBM803  Marketing Theory
Recent and classic research contributions to marketing theory development. The course addresses conceptual development and current practice in marketing decision-making. Topics critically examined include marketing orientation, competitive interaction, product development and introduction, channel relationship management, customer relationship management, advertising and promotion, pricing and revenues, and sales, service and quality.

PBM805  Advanced Topics in Marketing
Current state of knowledge in Marketing Research. As an introductory seminar, coverage will include current topics appearing in top marketing journals. Discussions will revolve around the reference disciplines and theories used in the marketing literature. This course will provide an in-depth introduction to a particular methodology or a particular setting that is relevant to research.

PBM811  Advanced Topics in Strategic Management
Current state of knowledge in strategic management. Topics may include the sources of competitive advantage, the role of industry evolution and technology, the organization of top management, and managerial decision-making and cognition. The course allows students to research alternative theoretical perspectives and available empirical evidence related to these topics.

PBM813  Advanced Topics in Organization Theory
This course introduces students to the major schools of thought in organization and management theory. It considers the development of the field, major and foundational works in these schools of thought, and provides a cognitive map with which to evaluate contemporary research and debates. At the end of the course the student will have an understanding of the strengths and weaknesses of each major perspective from the research.

PBM815  Advanced Topics in Human Behavior in Organization
This seminar examines theory and original research within the field of organizational behavior. The course covers a range of topics, including job performance, work attitudes (e.g., organizational commitment, job satisfaction), motivation, trust, justice, individual differences (e.g., personality), team structure and processes, power, leadership, and organizational culture. The primary emphasis is on the field’s classic, ground-breaking, empirical and/or provocative research. Overall, the course exposes students to current research thinking and strategies within the field.

PBM821  Advanced Topics in Operations Management Research
This course provides a general introduction to the major research fields of operations management (OM). The focus will be on reading and evaluating current papers from prominent OM journals. The theory of science and the review process will be briefly discussed. Students are expected to have as mathematical background the equivalent of upper-level undergraduate or first-year graduate courses in optimization and probability or stochastic modeling. This course may be appropriate for some graduate students in engineering or computing science.

PBM823  Advanced Research Topics in Operations Management
This course will provide an in-depth introduction to a particular methodology or a particular setting that is relevant to research in operations management. The topic may vary from year to year. Possible topics include optimization modeling and formulation, stochastic modeling and optimization, behavioural research in operations management, and health care operations management. The required background for students will vary depending on the topic. This course may be appropriate for some graduate students in engineering or computing science.

PBM825  Advanced Research Topics in Management Information Systems
As an introductory seminar, coverage will include current and historical topics appearing in top information systems journals. Discussions will revolve around the reference disciplines and theories used in the MIS literature. This course will provide an in-depth introduction to a particular methodology or a particular setting that is relevant to research in management information systems. Possible topics include applications of optimal control theory in management information systems and operations management, collaborative communication systems, and quantitative models for management information systems.

PBM831  Advanced Topics in Finance
This course provides introduction to the major research fields of Finance. The focus will be on reading and evaluating current papers from prominent Finance journals. This course provides an introduction to theoretical and empirical research work in asset pricing and market microstructure. Research topics may include market efficiency, time varying expected returns and volatility, test of asset pricing models, and models and analysis of price formation. They may also include contracting theory, the theory of the firm, corporate governance, capital structure, and dividend policy. The course may be repeated if the topics vary.

PBM841  Advanced Readings in Business Ethics
This course offers description and analysis of discourses of ethics ranging from Aristotle to postmodern ethicists. It also focuses on the applications of these theories in the fields of marketing, finance, technology, employer-employee relationship and the regulation of the corporation. This course presents advanced studies of liberal and neo-liberal, Marxist and neo-Marxist, Aristotelian and neo-Aristotelian, modern and postmodern, and communicative and pragmatist ethical approaches to business practice.

PBM842  Globalization Discourses of Ethics
This course offers an analytical contextualization of globalization in the framework of modern and postmodern ethical approaches, and addresses relevant ethical issues and their resolutions in theory and practice. It presents a theoretical framework for the ethics of globalization. This course surveys globalist and anti-globalist, hyper-pro-globalist and hyper-anti-globalist discourses from ethical standpoints. It studies the legal, economic, political, and cultural dimensions of globalization in connection with prospects of global civil society, cosmopolitanism and cosmocracy.
PhD (Computer Science)

PCS701  Big Data Analytics and Knowledge Discovery
This course will introduce principles for big data analytics that have been developed in response to the challenges for big data processing and analysis; it will also cover the specific knowledge of the fields of Machine Learning and Knowledge Discovery in Databases. Literature published will be discussed and innovative ideas will be encouraged.

PCS703  Natural Language Processing Information Retrieval
The course is concerned with concept in relevant journals s, models and algorithms to interpret generate and learn natural languages, as well as applications of NLP. The goal of the course is for the students to be familiar with basic concepts in NLP, understand the algorithms and methods for NLP and acquire the skills for developing NLP tools/systems

PCS705  Advance Theory of Computation
This course is primarily concerned with rigorous reasoning about computation; a significant portion of this course will then be focused on computational complexity, including major topics in theory of computation such as randomness, interactive proofs, parallel computation, and quantum computing

PCS707  Advances in Machine Learning
Machine learning approach will be discussed with trends and recent developments. Specific attention will be focused on robotics and intelligent systems.

PCS709  Computational Intelligence
This course will cover the introductory concepts, models, algorithms, and tools for development of intelligent systems. Topics include artificial neural networks, genetic algorithms, fuzzy systems, swarm intelligence, artificial life, and hybridizations of the above techniques.

PCS711  Heuristic Search Theory and Methods
This course will cover many important search algorithms used in AI ranging from single-agent search like A*, over two-player search (alpha-beta) to many-players, annealing or global search methods. Algorithms will be evaluated in terms of their algorithmic complexity, implementation considerations, utility, interaction with application-dependent knowledge.

PCS713  Advance Neural Networks
This course will cover basic neural network architectures and learning algorithms, for applications in pattern recognition, image processing, computer vision, financial markets analysis. Three forms of learning will be introduced (i.e., supervised, unsupervised and reinforcement learning) and applications.

PCS715  Intelligent Web Technologies
The objective of this course is to cater the recently growing information, culminating in the advent of big digital libraries. The course will discuss web intelligent techniques using AI, data visualization, statistics and other learning techniques.

PCS717  Parallel and Distributed Systems
This course will cover the current research topics in the design, implementation, and evaluation of parallel and distributed systems. Focus will be on the systems software and parallel programming systems, but some hardware issues will also be covered. Topics will include parallel algorithms, parallelization strategies, virtual machines, and operating system support

PCS719  Formal Research Methods
This course cover the most often encountered research methodologies in Computing Science and the dissemination techniques that a computing scientist should master, ethical issues related to research and graduate school life will also be part of this course

PCS723  Computer Vision and Robotics
Robotics and related technologies will be discussed with emphasis on vision. This course will cover treatment of geometry to reach and understand the modern Non-Euclidean (projective) formulation of camera imaging.

PCS725  Temporal and Spatial Database Management System
This course will introduce principles and foundations of temporal and spatial databases, including data models, query languages, algebras, and algorithms for selected operators

PCS731  Advanced Digital Signal Processing
This course will cover the theory and algorithms for processing of deterministic and stochastic signals. Topics include discrete signals, systems, and transforms, linear filtering, fast Fourier transform, nonlinear filtering, spectrum estimation, linear prediction, adaptive filtering, and array signal processing

PCS733  Advance Decision Support System
This course will cover the process of decision-making and issues involved in the design, implementation and evaluation of DSS. Additional topics include data mining, user interfaces, knowledge-based DSS, and research directions in DSS

PCS739  Advances in Simulation and Modeling
The course will cover Markov Models and Queuing Networks and simulation techniques such as, Monte Carlo Techniques and Event Driven Simulation, applied in performance modeling of communication systems and networks.

PCS743  Fuzzy Topologies with Human Centric Computing
Fuzzy set theory and analysis will be explored in the context of human centric computing and information processes. In addition applications in business, actuarial science and risk management will be discussed

PCS745  Advanced Algorithm Analysis
The goal of this course is to develop the appropriate background, foundation and experience for advanced study in Computer Science, Develop mathematical skills for algorithm design, analysis, evaluation and computational cost; Develop the skills to design and implement efficient programming solutions to various problems; Develop data structure techniques for various aspects of programming.
PhD (Mathematics & Scientific Computing)

PMT701  Advanced Numerical Computing
Direct and Indirect methods for solving simultaneous linear equations and matrix inversion, conditioning and round-off errors, Eigenvalues, eigenvectors, numerical functional approximation. Numerical differentiation and integration,

PMT703  Linear Algebra and Lie Algebra

PMT705  Applied Matrix Theory
Canonical forms, functions of matrices, variational methods, perturbation theory, numerical methods, nonnegative matrices, applications to differential equations. EM factorization, and Markov chains

PMT707  Numerical Methods for PDEs
Nonlinear discrete equations; Newton and monotone methods for nonlinear equations; computational algorithms and applications; finite difference method-convergence, stability and error estimates; multiplicity of solutions and bifurcation; asymptotic behavior of solutions; and coupled systems of equations.

PMT709  Topics in Inverse Problems
This course enables students know commonly used algorithms and techniques for analyzing and computing inverse problems, have seen and discussed examples of inverse problems in a variety of fields. Inverse problem resources and references will be discussed. Research based project is required.

PMT711  Topics in Numerical Differential Equations
This graduate-level course is an advanced introduction to applications and theory of numerical methods for solution of differential equations. In particular, the course focuses on physically-arising partial differential equations, with emphasis on the fundamental ideas underlying various methods.

PhD (Statistics & Scientific Computing)

PST701  Advanced Statistical Computing and Graphics
This course introduces students to a range of computational techniques including numerical linear algebra, numerical optimization, graphical techniques, numerical approximations, and numerical functional approximation.

PST703  Regression Modeling and Computing
The course emphasizes on the principles of statistical modeling through iterative processes, assessing the fit, and suggesting alternative models. Extensive use of R is part of the course.

PST705  Advanced Mathematical Statistics
This course covers the exposure to the topics of Random Vectors, Multivariate Distributions and Transformations, Conditioning, Transforms – Generating and Characteristic Functions, Order Statistics, the Multivariate Normal Distribution, Convergence and Large Sample Approximations

PST707  Advanced Bayesian Inference & Stochastic Modeling
This course focuses on building graphical models and stochastic simulation methods for inference and prediction, Mixture models, networks, and other latent variable probability models, i.e. hidden Markov models, Monte Carlo methodology and related dynamical modeling theory.

PST713  Non-linear and Integer Programming
An advanced mathematical treatment of analytical and algorithmic aspects of finite dimensional nonlinear programming., General integer programming problems and methods of solving them. Special attention directed toward current research and recent developments in the field

PST715  Advanced Design and Analysis of Experiments
This course focuses on the topics such as design fundamentals, factorial; nested factorial; incomplete block and fractional factorial designs. Response surface and mixture designs will be discussed. Split, Split-split and Optimum designs will be studied.

PST717  Advances in Time Series Analysis
Topics include univariate ARIMA modeling, forecasting, seasonality, model identification and diagnostics. Recent advancements in financial time series, unit root phenomenon, cointegration, GARCH and stochastic volatility modeling, trend break analysis and nonlinearity will be covered.

PST719  Advances in Bioinformatics & Biostatistics
The broad topics include model building, advanced analysis of categorical data, logistic regression analysis for binary outcome data, regression analysis for count data, analysis of life table, Kaplan-Meier survival plot, log rank test and Cox Proportional Hazards model.

PST721  Statistical Quality Control
It covers the techniques of modern Quality Control and Management. Topics include Statistical Process Control, Capability Studies, Continuous Improvement, ISO 9000 and other standards. Six Sigma, Design for Six Sigma and Lean Management tools. Taguchi methodology.

PST723  Stochastic Modeling
PhD in Education/Psychology

PSS701  Methods and Issues in Advanced Qualitative Research
The course focuses on developing a working knowledge of a range of qualitative methods, methodological approaches, and theoretical framework of research to enable the participants to conduct qualitative research within the social sciences.

PSS702  Advanced Educational Philosophy
This course is to understand the category of education from wide variety of perspectives. The course will explicate the development education from local through modern to post modern cultural perspectives. Placing education in these cultural and political frameworks will enhance critical acumen of students and widen their perspective of understanding education.

PSS703  Methods and Issues in Advanced Quantitative Research
The primary goal of the course is to help participants to develop a conceptual background and practical skills needed to critically evaluate statistics and to conduct statistical analyses of empirical data independently to complete a small research project.

PSS705  Seminar in Interdisciplinary Studies (Education and Psychology)
This course will provide participants with a broad overview of areas of study, major theories and research methodologies that guide the discipline of social sciences with a special focus on education. Separate seminars will be served as a platform to discuss and analyze current issues using an interdisciplinary social science perspective.

PSS707  Independent Study
This course will provide space for the participants to propose a research topic in their field of interest and complete a small scale project for publication in an HEC recognized journal. This course will be different from the main Ph.D. research study and will be beneficial for the candidates in providing them with experience to pursue their major work of investigation.

PSS709  Measurement & Assessment
This course provides participants with a comprehensive examination of the psychometric procedures used to develop and validate educational, psychological, and organizational instruments. Topics include normative samples, reliability and validity, test score interpretation, and test development.

PSS710  Psychology of Personality
This course enables participants to differentiate among the primary theoretical models of personality theory, such as psychodynamic, affective, cognitive-behavioral, and humanistic theories.

PSS721  Project Internship - Education
The practicum course aims to provide participants with real experience in a workplace environment by working on a challenging project. The practicum provides opportunities for participants to affiliate themselves with an educational institute and carry out a project over one semester. The project will enable participants to experience and excel in the arena of their concentration.

PhD in Economics

PDE701  Advanced Research Methodology
The importance of research, goals of research, topic selection, literature review, qualitative and quantitative studies, study design and sampling, sampling methods, data preparation and analysis, descriptive statistics, hypothesis testing, errors, correlation, inferential statistics, statistical significance.

PDE702  Advanced Applied Econometrics
Econometric methods for cross-section and panel data. Generalized method of moments, empirical likelihood, instrumental variables, bootstrapping, clustering, treatment effects, selection bias, difference-in-differences, quantitative choice, quartile regression, nonparametric methods, and semi parametric methods, recently developed econometric techniques, simulation techniques, estimation subject to inequality restrictions, semi parametric and nonparametric tools.

PDE703 / PEC711  Development Economics
The objective of the course is to familiarize the students with the theory and problems of development; Modernization Theory vs. Dependency Theory; imperialism; Structuralism vs neoliberalism; trade and development; structural adjustment policies; debt problems; development and democracy; conflict, growth and development; globalization and related issues.

PDE704  New Dimensions in Economic and Public Policies
Optimal design of tax and social insurance policies. Efficiency costs and incidence of taxation, income taxation, transfer and welfare programs, public goods and externalities, fiscal federalism and welfare analysis. Monetary policy and coordination, exchange rates, balance of payment analysis, international capital flows, debt crises, growth, and policy coordination. Structural and stabilization policies, growth, income distribution, poverty. Industrial policy to promote growth and industrialization, organizational structure, R&D strategic objectives; competition and anti-trust policies.

PDE711/ PEC712 Industrial Economics in a Globalized World
Theory and current issues in industrial economics. Core industrial organization issues, industrial economic issues at the national level and policy related issues. Market structure and innovation, market structure and advertising, vertical integration and mergers, foreclosures, upstream competition, privatization and regulation, industrial policy, structural adjustment and stabilization policies, reforming State Owned Enterprises (SOEs) in China.

PDE712  Public Finance
Equity and market failure; the economics of taxation, direct and indirect taxation, taxation of income, wealth and consumption, tax incentives, tax compliance and enforcement, and tax reform, user charges and fees. Public expenditure policy, government social protection programs, balanced budgets, deficit financing, debt management, fiscal consolidation and fiscal sustainability. Fiscal stimulus vs. fiscal austerity, fiscal decentralization and intergovernmental fiscal relations.
PDE713  International Trade
Law of comparative advantage, gains from trade, Ricardian and the Heckscher-Ohlin models, alternative trade theories, tariff and non-tariff barriers (NTBs), customs unions, international factor movements, fixed and flexible exchange rates, the internationalization of financial markets, international capital mobility, International Financial Institutions (IFIs), balance of payments and adjustment policies, international macroeconomic policy.

PDE714  Selected Topics in Monetary Economics
Monetary policy under uncertainty, market based monetary policy, economic and monetary union, monitoring inflation, empirical models of exchange rate dynamics, financial globalization, rational expectations, exchange rates and monetary policy in the New Synthesis.

PDE715  Main Issues in Islamic Economics
Theological basis to the practical implications of economic philosophy of Islam; basic economic theory of Islam and economic rules and outlook of the individual, businesses and the state in the Islamic context discussed in contrast to conventional economic theories. Analysis of the economic and spiritual well being of individuals and states as proposed under the Islamic system based on equity and justice.

Psychology

PSY400  Introduction to Organizational Psychology
This course examines the psychological aspects of organizational behavior and individual psychological processes and behavior. The topics will include social norms, group and team processes, leadership and power, motivation, job attitudes and satisfaction and organizational change.

PSY402  Counseling Psychology
This course focuses on the basic approaches, principles, and procedures of counseling. Students will be engaged in some directed role playing of counseling techniques as well as prepare a class demonstration based on their personal integration of readings and practice. Research related to counseling as well as issues regarding the nature of the counseling relationship will also be focused.
Pre-requisite:  PSY400

PSY405  Group Dynamics
This course presents theories of group dynamics and illustrative application to understand personal, marital, political, industrial and professional life. Personal participation by the student in a group interactive process will be emphasized. The course is designed especially to help group leaders understand the complex underlying dynamic forces that influence our behavior in groups.

PSY406  Research Methods in Organizational Psychology
This course builds on the fundamentals of research design and knowledge of basic statistical techniques to provide a broad overview of the major research methods of applied psychological research. Students learn to frame inquiries and problems as research questions.

PSY407  Personnel Psychology
This course focuses on psychological methods and knowledge applied to the personnel functions of industry. It provides an analysis and discussion of theories and research studies on the following topics: organizational management and development; manpower planning, selection, placement, training, and other important personnel problems.

PSY408  Consumer Psychology
This course focuses on the type and behavior of consumer, effects of psycho-social factors in decision making, satisfaction, loyalty, attitude, and changing attitude of consumer, ethics and principles of psychology in advertising, media selection, and methods in developing a research study in the area of consumer and advertising psychology.

PSY409  Consumer Psychology
This course focuses on psychological testing and measurement in industry and organizations. Various tests such as aptitude test, vocational interest test, personality test, attitude test and predictors used in industry and organization will be demonstrated. Practice using, modifying, making psychological tests, including analyzing and reporting results of the psychological tests will also be discussed.

PSY431  Psychological Testing II
This course focuses on psychological testing and measurement in industry and organizations. Various tests such as aptitude test, vocational interest test, personality test, attitude test and predictors used in industry and organization will be demonstrated. Practice using, modifying, making psychological tests, including analyzing and reporting results of the psychological tests will also be discussed.

PSY432  Behavior Modification in Industry
The overall objective of this course is to discuss reinforcement theory and how those techniques can be applied to positively or negatively affect human behavior. Students learn about methods, terminology and procedures used, as well as the development and history of behavior modification.

PSY433  Leadership and Strategic Change
This course is designed to enhance skills for facilitating/consulting with organizational leadership in organizational change. Theories and techniques for understanding and facilitating change processes within diverse organizational cultures are discussed and applied.

PSY434  Personality Psychology
‘Personality’ is a broad term applied to the wide traits of people who are employed and managed across the economy. Organizations of any size require additional staff to provide psychological assessment and management of their human resources.

PSY435  Research Project/Practicum
The practicum prepares students to practice industrial/organizational psychology with the understanding of organizational cultures critical to effective professional practice in the workplace. Students refine skills in identifying and solving human-resource problems in work settings.
PSY436  Seminar in Organizational Psychology
This course covers the most recent advances, issues and problems in industrial and organizational psychology through relevant professional journals, in order to prepare students for continued education or applied practice of their field. Students will critique professional journals and review the development of topics in their field.

PSY501  Work Motivation and Attitude
The course covers concepts in various theories of motivation, content and process theories, job satisfaction and its relationship with motives and performance efficiency; applications of theories of motivation to increase performance; problems and solutions of motivation in Pakistani society; research and development of motivational techniques to increase performance efficiency.

PSY506  Quality of Work Life
This course focuses on theories and research relating to quality of life at work, application of knowledge in health; safety at work, environment and working motivation; educating managers and employees to enable them to deal with sickness and problems caused by working, and concentrate on their physical and mental health.

PSY515  Projective Methods
This course presents the history and use of projective assessment devices such as the Thematic Apperception Test, Rorschach Ink blot Test, and Draw-A-Person test. The emphasis is upon administration and interpretation of these specific projective techniques.

Religious Studies

REL101  Islamic Studies
This course focuses on the meaning, significance and practicality of Islam as a universal religion. It acquaints students with the fundamental concepts, values and practice of Islam. It also reveals the relevance of Islam to all walks of life. The aim of this course is to enable the students to discover and study the spirit of the religion of Islam.

Supply Chain and Logistics Management

SCM301  Introduction to ERP Systems
This is a hands-on intensive implementation course exploring latest trends in off-the-shelf ERP packages like Oracle Applications or SAP. Overview of the reach of the ERP modules such as ordering and sales, inventory and material management, procurement, project management, manufacturing planning and control, finance, costing, business intelligence, maintenance, HR, etc.

SCM501  Supply Chain Management
This course covers essentials of Supply Chain Management and is divided into foundations of SCM, enabling concepts, the requirement process, strategic sourcing, strategic cost management relationship management and world class supply chain management.

SCM306  IT Applications in Logistics & Supply Chain Management
The course covers the topics: identification techniques for data collection, data transmission, data processing, and data warehousing in logistics; standardization in logistical data management; the importance of a real-time data flow and significant analytics.

SCM309  Packaging Design - Environmental Aspects
Packaging aspects are discussed in view of the different logistical, marketing, environmental, and legal requirements. Important factor is the standardization of packages for cost saving and damage free handling and transportation. Packages are carrying different kind of information, For logistical purposes the international standards for product identification, location numbering etc. are important.

SCM502  ERP Systems Design and Implementation
This course provides a technical overview of enterprise planning systems and their impact on organizations. Selected software solutions are introduced to illustrate the concepts, fundamentals, general information technology context and integration of business enterprise applications. Case studies will be used to discuss various stages of implementing ERP solutions.

SCM503  Strategic Supply Chain Management
This course covers a wide range of Supply Chain Management activities including formation and management of strategic alliances, buyer selections and management, negotiations, global sourcing, ethics in contracting situations and applications of information technology in SCM.
Pre-requisite: MAN 101/401

SCM504  Procurement and Inventory Management
The synchronization of supply with demand in order to provide customer value has to be designed, controlled and improved. In supply chain management these activities have to be coordinated along different stages in different enterprises. This course deals with understanding and overcoming the problems arising in those multistage inventory systems using case studies.

SCM505  Storage and Warehouse Techniques
In order to operate, optimize or understand warehouse systems, a sound knowledge about the various technical realizations of warehouse functions is essential. This course provides an overview of various in-house transporting and storage systems and indicates the preferred areas of usage. Case studies will be used as modus operandi in the course.

SCM506  Transportation Techniques and Management
The course aims to give an understanding of the basic techniques used in transportation. All major techniques in the fields of road traffic, air traffic, railroad and navy are discussed. Transport chains using freight-villages, intermodal transports, combined transport-chains as location planning, design and organization of dispatch departments, supply-chains and management tracking and tracing are investigated using the case study approach.
SCM507  Quantitative Methods for Logistics
Students get knowledge and skills required to manage complex systems of production, distribution and freight transport in global supply chains. It also prepares students for careers in industrial companies and service organizations which have to deal with complex logistical and production processes. Operations Research & Quantitative Logistics focuses on those areas in the transport and logistics sector that require strong quantitative skills, where practitioners apply academically developed theories. This includes Quantitative trend analyses techniques. Production planning process (optimizing capacities and lot sizes). Transportation Planning Facility, site layout, and location planning etc. The use of the planning tools provided by Microsoft Excel Solver Data Analytics, Data warehousing, Business intelligence.

SCM508  Design of Business Processes - Workflow Management
Understanding of Value Adding business processes, internal and cross-company supply chain Knowledge of the design and optimization tools. Definition of internal and external enterprise process chains. Design and optimization process chains using Microsoft Office SharePoint Designer/Server 2007 or ARIS-Toolset. Visualization of internal or cross-company processes by using flowchart modeling style of MS Visio 2010. Automation of ERP processes by implementation workflow management systems in ERP systems (SAP workflow management).

SCM509  Logistical Projects in ERP - Case Study Development
Good understanding of business processes such as order fulfillment, material and capacity resource planning, financial and accounting processes. Operating the ERP application system with SAP or Oracle. Understanding of business analytics resulting out of the business processes. Introduction into ERP systems, Basic technology of the SAP ERP system Design of business cases like quality management, quality auditing or business information systems, Customizing requirements and realization. Future ERP systems – requirements and realization with advanced computing technics s.a. in-memory-computing with HANA, Cloud Computing.

SCM510  Risk Management in Supply Networks
This course provides a holistic view on the total value adding process regarding risk portfolios. Using the FMEA method for analyzing risk potentials and learning how to develop resistant/robust supply chain strategies (TSCRM). Introduction to the principles of risk management of business and engineering processes. Sources of risk – early warning signals, Trends effecting the Supply Chain risk potential, Total Supply Chain Risk Management (TSCRM) – holistics approach, Business continuity management.

SCM512  Innovation Management in Supply Chain and Logistics
This course provides future trends in global supply networks in technology of material and information flow, new partnership and collaboration principles following the Toyota Supply Chain Management. Impact of new technologies in communication (RFID, GBI, WLAN, Web-based applications etc. Demand driven supply chains, Impact analysis of innovation to social, environmental and financial results. Development of a innovative and sustainable supply chain strategy.

SCM513  Corporate Consultancy Projects in Logistics
This course provides introduction into the project management and consultancy process. Kick-off Meeting between the customer (Industrial or logistics service enterprise) and the consultancy team (4 to 5 students and the lecturer). Problem definition (diagnosis) workshop of the consultancy team moderated by the lecturer. Information gathering at customer’s site Creative problem solving workshop of the consultancy team Information consolidation and evaluation – internal decision making process (consultancy team) Presentation of the favorite solutions to the customer.

Social Sciences

SSC101/402 Introduction to Psychology
Its subject matter includes human development, memory cognition, perception and psychopathology. The course explores the field of psychology, teaches to learn about oneself, the mind and the science of psychology.

SSC102  Business Ethics and Corporate Governance
This course entails an understanding of the general principles of ethical conduct. It studies the relationship of what is good and right for businesses. This course shall proceed to place modern business practices in their historical context. The ethical attitude of ancient, medieval, modern and postmodern communities would be contrasted and the nature of modern business practices and their ethical implications would be explained with special reference to business environment in Pakistan.

SSC104  Principles of Sociology
The course seeks to teach the basics of Sociology including social action and interaction, social groups, social institutions, culture, prejudice and stereotypes, and social change.

SSC201  Policy Studies
The Liberal, Marxist and Weberian approaches to policy making. The market and the state, bureaucracy and administration regulatory systems. Non-state sources of policy conception and implementation corporations, association, NGOs policy making and implementation processes in Pakistan in fiscal, monetary, labor, energy, health and education areas.

SSC202  Environmental Studies
The course covers basic concepts of Environmental Science and current environmental issues. Major components of environment and ecosystems. Basic understanding in the areas of industrial, coastal and marine environment, deforestation, greenhouse effects, ozone depletion, impacts on human health and climatic change. Environmental challenges for sustainable development, current and future trends in population growth, environmental pollution, development in industry and agriculture, urbanization, poverty and resource depletion. National and International Environmental laws and regulations.
This course offers insights into the archetypes of knowledge and introduces students with nature of diverse ideas and the way socio-politico-economic conditions are related to ideas. This course studies metaphysics, epistemology, political theory, and ethics etc. It develops students’ critical thinking and analytical skills and enables them to appreciate the role of ideas in shaping past, structuring present and influencing future.

This course will seek to discuss the history of ideas, from the ancient Greeks to the present, and the contribution of important philosophers.

This course offers an in-depth analytical and critical study of ethical theory and its application to business practice. It encompasses ethical theories from Aristotle to modern and postmodern ethics and applies them to various areas of business practice such as marketing, management, finance, technology, organization, globalization etc. This course is designed to enable students to foresee, identify and resolve ethical issues and problems in business.

This course focuses on human behavior in its social context to reveal how one’s feelings and actions can be influenced by other people. The topics include processes of human interaction and the social influences of family, membership groups, and socioeconomic class on individuals and groups.

The course examines ethical issues in the context of business theory and practice. In the process of exploring these issues and raising questions, students draw on a wide body of literature including the humanities, management theory, and the social sciences.

The course examines major theories of learning with relevance to instrumental and classical conditioning, cognitive learning processes, motivation, affect, and memory. The students will explore relevant research on traditional and contemporary issues in learning, with an emphasis on human learning from both behavioral and cognitive perspectives.

This course will examine the basic questions and principles of moral reasoning. Among the issues to be considered: what makes an action moral? Does might make right? Do moral judgments admit of exceptions? Is pleasure a relevant factor in deciding what to do? Does moral reasoning rest on a grand mistake?

**Statistics**

**STA100 Basic Statistical Methods**
This course provides concepts of statistical tools used for computation of quantities required for business analysis. The emphasis is on quantitative techniques and its application to economics, business and media studies.

**STA101/102 Quantitative Methods I & II**
The objective of the course is to train students in the use of quantitative techniques in business and finance. The students are required to gain thorough theoretical knowledge of the subject and understanding of the application of such knowledge.

**STA103 Sampling and Probability Theory**
The course highlights the basis concepts of statistics, sample space, events, classical and axiomatic definition of probability, conditional probability and Bayes’ theorem, binomial, Poisson, normal distribution and moment generating functions.

**STA201 Quantitative Business Analysis**
This course will provide an in-depth study of the concepts of statistics and quantitative business tools. The emphasis will mainly be on learning quantitative techniques along with their applications to economics and business.
Pre-requisite: MTH 103

**STA202 Quantitative Skills and Managerial Statistics**
The course introduces the use of statistical method to proceed beyond the collected data into the area of decision making through statistical analysis. It provides an in-depth introduction to probability, sampling theory and sampling distribution, estimation of parameters, hypothesis testing, analysis of variance, decision theory and quality control charts.
Pre-requisite: STA 201

**STA203 Probability Theory and Statistics**
The course includes the basic concepts of statistics, sample space, events, classical and axiomatic definition of probability, conditional probability and Bayes’ theorem, binomial, Poisson and normal distribution, moment generating functions, etc.
Pre-requisite: MTH104, MTH103

**STA204 Industrial Applications of Statistics**
The course teaches an applied approach to statistical quality control utilizing theoretical tools acquired in other mathematics-statistics courses. It emphasizes on understanding and applying statistical analysis methods in real-world situations in engineering.

**STA205 Probability Theory & Statistics II**
Probability Theory, a rigorous treatment of probability and Statistical Theory, a treatment of Distribution Theory and Inference will develop your knowledge of probability and statistics beyond the first year course. It will also provide the probability and statistics basis for all advanced courses. Further Mathematical Methods covers the mathematics needed for statistics and actuarial courses.
Pre-requisite: STA203
STA206 Probability & Statistics
The course includes concepts of statistics, sample space, events, probability, conditional probability and Bayes’ theorem, Discrete and continuous random variables and discrete probability distributions. Mathematical expectations and moment generating function.

STA210 Sampling Theory
The purpose of this course is to provide students with theoretical background in survey sampling. The course will expose students to a wide range of sample designs and estimation techniques used in practice, including different sampling techniques.
Pre-requisite: MTH201, STA203, STA301, STA302

STA301 Model and Inferences
Statistical models and random samples, informal methods of checking models, estimation and prediction, methods of maximum likelihood and least squares and their applications within the framework of programming are taught in this course.
Pre-requisite: MTH201, STA203, STA205

STA302 Methods of Data Analysis
The course is an introduction to the use of computers as a powerful tool in data analysis. Topics will include statistical graphics, advanced regression techniques, curve fitting and smoothing, generalized additive models, CART, multivariate techniques, cross-validation and the bootstrap. Additional topics may include survival analysis, simulation methods and neural networks.
Pre-requisite: STA203, STA301

STA303 Time Series Analysis and Forecasting
The course covers introduction of statistical methods for analyzing and forecasting time series data. The topics include: spectral analysis, smoothing autoregressive moving average models, regression with auto correlated errors, linear filters and bivariate spectral analysis.
Pre-requisite: ARM601, STA305

STA305 Applied Regression Analysis
Linear regression and correlation; maximum likelihood and least square estimators and their properties. Nonlinear regression models; generalized linear regression models; introduction to time series; time series model building and forecasting with focus on data of interest to actuaries are features of this course.
Pre-requisite: MTH204, STA302

STA307 Decision Theory
Sampling models in business and economic problems, Bayesian inferences, auto-regressive series models and their applications, Bayesian estimation of parameters, adaptive forecasting, control theory, dynamics, models for inventory control are features of this course.
Pre-requisite: STA205

STA309 Loss Models I
Models for loss severity: parametric models, effect of policy modifications; tail behavior. Models for loss frequency: \((a,b,0)\), \((a,b,1)\), mixed Poisson models; compound Poisson models. Aggregate claim models: moment and moment generating function: recursion. Classical ruin theory.
Pre-requisite: FRM202

STA310 Loss Models II
Credibility Theory: Limited fluctuation; Bayesian; Buhlmann; Buhlmann-Straub; Empirical Bayes parameter estimation statistical inference for loss models; maximum likelihood estimation; effect of policy modifications; model selection.
Pre-requisite: STA309

STA403 Statistics and Mathematics
A systematic exposure to the statistical and mathematical analysis of business situations. This course introduces statistical & mathematical methods in the area of decision-making. The course includes measures of dispersion, different mathematical functions, optimization methodology.

STA404 Statistical Inference
The course concentrates on the application of statistical techniques to the analysis of data and estimation procedures. The topics include counting techniques, probability & its distributions, sampling, estimation of parameters, testing of hypothesis & analysis of variances, regression & correlation.
Pre-requisite: STA 403

STA405 Simulation and Modeling
The course includes types of models, properties of linear models, model building techniques, the black box approach, random number generation and testing. Transformation; test of randomness, parameter estimation, least mean square, bootstrap, jackknifing, re-sampling procedures, query models and applications.
Pre-requisite: STA 203 CSC 306 / CSC 409

STA406 Statistical Methods in Social Sciences
This course includes an overview of quantitative methods, basic concepts in descriptive and inferential statistics. It emphasizes on the development of critical thinking skills and the methodological tools necessary for functioning as an Industrial Organizational Psychologist in applied settings. The focus is on non-parametric and parametric statistical procedures including when and how to use each quantitative method including choice of the most appropriate research method and strategies to address common problems encountered and using computer programs for data analysis.

STA407 Design of Experiments
This course explains design of experiment and its importance. Different experimental designs such as Complete Randomized (CRBD), Latin Square Design, two-level factorial, fractional factorial, and Taguchi’s orthogonal designs will be discussed.
Pre-requisite: STA404
Telecommunication Engineering

TCE200  Electronic Communication System
This course introduces the fundamentals of electronic communication systems. Topics include the frequency spectrum, electrical noise, and modulation techniques, characteristics of transmitters and receivers, and digital communications. Upon completion, students should be able to interpret analog and digital communication circuit diagrams, analyze transmitter and receiver circuits, and use appropriate communication test equipment.
Pre-requisite:  TCE204, TCE205

TCE204  Electromagnetic Field Theory
Introduces the concepts and mathematical methods to understand and analyze electromagnetic fields and waves.
Pre-requisite:  GSC103, MTH204

TCE205  Signals and Systems
To provide understanding of signals, systems and transforms. Linear system theory, signals, types of signals, transformations of independent variable, signal properties, exponential signals, impulse and step functions, systems, input-output models of system, properties of system, linear time-invariant system, time domain analysis of linear systems, properties of LTI system, LTI analysis of linear differential equations, complex exponential inputs to LTI system, stability analysis are taught in the course.
Pre-requisite:  MTH215

TCE301  Probability Methods in Engineering
To introduce the basic concept and engineering applications of probability and statistics. Set theory, basic concepts of probability, conditional probability, independent events, Baye’s Theorem, discrete and continuous random variables, distributions and density functions, probability distributions (binomial, Poisson, hypergeometric, normal, uniform and exponential), mean, variance, standard deviations, moments and moment generating functions, linear regression and curve fitting, limits theorems and applications.
Pre-requisite:  MTH107

TCE321  Wave Propagation & Antenna
To make students understand different aspects of electromagnetic wave propagation and the role of antenna as transducer. Different characteristics of antennas are also explained.
Pre-requisite:  TCE204, EPE200

TCE404  Digital Signal Processing
One- and N-dimensional signals and systems, sampling theorem, discrete-time Fourier transform, discrete Fourier transform, fast Fourier transform, z-transforms: stability and minimum phase signals/systems, linear filtering of signal: time domain: difference equations and convolution, impulse invariance, etc. are the contents of the course.
Pre-requisite:  MTH403, CME202

TCE415  Transmission & Switching Systems
Transmission systems including PDH and SDH, synchronization, routing techniques, line encoding techniques. Telecommunication networks, PSTN, PLMN, and PABX, exchange hierarchies, digital exchanges, routers, routers, bridges, switches, hubs, gateways and signaling systems are taught in the course.
Pre-requisite:  TCE205

TCE416  Digital Communication
Introduction to principle of analysis and designing of modern digital communication systems.
Pre-requisite:  TCE200

TCE420  Information Theory and Coding
Discrete messages, concept of amount of information, average information, entropy information rate, Shannon’s theorem, channel capacity, relation between band width and s/n ration.
Pre-requisite:  TCE205, TCE204

TCE421  FPGA Based System Design
Introduction, digital design and FPGA, FPGA-based system design, manufacturing process, transistor characteristics, CMOS logic gates, wires, registers and RAM, packages and pads, FPGA architectures, SRAM-based FPGAs, permanently-programmed FPGAs, circuit design of FPGA fabrics, architecture of FPGA fabrics, logic design process, combinational network delay, power and energy optimization, arithmetic logic elements, logic implementation using FPGAs, physical design (PnR) for FPGAs, synthesis process, sequential design using FPGAs, sequential design process, embedded system design, introduction to the design and use of single-purpose processors (hardware) and general-purpose processors (software), memories and buses, hardware/software tradeoffs, advanced computation models, control systems, chip technologies, modern design tools, embedded processor selection, hardware/firmware partitioning, glue logic, circuit design, circuit layout, circuit debugging, development tools, firmware architecture, firmware design, and firmware debugging.
Pre-requisite:  ELE201

TCE422  Communication System
This course is structured as a senior-level design course emphasizing the different communication systems and their applications such as broadband, satellite communication, TV broadcasting and navigation etc.
Pre-requisite:  TCE200

TCE423  RF and Microwave Engineering
Radio communication systems, Modulation and Demodulation, Radio wave propagation techniques, Antennas and Aerials, Antenna Arrays, Antenna Distribution systems, Radio receiver properties, Types of receivers.
Pre-requisite:  TCE321
TCE424 Radar Systems
To teach the principle of operation of radar; commonly used devices in radar; statistical nature of the received signal and signal processing; different types of radar and their applications.
Pre-requisite: TCE200

TCE425 Telecom Management
The course will give the concepts of Network Management in TCP/IP Environments, Networks Management Station (NMS), Network Management Requirements, and Performance & Security Management.
Pre-requisite: ENG203

TCE426 Electromagnetic Compatibility
The primary purpose of the course is to develop the fundamental concepts of EMI and EMC. The course is devised to acquaint the students with the knowledge of sources and types of interference, EMI effects, Coupling, Grounding, Shielding, filtering and military EMI/EMC standards.
Pre-requisite: TCE204

TCE427 Antenna Theory and Design
Design and use of antennas of varying types, including wire, broadband, horn, and reflector antennas in transmitting and receiving applications. The application and design of antenna arrays, and an introduction to diffraction theory.
Pre-requisite: TCE321

TCE428 Mobile and Pervasive Computing
This course will cover the topics such as introduction to wireless communication systems, evolution of mobile radio communications, infra-red systems, paging systems, cordless telephone systems, cellular telephone systems and wireless LANs.
Pre-requisite: TCE461

TCE429 Tele-Traffic Engineering
This course focuses on the application of traffic engineering theory to telecommunication.
Pre-requisite: TCE321

TCE430 Satellite Communication
To acquaint the students with the principle of operation of satellite communication, its benefits and the technology involved.
Pre-requisite: TCE200

TCE431 Digital Filter Design
The objective of this course is to introduce the basic concepts in designing digital filters, for example IIR filter or FIR filters.
Pre-requisite: TCE404

TCE461 Wireless and Mobile Communications
The aim of this module is to understand the fundamentals of wireless and mobile communications & the use of wireless technology in the telecom industry.
Pre-requisite: TCE204

TCE471 Optical Communication
The aim of this course is to understand the optical fiber communication technology and networks & their applications in telecommunication industry.
Pre-requisite: TCE416, TCE335

TCE450 Project
To give students a chance for enhancing their Technical capabilities by implementing their theoretical & practical knowledge in the field of Research & Development. (For Semester VII & VIII).

Telecommunication Management

TCM401 Introduction to Technology Management
Surveys the history and recent developments of technology management in the corporate and government environments. Major aspects of domestic and international technology management are discussed. Information technology management is the focus of this course. Other topics include project and system management, computer information systems, telecommunications management, distribution, marketing, logistics, manufacturing and aspects of international technology management.

TCM402 Introduction to Teletraffic Engineering
Review of Probability distributions, PDF and CDF development and applications for Telecommunication systems. Traffic characterization, Loss and delay traffic scenarios. Traffic tables and Traffic provisioning and planning case studies for both private and Public based Telecommunication Networks.

TCM403 Global Communications: Industry and Policy
Focuses on understanding how the changing structures of telecommunications in North America, South America, Europe, Asia/Pacific and Japan, and how global decisions affect local actions. The course explores current and merging issues in global telecommunications including deregulation, transition to new business models and affordable access to technology. The students will learn how some of the most powerful global regulatory bodies create and establish legal and regulatory policy, and how their actions affect business and consumers.

TCM404 Management of Telecommunications
To study principle of telecom planning and management, Telecom strategic planning, system planning process, Business planning process, the Business planning and revision, feasibility analysis, financial evaluation techniques.

TCM405 Optical Communication Network
Introduces basic fiber optical technologies. The major components of a fiber communications link, including splices, connectors, optical sources, detectors, optical amplifiers, splitters and modulators are covered. Optical switching systems and technologies will be studied in detail as well as some fiber based standards and networks such as FDDI, SONET.
TCM406  Network Design
To impart knowledge to students, about designing of Telecommunications Networks. This course provides basic concepts of telecommunication networks and how it is designed and what factors play prime role in designing of any telecommunication network. This course also compares various networks such as Satellite, Optical fiber and Microwave/DRS. This comparison provides advantages and disadvantageous of different networks in different scenarios and how and why a particular one is selected.

TCM407  Broadband Communications
Review of basic digital hardware and the structure of digital computer and the digital switching networks. Topics include voice digitization, line coding, time division multiplexing, basic digital modulation formats, network control and synchronization, digital technologies and switching systems for high-speed data and voice networks in examples of T1/T3, ATM, SONET/SDH, B-ISDN, PBX, ACD and LANs. Different types of media such as fiber optics, cable and wire, cellular as well as local and long distance switching systems are also covered.

TCM408  Advanced Mobile and Wireless Communications
Focuses on key technologies used in mobile and wireless communications, including cellular NGSM, TDMA, CDMA paging, PCS and infrared. It emphasizes on key service providers, design of wireless data and voice communications systems, security, and advances in mobile and wireless technology; addresses growth of PDAs and other mobile devices, and their impact on enterprise networks and features a case study approach on the application of these technologies.

TCM409  Customer Service and Call Center Technologies
Focuses on customer service and call centers as the contact point between a customer and a company’s products and services; Emphasises on critical call center technologies, including Computer Telephony Integration (CTI), workflow software, ACD and PBX systems, messaging systems (voice and email) and knowledge management systems. Students will learn how to implement customer service applications, such as help desk, customer support and field service.

TCM410  Management of Network Security
Defines network security in the context of networks, information and computer systems. This course identifies threats and vulnerabilities; major aspects of encryption, digital signatures and other authentication procedures are covered. LAN, Wireless and other aspects of network security are reviewed with discussions focusing on firewalls, VPN, and ISO17700 compliance.

TCM411  Telecommunication Marketing
Telecommunication Marketing is one of the courses being offered the MBA in Telecommunication Management program. Topics in this course include the nature of the telecommunication market, analysis of customer procurement strategy, product policy, pricing, distribution strategy, sales force management and key account selling strategies.

TCM450  Project
This course gives students a chance to enhance their technical capabilities by implementing their theoretical and practical knowledge in the field of Research and Development.

TCM501  Management of Telecommunication Regulatory System
Introduction to graduate level study of telecommunications law and policy and its intersection with economics and technology. Fundamental principles and theories of telecommunications law; policy and policy-making; and methodological approaches are covered.

TCM502  The Future of Emerging Technologies
Focuses on emerging technologies and the use of scenario planning as a comprehensive tool to explore the trends and factors impacting technical decisions for business, industry and other organizations. It explores emerging technologies, e.g., biotech, Micromechanical Electrical Systems (MEMS), nanotechnologies, etc. and their potential effect on established systems and technologies.

TCM503  Electronic Business, System and Technologies
Provides a high-level overview of the e-business industry with a focus on both business-to-business and business-to-consumer electronic commerce. Discussion of e-government issues will also be covered. Topics include framing the electronic commerce market opportunity, the evolution from simple e-commerce to comprehensive e-business, exploring various business models, identifying key elements of branding and the customer interface, implementation, analytics and industry trends. It examines the fine balance between creating a personalized user experience and maintaining a customer’s privacy.

TCM504  Management of Physical Security Technology and Systems
Emphasizes the securing and protection of physical assets with concentration on communications and computing facilities, including computers, servers, etc. Consideration will also be placed on securing key personnel when they are off site. Focus is also placed on processes and procedures that minimize business disruption while insuring site(s) and asset protection.

TCM505  Telecommunication Business Continuity Process and Crisis Management
Emphasizes the development of protocols and procedures designed to minimize business and enterprise risks associated with disasters and other major disruptions to ensure the rapid recovery of critical business functions. Focus is placed on planning and plan maintenance; business impact analysis identifying critical business processes and systems; and development of alternative operating or recovery procedures. Additionally, considerations for virtual continuity and collaboration with intercom any business-continuity planning teams will be covered.
TCM506  Telecommunication Business Process
Focuses on the dramatic transformation of business and organization-
al models realized through the convergence of communications and
computers via the Internet and web, and other networks. Emphasis
is placed on the global considerations an enterprise an organization
must hold as policies, systems and technologies evaluated for the
enterprise or organization. This core MSEBST program course will
discuss and analyze relevant case studies.

TCM507  Optimization of Telecommunication Systems
Application of economic principles to policy and strategy issues in
the print, online, broadcasting, multi-channel, home video, and
motion picture industries, the production, distribution, and pricing of
information products and services; intellectual property and new
technologies; information networks and compatibility, policy and
strategy applications are covered in this course.

TCM508  Managing Telecommunication in Media Application
Examines the information processing of mediated messages and
theories underlying memory, attention, and cognition. Advanced
analysis of cognitive psychology and emotion theory as they apply
to the study of media, case studies in marketing and competitive
strategies of media and telecommunications firms. Effects of
technological change on industry structure and strategy are covered
in this course.

TCM509  Internet Telephony
Focuses on different media and technologies used to deliver
integrated data/voice communications, including integrated data/
voice switching, voice-over IP and IP Telephony. It discusses current
and emerging standards in the industry. Emphasises on the selection,
design and implementation of integrated data/voice applications
throughout the enterprise is a feature of this course.

TCM510  Managing the Creative Process
Examination of the business side of video production with
emphasis on the role of the producer and/or production manager,
including production team organization, schedules, budgets,
contracts, markets and intellectual property are the courses features.

TCM511  IP Multimedia Technologies
The objective of course is to impart knowledge about Next
Generation Converged Networks and Services based on IP Core
Network, i.e. IP Telephony, IPTV, Multimedia and Interactive Games,
Internet Radio, and Media Streaming. The students will learn
technological as well as managerial aspects of multimedia networks
and applications.

TCM512  Multimedia Communication
This course introduces technologies for multimedia communica-
tions. It will address how to efficiently represent multimedia data,
including video, image, and audio, and how to deliver them over a
variety of networks. In the coding aspect, state-of-the-art compression
technologies will be presented. Emphasis will be given to a number
of standards, including H.26x, MPEG, and JPEG. In the networking
aspect, special considerations for sending multimedia over ATM,
wireless, and IP networks, such as error resilience and quality of
service, will be discussed.

TCM513  Error Control coding
Channel coding, cyclic codes, encoding by polynomial, multiple error
correction, finite field arithmetic, BCH codes, reed Solomon codes,
performance calculation of block codes, multistage coding, iterative
decoding, the soft-output Viterbi Algorithm are taught in the course.

TCM514  Multimedia Systems
Multimedia data has become an indispensable part of our daily
life and modern research projects. In this course, students will be
introduced to principles and current technologies of multimedia
systems, multimedia standards, and gain hands-on experience in this
area. Issues in effectively representing, processing, and retrieving
multimedia data such as sound and music, graphics, image and video
will be addressed.

TCM515  Video and Channel Coding
The course contains video basics, what is video? recording and
playback and history of video. analog video, the video image,
formats and standards, composite and component video. digital video,
comparing digital and analog video, compression, formats and
standards, encoding and streaming, video codecs, MPEG, streaming
video. Video products, cameras and recorders, video networks and
cisco video products.

TCM516  Speech Coding
This course will throw light upon the topics such as models for
speech production: the human vocal tract, linear prediction used for
vocal tract parameter estimation, parameters for the male/female,
and child voice, models for speech perception: the human ear,
frequency analysis and pitch perception, intensity discrimination, time/
frequency masking, sound localization and auditory perception, the
interaction between visual and auditory information, speech coding
and recognition, etc., are a features of this course.

TCM517  Network Security and Cryptography
This course focuses on algorithms and protocols for secure
network communication. Topics include cryptographic algorithms (DES,
Diffie-Hellman, RSA), authentication, key management, secure
networking, certification, trust management, and secure electronic.

TCM518  Voice Over Internet protocol
The objective of this course is to provide a technical and
practical overview of Voice over IP (VoIP). The course identifies the main
elements of the technology and presents them in an accessible
format. At the end of the course students will be conversant with
VoIP technology and understand the role of VoIP in their customer’s
company and marketplace.
TCM522  Information Theory and Coding
The topics covered include basic concepts of information theory—entropy, mutual information, channel capacity, information rate, Shannon’s noiseless coding theorem and Shannon’s fundamental coding theorem; modeling of information sources—zero-memory and Markov models; modeling of information channels—BSC and BEC channels, additively of information and cascaded channels; construction of compact source codes—Kraft inequality, compact codes, Huffman and LZW compression codes; and analysis and design of error-control channel codes—Hamming distance, binary linear codes and the parity-check matrix, Hamming codes, checksum codes, cyclic codes and the generator polynomial and CRC codes.

TCM523  Wireless Adhoc Networks
Introduction, foundations of wireless communication, wireless channels, modulations, WPANs, WLANs, and MAC Layers, wireless protocols, mobile IP, wireless routing , wireless TCP, source coding, QoS, introduction to wireless sensors networks, data dissemination and network security are covered in this course.

TCM524  Broadband Communication
This course covers various systems that transmit data including, multimedia data at high speed networks and networks, ATM, T1/E1 circuits, multiplexing of T1/E1 standards, optical channels, cable systems, satellite transmission and broadband issues, ISDN, and its variants. High speed multimedia communications systems.

TCM525  Mobile and Pervasive Computing
This course will cover the topics such as introduction to wireless communication systems, evolution of mobile radio communications, infra-red systems, paging systems, cordless telephone systems, cellular telephone systems and wireless LANs. In addition it includes, analog and digital transmission, channel capacity, transmission and multiplexing, communication networks, antenna and wave propagation, spread spectrum, satellite communication, cellular wireless networks, mobile radio propagation model, wireless systems and standards, cordless systems and wireless local loop and wireless LAN technologies are also covered.

TCM526  Next Generation Networks
This course provides students to get the opportunity to research and report on near term “Next Generation Networks”. The course consists of discussions on one type of Next Generation Network followed by each student researching two additional Next Generation Network types. A case study approach will be utilized.

TCM527  Satellite Communication
Students will be exposed to historical background of satellite communication, uplink and downlink frequencies, synchronous satellite, international regulations and frequency coordination, frequency allocation and band spectrum, general and technical characteristics of satellite communication signals, advantage and disadvantages of satellite communication, active and passive satellites. In addition to this, the course covers orbits and launching methods, radio wave propagation, atmospheric losses, rain attenuation, the space segment, altitude control , station keeping, thermal control, transponders and antenna, earth segments and the space link, inter connect and technical regulation and compliance approval of CPE and convergence are also features of the course.
External students are allowed to register for 15-week Certificate Courses of their areas of interest. The following are some of the Certificate Courses being offered during 2014-2015:

**Accounting**
- Accounting Information Systems
- Advanced Financial Accounting

**Advertising and Communication Management**
- Principles of Marketing
- Principles of Advertising
- Advertising Research
- Client Management

**Finance and Banking**
- Analysis of Financial Statements
- Corporate Finance
- Money and Capital Markets
- Treasury and Fund Management

**Health Services Administration**
- Strategic Management of Health Services
- Pharmaceutical Marketing and Quality Assurance

**Human Resource Management**
- Strategic Human Resource Management
- Salary and Compensation
- Leadership Studies

**Management Information Systems**
- Oracle/Developer 2000
- Software Engineering
- Data Communication and Networking
- Programming in C++

**Marketing**
- Advertising
- Personal Selling
- Brand Management
- Media Planning

**Sales Management**
- Effective Territory Design
- Basic Selling Skills
- Distribution and Channel Management
- Merchandising
ACADEMIC CALENDAR
FALL 2014

| Registration and Fee Payment | Saturday, August 16, 2014 to Thursday, August 28, 2014  
Saturday, July 26, 2014 to Saturday, August 16, 2014  

- On board students  
- New students |
<table>
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<tr>
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<tbody>
<tr>
<td>Last day to drop courses without penalty</td>
<td>Sunday, September 14, 2014</td>
</tr>
<tr>
<td>Orientation</td>
<td>Saturday, September 06, 2014</td>
</tr>
<tr>
<td>Commencement of Regular Classes</td>
<td>Monday, September 08, 2014</td>
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<tr>
<td>Commencement of Executive Classes</td>
<td>Saturday, September 13, 2014</td>
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<tr>
<td>Last day to drop courses with penalty</td>
<td>Sunday, October 19, 2014</td>
</tr>
<tr>
<td>Eid-ul-Azha*</td>
<td>Friday, October 03, 2014 to Sunday, October 05, 2014</td>
</tr>
<tr>
<td>Iqbal Day</td>
<td>Sunday, November 09, 2014</td>
</tr>
<tr>
<td>Muharram*</td>
<td>Saturday, November 01, 2014 &amp; Sunday, November 02, 2014</td>
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<tr>
<td>Classes End</td>
<td>Sunday, December 14, 2014</td>
</tr>
<tr>
<td>Quaid-e-Azam’s Birthday</td>
<td>Thursday, December 25, 2014</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Monday, December 22, 2014 to Monday, January 05, 2015</td>
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</tbody>
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Exam Schedule for Regular and Executive Students

<table>
<thead>
<tr>
<th>Week</th>
<th>Exams</th>
<th>Regular</th>
<th>Executive</th>
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<tbody>
<tr>
<td>6th</td>
<td>1st Hourly</td>
<td>10/13 - 10/16</td>
<td>10/18 - 10/19</td>
</tr>
<tr>
<td>16th</td>
<td>Final</td>
<td>12/22/2014</td>
<td>to 01/05/2015</td>
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* Subject to the appearance of moon.

**Note:**
All dates are subject to change. Students will be informed of the changes well in advance.
### SPRING 2015

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Registration and Fee Payment</td>
<td>Thursday, December 18, 2014 to Thursday, January 01, 2015</td>
</tr>
<tr>
<td>• On board students</td>
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<tr>
<td>Last day to drop courses without penalty</td>
<td>Sunday, January 18, 2015</td>
</tr>
<tr>
<td>Commencement of Regular Classes</td>
<td>Monday, January 12, 2015</td>
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<tr>
<td>Commencement of Executive Classes</td>
<td>Saturday, January 17, 2015</td>
</tr>
<tr>
<td>Eid-e-Milad-un-Nabi (SAW)*</td>
<td>Friday, January 02, 2015</td>
</tr>
<tr>
<td>Last day to drop courses with penalty</td>
<td>Sunday, March 01, 2015</td>
</tr>
<tr>
<td>Classes End</td>
<td>Sunday, April 19, 2015</td>
</tr>
<tr>
<td>Break</td>
<td>Monday, April 20, 215 to Sunday, April 26, 2015</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Monday, April 27, 2015 to Tuesday, May 12, 2015</td>
</tr>
<tr>
<td>Labour Day</td>
<td>Friday, May 01, 2015</td>
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</tbody>
</table>

### Exam Schedule for Regular and Executive Students

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<tr>
<td>6th</td>
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<td>2/16 - 2/19</td>
<td>2/21 - 2/22</td>
</tr>
<tr>
<td>16th</td>
<td>Final</td>
<td>04/27/2015</td>
<td>05/11/2015</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.
### SUMMER 2015

| Registration and Fee Payment                  | Thursday, April 16, 2015 to Saturday, May 02, 2015  
|                                             | Saturday, March 21, 2015 to Sunday, March 29, 2015 |
| Last day to drop courses without penalty     | Sunday, May 17, 2015                                  |
| Commencement of Executive Classes            | Saturday, May 16, 2015                                |
| Orientation                                 | Saturday, May 16, 2015                                |
| Last day to drop courses with penalty        | Sunday, July 05, 2015                                |
| Independence Day                            | Friday, August 14, 2015                              |
| Classes End                                  | Sunday, August 16, 2015                              |
| Eid-ul-Fitr*                                 | Thursday, July 16, 2015 to Saturday, July 18, 2015  |
| Final Exam                                   | Saturday, August 22, 2015 & Saturday, August 29, 2015
|                                               | Sunday, August 23, 2015 & Sunday, August 30, 2015    |

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<tr>
<th>Exam Schedule</th>
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<tr>
<td><strong>Week</strong></td>
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<td>6th</td>
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<tr>
<td>11th</td>
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<td>15th</td>
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### SUMMER CRASH 2015

| Registration and Fee Payment                  | Thursday, April 16, 2015 to Saturday, May 02, 2015  
|                                             | Saturday, March 21, 2015 to Sunday, March 29, 2015 |
| Last day to drop courses without penalty     | Thursday, June 11, 2015                              |
| Commencement of Regular Classes              | Monday, June 08, 2015                                |
| Last day to drop courses with penalty        | Saturday, July 11, 2015                              |
| Classes End                                  | Thursday, August 06, 2015                            |
| Eid-ul-Fitr*                                 | Thursday, July 16, 2015 to Saturday, July 18, 2015  |
| Independence Day                            | Friday, August 14, 2015                              |
| Break                                       | Friday, August 17, 2015 to Sunday, August 16, 2015  |
| Final Exam                                   | Monday, August 17, 2015 to Thursday, August 20, 2015|

<table>
<thead>
<tr>
<th>Exam Schedule</th>
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<tbody>
<tr>
<td><strong>Week</strong></td>
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<tr>
<td>5th</td>
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<td>11th</td>
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</table>

* Subject to the appearance of moon.

**Note:**
All dates are subject to change. Students will be informed of the changes well in advance.
M. Haseeb Halai
Travel and Corporate Photographer, Media Studies
Undergraduate at IoBM; Photographer for IoBM
Catalog 2014-15