Institute of Business Management
Catalog 2012-2013

Vision

Mission Statement

The Institute of Business Management will 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.

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

You are entering the business world at a time of a severe global crisis. The world economy has faced a serious downturn since 2007 when the subprime mortgage bubble burst in America. Trillion dollar bail out packages in the US, the EU, China, India and several other emerged economies have only succeeded in transferring debt from private to public sectors. Today country after country faces a serious risk of sovereign default and the contagion is spreading from one capital market to another.

What is most striking about this enduring crisis is the lack of new ideas to make a fresh start and institute fundamental policy changes – there is no Keynes, no Schumpeter, and no Marx to inspire a comprehensive system overhaul. So the "reforms" that are institutionalized by bodies such as the European Central Bank, the Financial Security Forum and the IMF are of a marginal cosmetic character and, therefore, usually stillborn.

Business schools face the challenge of nurturing creativeness and imagination so that our country can escape from the global disorder in which it is trapped. It is not enough to absorb the conventional wisdom in textbooks that are rapidly becoming obsolete. You have to write your own texts and have the courage to experiment with ideas that are currently regarded as outrageous and bizarre. Above all, this collapsing, disintegrating, stagnating world of business requires pioneers.

We at IoBM will seek to teach you to innovate, create and dare to be different. Our principal concern is to bridge the gap that divides the world of business education from the world of business practices. Our teaching and research is being redesigned to focus on serving the needs of the market. We are not an ivory tower and measure our success by our ability to provide workable, imaginative solutions that can take the productivity and competitiveness of Pakistani business to newer, loftier heights. I urge you to participate enthusiastically in this exciting venture and wish and hope that you will make a significant contribution to the rejuvenation of Pakistan business and of the world economy.

Aftab Ahmed Khan
Chancellor

Contents

Welcome to IoBM
From the President

Congratulations on joining the Institute of Business Management fraternity. This is the seventeenth year of our service to the business sector and the process of intensifying our efforts to integrate business teaching with business practices. This initiative has a multidimensional approach.

First, we are committed to restructuring teaching programs in a manner to become organically linked to the financial and manufacturing corporate sector. It is very gratifying that our faculty and students, with their hard work and dedication, have brought priceless laurels for the Institute. These include the Business Demands 2011 by P&G Pakistan, the CIMA Global Business Challenge Pakistan 2010 and 2011, the Global Investment Challenge 2010 and the Unilever Lipton Challenge 2011 etc. Our team qualified to represent Pakistan in the CFA Investment Research regional challenge in Hong Kong.

Secondly, we continue to widen the scope of our education programs. This year we shall Insha-Allah establish a full-fledged Engineering Faculty with degree programs in various disciplines for which Guangxi University of Technology, Liuzhou, China is assisting us in designing the curriculum, teaching methodology and establishing laboratory facilities. Further, in view of the growing demand for technology skills, and the guidelines provided by the Higher Education Commission, recognizing the need for more application oriented education in the country, a two-year Associate Degree Program, equivalent to a Bachelor's (Pass) Degree, is also being developed. We are establishing a Vocational Training Center in the proposed Engineering College premises being established adjacent to our campus for this purpose.

Our recently launched programs of Media Studies, Educational Management, Business Psychology, Environmental Management, Actuarial Science and Risk Management are flourishing at a very fast pace. Recently Eduniversal, Paris in its convention at Shanghai, China adjudged IoBM's two Business Programs as the best in the world and six as best in the region. In order to foster relations with global universities, we have signed MoUs with a large number of Universities in Europe, Asia and USA. Resultantly, our students are going to Bilkent University, Turkey, University of Florence, Italy, International Burch University, Bosnia and University of Kuala Lumpur, Malaysia on scholarships. Recently, an MoU has been signed with the University of Kuala Lumpur, Malaysia for initiating PhD Programs. Further, a German Foundation, Senior Expert Service (SES) has been regularly sending technical experts and academicians to provide assistance for various IoBM programs and has agreed to set up an Environment and Energy Teaching & Research Center (EETR) at our Institute.

I again welcome you to IoBM and look forward to your contribution to our efforts for which you will find state of the art facilities and a stimulating intellectual and research environment to groom you as complete and perfect professionals dedicated to the service and progress of Pakistan.

With Best Wishes

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 prologue to the Institute, the catalog proceeds to introduce life at IoBM and culminates in course descriptions. The catalog also describes undergraduate and master's 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: 1994-2012

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 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 & 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. Aftab Ahmed Khan, former Federal Secretary Finance, 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 or his nominee
- President, Federation of Pakistan Chamber of Commerce and Industry
- President, Karachi Chamber of Commerce and Industry
- President, Karachi Stock Exchange (Guarantee) Ltd
- Education Secretary, Government of Sindh
- Mr.Shahjehan S.Karim, President Foundation for Higher Education
- Mr. Justice® G.H.Malik
- Mr. Basheer Janmohammad
- Mr. Abdul Ghaffar Adamjee
- 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 Syed Karim, Rector, IoBM
- Mr. M.W.Jahangir, Secretary

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 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 College also offers programs in Industrial Engineering & Management, Actuarial Science & Risk Management, Telecommunication Engineering & Management and Financial Mathematics & Statistics. The College of Economics and Social Development offers a BS program in Commerce, Media, MBA in Educational Management and MSc leading to MPhil in Economics. The College of Engineering & Sciences (CES) offers program in Industrial Engineering & Management, Electrical Engineering & Telecommunication Management.

The Institute emphasizes 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 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 4000 students have graduated from the Institute. Most of them are placed in key positions in leading national and multinational firms including Citibank, 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 Management Excellence Center (MEC) 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 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.

Why Choose IoBM?

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

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, 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 teachers 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.

Life at IoBM

Resources and Facilities

Institute of Business Management has a purpose built ten acre campus located in the serene and secure surroundings of Korangi Creek, Karachi. The Business College 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 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.

Computer 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 25,000 books. All library books are searchable using OPAC (Online Public Access Catalog), 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. The library employs a dynamic and diverse staff offering innovative and flexible services to library users.

Student Achievements and Awards

- 3 out of 12 teams shortlisted in the second regional round of CIMA GBC Challenge 2012 were from IoBM. For the past two years, IoBM has been winning this competition in Pakistan.

- IoBM team won the GIRC (Global Investment Research Challenge) 2011 and were runners-up in 2010. The equity research competition was organized by the CFA Association, Pakistan. The teams were required to prepare an equity research report on Engro Foods.

- IoBM won the second prize in the Unilever Lipton Hunt-a national completion between leading business schools of Pakistan.

- IoBM won the Business Launch Challenge 2010/2011 by P&G Pakistan. The competition was a part of the P&G Pakistan's Human Resource Initiatives and was geared towards enhancing students' grasp of the industry in general and P&G Pakistan's business in particular. IoBM's team competed with over 50 teams across Pakistan.

- The IoBM team won the Brands' Anatomy, a Brand Building Competition held at SZABIST.

- The IoBM team won The AD EFFECT Competition held at the LUMS International Marketing Colloquium 2011.

- The IoBM team won the on-Campus Management Trainee Program organized by Telenor.

- IoBM won the second & third prize in Digital Minds, 2010, an inter-university competition held by Symmetry Digital which is Pakistan's largest Digital Agency were finalist in the 2012 competition.

- The IoBM team won the 2011-2012 CFA Institute Research Challenge held at Avari Hotel, Karachi on January 2, 2012. Eight teams including IBA, SZABIST, IoBM, NUST, LSE, FAST—NU, PAF-KIET and Greenwich University participated in this event. The competition involved preparing an equity research report on Engro Foods. The winning IoBM team represented Pakistan in the regional competition, comprising teams from 19 countries, which was held in Hong Kong in March 2012.

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 Activities

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 & fun stalls, CBMUN, the 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. 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.

Recent Events

Mathematics Society

- A Mathematics Colloquium entitled "Risk Forecasting" was organized by the Society.

- Social Welfare and Trust (SWAT) works for the betterment of society.

Economics Society

- The "Share Happy" campaign launched by Wall's in collaboration with Egalitarians-The Economics Society of IoBM- kicked off with a great start on February 16, 2012.

- The Egalitarian Society, in collaboration with Warid Team Glow organized an activity on March 20, 2012 at IoBM, Dosti Kay Rung by Warid Glow, to revive the spirit of friendship.

The Literary and Public Speaking Society

• The Literary and Public Speaking Society conducted Intravarsity Parliamentary Debate Season 2 during Fall 2011. It was the second time LPSS catered to a need to foster parliamentary debating talent among its members.

• CBMUN 2012 was conducted during Spring 2012. This was the 4th MUN event and was largely attended.

CBM Society of Health Managers (CSHM)

• World Hepatitis day was celebrated at IoBM by CSHM in collaboration with the Health Foundation and EPS Society (IoBM) on the July 5, 2011.

• Pink Ribbon, together with Rotaract and CBM Society of Health Managers, celebrated Breast cancer awareness 'Pink Day' at IoBM in order to educate young girls about the prevalence of the disease and its indications, treatment and prevention.

• The Second International Annual Health and Business Psychology Conference 'Health PsyCon' was held on January 28, 2012 at the MEC. The effort was a joint collaboration between the Department of Health Management and Business Psychology.

• CSHM Health Camp 2012 was held on January 29 and 30, 2012. The CSHM health camp created a platform for various health care industries to come together as part of CSR and conduct free awareness and assessment sessions for students, faculty and staff of IoBM.

• World Health Day in face of ProHealth walk was celebrated in the campus on April 14, 2012. The event was graced by Ms. Sabina Mohsin who joined students, faculty and IoBM staff to promote a culture of fitness and health.

• 8th Health Asia Conference was held at Expo Center on April 25, 2012. Dr. Asima Faisal, HoD MHM Program presented her paper on 'Talent Management in Health care- Building Generation Next'

Media Society

- Guest Lecture on "Book Reading Culture on Decline": Ajmal Kamal, Publisher, City Press and Editor "Aaj", Urdu Language monthly literary magazine, lamented the decline in book reading culture and highlighted the problems which are being faced by the book publishing industry in Pakistan on November 17, 2011.

- Owais Mangalvala, Producer and Documentary Maker from Express News, screened his documentary on the impact of news channels on the viewers to the students of Media Studies during an interactive session on December 1, 2011.

- Media Society, on February 14, 2012, arranged a photo-booth at the Student's Activity Centre to encourage media students who seek careers in photography.

- Media Society organized a seminar and panel discussion on the "Ethics of Media" titled 'Who will Watch the Watchdog? Future of Ethics in the Times of Breaking News' on February 15, 2012.

- On account of International Women's Day on March 8, the Media Society organized a guest lecture with Sarah Zaman, Director 'War Against Rape'. Ms. Zaman highlighted the problems that women in our society face and how the media can highlight those problems.

- An interactive session with media and corporate sector executives on Budgetary and household solutions for the common man in collaboration with the PR and Event Management Class in the month of March 03, 2012. This event was well-highlighted by both print and electronic media of Pakistan.

- "A common broadcast and editorial policy": An interactive session of media students with as many as 13 print and electronic media professionals in Room No. 314, Academic Block on November 20, 2011.

- IoBM creative arts, publications, documentaries and business plans galleria at the Expo centre for three days and at IoBM for two days (July, 2011).

- "Pakistan Calling: Towards a better tomorrow" – A Seminar organized by Media Management students at the BSC/MEC with celebrities from such fields as education, media, showbiz, sports, health, social work, law, youth and women affairs—March 2012.

The Management Society

• The year 2011-2012 has been a year of great activity for the Management Society, IoBM. The academic year started with an event organized to welcome the freshmen. Regardless of some climatic upsets, the Welcome Carnival was thoroughly enjoyed by all attendees.

• Only a few months later, the TMS team welcomed back Umair Jaliawala to CBM with the soul stirring Dastaan-e-Ishq – Tales of Passion, an event that was a resounding success and provided inspiration to all.

Finance Society

• In July, 2011, the IoBM Finance Society organized an enlightening panel discussion on Federal Budget of 2011 – 2012. The event was attended by renowned personalities of the banking and finance industry. The panel discussion concluded with very commendable suggestions and a fruitful discussion among the panelists.

• In October 2011, the Finance Society, in collaboration of ACM Gold Pakistan, organized a Mock Trading Competition on commodities.

• The Finance Society, IoBM hosted an event in recognition of the winning team of CFA – global Investment proposal challenge in February, 2012. The winning team of IoBM was presented with souvenirs by Mr. Arif Habib, Chairman Arif Habib Group.

• In March 2012, the Finance society of IoBM organized another milestone event that aimed at highlighting the issues and challenges in the development of long term debt financing market in Pakistan from the viewpoint of various stakeholders including commercial banks, Islamic banks, leasing companies, asset management companies, stock exchanges and existing/aspiring DFIs.

Marketing Society

- Brand Carnival was a 2 day exquisite event organized by the Marketing Society of IoBM on January 30 and 31, 2011 on campus where various organizations showcased their brands and promoted them. More than 15 brands participated, including Coca-Cola, Toyota, Telenor, UBL, Ideas by Gul Ahmed, HP Pakistan, Knorr, Vaseline, ISE Cards, PTCL, GSK's Sensodyne, FedEx, Shan Foods, Omore and others. The Brand Carnival was also attended by Mr. Masood Hashmi, President, Marketing Association of Pakistan (MAP). He along with the Rector of IoBM, Mr. Talib Karim visited many of the stalls and took a keen interest in the entire event.

- Dimensions, the annual magazine published by the Marketing Society was also formally launched on January 31st by Mr. Masood Hashimi, President, Marketing Association of Pakistan. The magazine brings together articles and information about the latest in marketing. It includes, but is not limited to, marketing articles, researches, interviews, marketing buzz and more.

- How Companies Play To Win was a marketing conference held in collaboration with the Marketing Association of Pakistan on March 12, 2011. CEOs from Kraft Foods, Ismail Industries and 3M, and Marketing Managers from UG Foods, HBL, Engro Foods, HSBC, Candyland and Unilever spoke about how their companies implemented various strategies to tackle different situations they faced. The conference was very insightful and turned out to be a huge success as students extracted key learnings.

- A Peek Inside The Black Box was a guest speaker session, on how consumer insights can help marketers craft successful strategies. Held on Monday, March 19, 2012, it was organized by the IoBM Marketing Society. The speaker was Mr. Umer Shaikh, Marketing Manager at Ulker (UG Foods). Mr. Shaikh used an interactive and entertaining way to speak about brands and how they have used consumer insights to formulate their marketing strategies. Students turned up in huge numbers and thoroughly enjoyed the session.

Sports Society

- VANQUISHERS- The IoBM Sports Society organized an INTER SOCIETY SPORTS FESTIVAL FALL 2011 from October 25 to October 27, 2011.

Music Society

- Last summer, Music Society hosted Summer School of Music in media partnership with MTV. It is an annual eight-week program for the students of IoBM aimed at enhancing the musical skills of students by training in musical instruments.

- Music Society arranged a gig at Base Rock Café on January 27, 2012. Musician's Club of MSI made the evening musical through their talent. The diversity of music allowed the audience to enjoy various genres.

- On February 29, Music Society once again made students in the IoBM Activity Center go crazy with their terrific performances. This open mic provided another opportunity to our musicians to perform live and showcase their music and singing live. In total 18 songs were performed.

IoBM Club for Entrepreneurs

- On February 11, 2012, the IoBM Club for Entrepreneurs (ICE) hosted IGNITE Karachi. IGNITE is a global event held in over 100 cities all over the world and it was ICE that brought this prestigious event for the first time not just only to Karachi but in fact for the first time to Pakistan.

- March 22, 2012, dawned with the birth of revolution and the enthusiastic cries of hundreds of IoBMers at the Institute of Business Management (IoBM) where 'The Enlighterz Society' got re-launched and made a small effort to bring together every single member of the reputed institute under the concept of "Irtiqa-e-Tehzeeb".

Entertainment Plus Society

- Youm-e-Hussain was held at IoBM organized by the Entertainment Plus Society.

- Eid-e-Milad-un-Nabi is one of the auspicious occasions held every year on the premises of IoBM organized by Entertainment Plus Society.

The Strategic Human Resource Society (SHRS)

- "ZLDC: Zenith Leadership and Development Conference" takes place in spring at the start of the year.

- During the academic year SHRS also organized its first HR Summit and the society published its first Human Resource newsletter "The Resourcer" in Spring 2012.

The Dialogue Society

- An interactive lecture by Javed A. Ansari in the month of Ramazan on "Why Islam?"

- Another lecture on "Youth Empowerment in the Islamic Perspective" by a UK-based Historian and Islamic scholar Adnan Rashid

- A lecture on "Who are Our Real Heroes?" by Shayky Zahir Mehmood (Khateeb at one of Birmingham's largest mosques, Jamia Masjid in Aston)

Vanguard Society

- An entrepreneurship conference of Pakistan, i.e., Jaago Pakistan- "Find what's real" was organized at the IoBM Auditorium on January 26th, 2012.

- ZAHRSSS were the ones performing a great art and entertained the audience till the very last moment of their play leaving a very thoughtful message at the end.

- BLAST "Igniting human souls", another entrepreneurial event by Vanguard: The SS Club which had speakers like Maddi Murtaza, Hussain Aftab Changi, Sumrah Ahmed, Nazia Ramzan and Owais Moeen. It was a full day event in which 220 students from all over Pakistan came and learned a lot from it.

- I-SEE'12 Open house, with performance of bands like OVERDOSE and Stage 7. There were food stalls and other entertaining sessions arranged for students.

- I-SEE'12 Fair had food stalls and other fun stalls for students and for the marketing of I-SEE'12, an upcoming event.

Convocation

In December, 2011, IoBM held its fourteenth Convocation, awarding degrees to 299 MBA (Regular), 126 MBA (Executive), 33 MBA (Health and Hospital Management), 33 MBA (Industrial Management), 09 MBA (Media Management), 14 MBA (Advertising and Communication Management), 27 MBA (Finance and Risk Management), 12 MBA (Telecommunication Management), 07 MBA (Educational Management), 03 MPhil, 317 BBA (Honors), 101 BS (Joint Honors), 01 BS (Computer Science), and 01 BS (MIT). 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.

Gold Medals were awarded to the following students:

Ravi Srichand Talib
BBA (Honors)
Imam Ali Kazi Memorial
Gold Medal

Salman Zia
BS (Joint Honors)
Razzak Tabba Memorial
Gold Medal

Umair Aslam
MBA
S. Moazzur Rab Memorial
Gold Medal

Umaima Jalal
MBA (Finance & HRM)
Faysal Bank Ltd.
Gold Medal

Faryal Faridi
MBA (Regular)
Halima Fatima Memorial
Gold Medal

Rabia Kazmi
MBA (Industrial Management)
Janmuhammad Dawood
Gold Medal

Nadia Rashid Ansari
MBA (Marketing)
Shan Foods
Gold Medal

Mehra Jehangir
MBA (Finance)
Citibank
Gold Medal

Muhammad Khurram
MBA (Executive)
S. H. Hashmi Memorial
Gold Medal

Sara Javed
MBA (Finance & Risk Mgmt.)
Adamjee Foundation
Gold Medal

Salina Mukhtar
MBA (Health & Hospital Mgmt.)
Sanofi-Aventis
Gold Medal

Global Linkages

Institute of Business Management (IoBM) has established an International Relations Department 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 USA.

Eduniversal Ranking

Eduniversal, based in Paris, France, is a worldwide academic institutions ranking organization which ranks the 1,000 best academic institutions from around the world.
Eduniversal has adjudged IoBM's two Business Programs as best in the world, namely:

1.   MBA Health and Hospital Management
2.   MBA Supply Chain Management

Eduniversal has also ranked six Business Programs of IoBM as best in the region, which are as follows:

1.   MBA Regular
2.   MBA Executive
3.   MBA Marketing
4.   MBA Human Resource Management
5.   MBA Finance and Risk Management
6.   MBA Advertising and Media Management

Student Exchange Program

Recently, IoBM's students have been studying in the following Universities through Student Exchange Programs.
1.   Bilkent University, Turkey
2.   University of Florence, Italy
3.   International Burch University, Bosnia
4.   University of Kaula Lumpur, Malaysia
5.   Hanyang University, South Korea

IoBM has entered into an understanding with these universities for the exchange of students on waiver of university tuition and in some cases provision of free hostel facilities. Exchange of more students, faculty members as well as joint research projects are being negotiated with a number of universities all over the world.
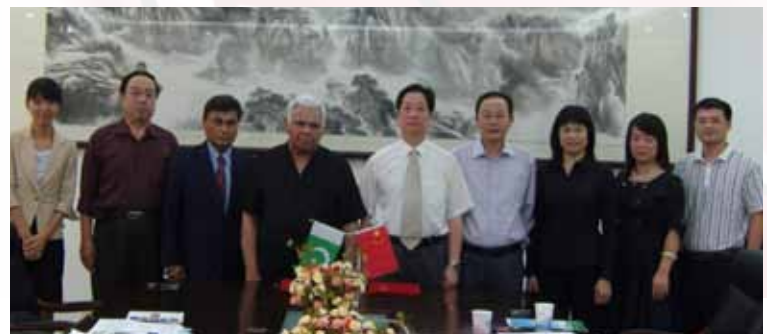
Senior Expert Services

Senior Expert Services (SES) of Germany has been sending technical experts to IoBM for giving expert advices in various programs including Health Management, Media Management, Industrial Engineering, Corporate Social Responsibility, Development of Academics and Vocational Training, which is supported by the German Government. SES is also assisting IoBM in setting up a full-fledged academic program in Environment and Energy Management.

International Collaboration for Engineering College

IoBM is in the process of establishing an Engineering College for which Guangxi University of Technology, Liuzhou, China has agreed to assist IoBM in teaching methodology, laboratory facilities and induction of faculty. This University has also agreed to depute a full time faculty member for teaching Chinese to IoBM students.

Erasmus Mundus

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 coordinator for Asian universities to develop institutional cooperation by promoting linkages between leading Asian and European Universities in the form of student, faculty and staff mobilities. This program will also enable Undergraduate, Master's, Ph.D and Post Doctorate students of Asian partner countries to benefit educationally, linguistically and culturally by studying at European Universities. Further, the project will provide the opportunity to our faculty members and staff to get training at European Higher Educational Institutions, which will upgrade their knowledge, skills and orientation through different training programs. IoBM's Consortium Members include:

European Union Countries:

Lithuania	-	Mykolas Romeris University (Lead Applicant)
Spain	-	University of Malaga
Portugal	-	Institute of Politecnico de Castelo Branco
Italy	-	University of Bologna
Italy	-	University of Florence
Greece	-	University of Peloponnese

Asian Countries:
Group A

Pakistan	-	Institute of Business Management (Coordinator)
Bangladesh	-	American International University
Nepal	-	Kathmandu Royal University
Bhutan	-	Gaeddu College of Business Studies

Group B

Thailand	-	Siam University
Sri Lanka	-	University of Peradeniya
Sri Lanka	-	University of Kelaniya

Memorandum of Understanding

IoBM is currently managing various bilateral agreements under formally signed Memorandum of Understanding (MoU). MoU's provide exchange of students, faculty and staff and promotes joint research and consultancy between the Universities.

1.   Eqrem Cabej University, 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, Nanning, China
7.   Guangxi University of Technology (GXUT), Liuzhou, China
8.   Guilin University of Technology, Guilin, China
9.   University of Florence, Italy
10. Hanyang University, South Korea
11. National University of Mongolia, Ulaanbaatar
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. University of Kelaniya, Sri Lanka
19. Michigan Technological University, USA
20. Bilkent University, Turkey
21. Istanbul Kemer University, Turkey
22. Vytautas Magnus University, Lithuania
23. Mykolas Romeris University, Lithuania
24. University of Bologna, Italy
25. Petre University of Lassi, Romania
26. University of Peloponnese, Greece
27. University of Bologna, Italy
28. University of Malaya, Malaysia
29. University of Peradeniya, Sri Lanka
30. Malmo University, Sweden
31. George Mason University (GMU), USA
32. Mykolayiv State Agrarian University, Ukraine

Memberships of Professional Bodies

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

1.   International Association of Universities (IAU), UNESCO, France
2.   International Association of University Presidents (IAUP)
3.   The Association of Commonwealth Universities (ACU), UK
4.   Association of Universities of Asia and the Pacific (AUAP), Thailand
5.   AACSB International - The Association to Advance Collegiate Schools of Business, USA
6.   Asian Media Information and Communication Centre (AMIC), Singapore
7.   Management Association of Pakistan (MAP), (Member, Executive Committee)
8.   Marketing Association of Pakistan (Vice President for the year 2010-2011)
9.   Employers Federation of Pakistan
10. Institute of Corporate Governance
11. International Finance Corporation (IFC), USA

College of Business Management

BBA (Honors)
(Four-Year) Program

Bachelor of Business Administration (Honors) is a professional and comprehensive management degree course which covers all areas of business including Marketing, HRM, Economics, Business Strategy, etc. It equips students with both soft and hard managerial skills in a balanced way and prepares them to undertake diverse, entry-level executive jobs. The emphasis of BBA is on applied management knowledge.

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 are required to select one of the fields of specialization listed below:

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

Courses are divided into Foundation, Core and Electives.

Foundation Courses

Communication
COM101 General English
COM102 Business Communication I
COM201 Business Communication II
COM202 Business and Professional Speech

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

Economics
ECO101 Principles of Microeconomics
ECO102 Principles of Macroeconomics
ECO402 Pakistan Economic Policy

Law
LAW201 Corporate Law
LAW401 Business Law

Mathematics
MTH101 College Algebra
MTH103 Calculus for Business Decisions

Political Science
PSC301 Pakistan Studies

Social Science
SSC101 Introduction to Psychology
SSC301 History of Ideas
SSC401 Business Ethics

Religious Studies
REL101 Islamic Studies

Statistics
STA201 Quantitative Business Analysis
STA202 Quantitative Skills & Managerial Statistics

Core Business Courses

Accounting
ACC101 Introduction to Financial Accounting
ACC201 Intermediate Financial Accounting
ACC301 Cost Accounting
ACC410 Management Accounting
ACC503 Taxation

Finance
FIN201 Introduction to Business Finance
FIN202 Financial Management
FIN301 Financial Institutions

Human Resource Management
HRM301 Human Resource Management

Management
MAN101 Principles of Management
MAN302 Organizational Behavior
MAN303 Production and Operations Management
MAN305 International Relations
MAN403 Entrep. and Small Business Management
MAN405 Strategic Management
MAN408 Analysis of Pakistani Industries

Management Information Systems
MIS102 Computer Concepts
MIS103 Computer Applications I
MIS201 Computer Applications II

Marketing
MKT301 Principles of Marketing
MKT302 Marketing Management
MKT403 Sales Management
MKT404 Methods in Business Research
MKT509 Consumer Behavior

Elective Business Courses

Accounting
ACC302 Accounting and Financial Information Systems
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements

Finance and Banking
FIN403 Islamic Banking and Finance
FIN503 Corporate Finance
FIN504 International Finance
FIN505 Treasury and Fund Management
FIN506 Invest. Banking and Security Analysis
FIN507 Portfolio Management
FIN508 Risk Management
FIN509 Financial Derivatives
FIN510 Investment Analysis
FIN512 Money and Capital Markets
FIN513 Project Appraisal
FIN514 Asset Liability Management

Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training & Development
HRM504 Negotiation Skills & CB
HRM505 Org. 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

Management
MAN502*Business Process Re-engineering
MAN503 Supply Chain Management
MAN507 Business Etiquette
       *Accepted as elective under all disciplines.

Management Information Systems
MIS503 System Analysis and Design
MIS504 Oracle/Developer 2000
MIS505 Software Engineering
MIS506 Data Communication and 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 & Info. Systems

Marketing
MKT502   Graphic Design
MKT503   Packaging and Printing
MKT504   Advertising
MKT505   Industrial Marketing
MKT506   International Marketing
MKT507   Services Marketing
MKT508   Personal Selling
MKT510   Direct and Digital Marketing
MKT511   Brand Management
MKT512   Export Marketing
MKT517   Media Marketing
MKT519   Marketing of Financial Services
MKT520   Merchandising and Sales Promotion
MKT521   Distribution and Channel 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 would have to cover twelve courses in a year. Full load of six courses can be taken each in the Fall and Spring semesters with option for fewer courses in the latter and making up the shortfall in the summer session.

The Master's/Bachelor's degree programs offered at IoBM are based on a semester system. An academic year consists of a fall semester commencing in September and concluding in January, a spring semester commencing in January and concluding in May, and a summer session from June to August.

Enrollment in fall and spring sessions is compulsory with the summer session being optional. For the MBA executive program enrollment is also compulsory in the summer session.

IoBM does not encourage transfer of credits from other colleges. In case one feels that he/she deserves transfer of credit, the applicant should submit a request to the Dean/Rector at the time of admission.

Course Structure

Freshman
Semester One
General English
Principles of Microeconomics
Principles of Management
Computer Concepts
College Algebra
Islamic Studies

Semester Two
Introduction to Financial Accounting
Business Communication I
Principles of Macroeconomcis
Computer Applications I
Calculus for Business Decisions
Introduciton to Psychology

Sophomore
Semester Three
Intermediate Financial Accounting
Business Communication II
Corporate Law
Computer Applications II
Principles of Marketing
Quantitative Business Analysis

Semester Four
Business and Professional Speech
Introduction to Business Finance
Foreign Language I*
International Relations
Consumer Behavior
Quantitative Skills and Managerial Statistics

Junior
Semester Five
Financial Management
Financial Institutions
Foreign Language II
Organizational Behavior
Marketing Management
Methods in Business Research

Semester Six
Cost Accounting
Human Resource Management
Production and Operations Management
Sales Management
Pakistan Studies
History of Ideas

Senior
Semester Seven
Management Accounting
Business Law
Entrepreneurship and Small Business
Business Ethics
Elective I
Elective II

Semester Eight
Taxation
Pakistan Economic Policy
Strategic Management
Analysis of Pakistani Industries
Elective III
Elective IV
Internship (2 credit hours)

* Six units of a foreign language course completes the language sequence.

"My journey at IoBM has definitely had a deep and profound impact on me. It has transformed the way I feel about the world around me, about what I can accomplish and more importantly, about myself." During these golden years, "I admired and embraced the intelligence, confidence and curiosity that surrounded me!". The top notch faculty at IoBM provides students with the ability to think beyond limits and gifts them with the confidence and power of imagination. As head of Promotions of the Marketing Society of IOBM, I feel great honor to express that I attained Victory at CIMA Global Business Challenge 2011, Pakistan Final and was crowned as the national champion, Alhamdulillah!! A unique blend of diverse knowledge, expertise and experience is a staple to winning this competition and representing Pakistan at the Global Final being held at Chengdu, China during July, 2011. At present, I feel a great privilege to lead the "Team Phoenix" at Digital Minds competition, 2011 and have made it to the Grand finale with our consistent team efforts, hard work and synergy after competing with 135 teams from the top Universities of Pakistan. I am looking forward to wining more laurels for myself, the Institute and my country, Insha'Allah".

S. Shaharyar Husain Jaffari
BBA (Honors)

BS (Honors) Economics and Finance (Four-Year) Program

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 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
ACC503 Taxation

Communication
COM101 General 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 & 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   **4 = Intermediate German
**5 = Intermediate Japanese   **6 = Intermediate Italian
**7 = Intermediate Russian   **8 = Intermediate Chinese

Law
LAW401   Business Law

Management
MAN101 Principles of Management
MAN302 Organizational Behavior

Management Information Systems
MIS402   Computer Concepts & 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

Freshman
Semester One
General English
Principles of Microeconomics
Foreign Language I or Policy Studies
Computer Concepts and Applications
College Algebra
Islamic Studies

Semester Two
Introduction to Financial Accounting
Methods in Business Writing
Principles of Macroeconomics
Foreign Language II or Environmental Studies
Calculus for Business Decisions
Intermediate Microeconomics

Sophomore
Semester Three
Intermediate Financial Accounting
Business and Professional Speech
Probability Theory and Statistics
Business Law
Introduction to Psychology
Principles of Management

Semester Four
Intermediate Macroeconomics
Internet Banking and EPS
Introduction to Business Finance
Principles of Marketing
Pakistan Studies
Model and Inference

Junior
Semester Five
International Trade
Introduction to Econometrics
Money and Banking
Financial Management
Financial Institutions
Methods of Data Analysis

Semester Six
Managerial Economics
Financial Economics
Corporate Finance
Money and Capital Markets
Organizational Behavior
Methods in Business Research

Senior
Semester Seven
Taxation
Topics in Microeconomics
Monetary Theory and Policy
International Finance
Portfolio Management
Human Resource Management

Semester Eight
Topics in Macroeconomics
Pakistan Economic Policy
Treasury and Fund Management
Investment Banking and Security Analysis
Financial Derivatives
Project Appraisal
Internship (2 credit hours)

BS (Honors) Accounting and Finance (Four-Year) Program

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 & Financial Information System
ACC405 Internal Auditing & EDP Accounting
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC503 Taxation
ACC505 Auditing

Communications
COM101 General 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
FIN501 Advanced Financial Management
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

*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

Law
LAW401 Business Law

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

Management Information Systems
MIS402 Computer Concepts & 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

Freshman
Semester One
General English
Principles of Microeconomics
Foreign Language I or Policy Studies
Computer Concepts and Applications
College Algebra
Islamic Studies

Semester Two
Introduction to Financial Accounting
Methods in Business Writing
Principles of Macroeconomics
Foreign Language II or Environmental Studies
Calculus for Business Decisions
Pakistan Studies

Sophomore
Semester Three
Intermediate Financial Accounting
Business and Professional Speech
Probability Theory and Statistics
Business Law
Principles of Marketing
Introduction to Psychology

Semester Four
Accounting & Financial Information Systems
Internal Audit & EDP Accounting
Introduction to Business Finance
Internet Banking & EPS
Model and Inferences
Principles of Management

Junior
Semester Five
Advanced Financial Accounting
Managerial Economics
Financial Management
Financial Institutions
Money and Banking
Methods of Data Analysis

Semester Six
Cost Accounting
Corporate Finance
Treasury & Fund Management
Advanced Financial Management
Organizational Behavior
Methods in Business Research

Senior
Semester Seven
Advanced Managerial Accounting
Analysis of Financial Statements
Portfolio Management
International Finance
Human Resource Management
Entrepreneurship and Small Business Management

Semester Eight
Auditing
Taxation
Pakistan Economic Policy
Investment Banking and Security Analysis
Financial Derivatives
Project Appraisal
Internship (2 credit hours)

MBA after BBA and BS Joint (Honors) (One-Year) Program

The BBA and BS Joint (Honors) programs are the route to Master in Business Administration. For those students who have obtained their BBA and BS Joint (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 Course

Accounting
ACC501* Advanced Financial Accounting
for BS Joint (Honors) students only

Economics
ECO405   Seminar in Economic Policy

Finance
FIN502   Strategic Financial Management
FIN510   Investment Analysis*
for BS Joint (Honors) students only

Management
MAN501 Total Quality Management
MAN508 Comparative Management

Management Information Systems
MIS501   Information Systems Management
MIS502   Electronic Commerce

Marketing
MKT402   Marketing Management*
MKT501   Strategic Marketing and Planning
for BS Joint (Honors) students only

Business Elective Courses

Majors in Accounting*
ACC502 Advanced Managerial Accounting
ACC505 Auditing
ACC506 Analysis of Financial Statements
for BBA (Honors) students only

Majors in Finance and Banking*
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
FIN512   Money and Capital Markets
FIN513   Project Appraisal
FIN514   Asset Liability Management
for BBA (Honors) students only

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training and Development
HRM504 Negotiation Skills & CB
HRM505 Organizational Change and 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 Information Systems
MIS503   System Analysis and Design
MIS504   Oracle/Developer 2000
MIS505   Software Engineering
MIS506   Data Communication & Networking
MIS507   Relational Database Management 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 & Info. Systems

Majors in Marketing

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
MKT517 Media Marketing
MKT519 Marketing of Financial Services
MKT520 Merchandising and Sales Promotion
MKT 521 Distribution and Channel Management
MKT 527 Integrated Marketing Communication

for BS (Joint Honors) students only.

Majors in Supply Chain and Logistics 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 & Management

Course Structure

Semester One

Advanced Financial Accounting*
Investment Analysis**
Strategic Financial Management
Total Quality Management
Strategic Marketing and Planning*
Marketing Management**
Elective I
Elective II

for BBA (Honors) students only
**for BS Joint (Honors) students only*

Semester Two

Seminar in Economic Policy
Comparative Management
Information Systems Management
Electronic Commerce
Elective III
Elective IV

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. 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 short fall in Summer session.

MBA Advertising and Media Management after BBA (Honors) (One-Year) Program

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 & 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 & 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

Semester One
Advertising Management and Strategy
Brand Management
Public Relations and Event Management
Digital Media
Services Marketing
Media Planning

Semester Two
Integrated Marketing Communication
Creative Planning and Development
Advanced Financial Accounting
Comparative Management
Strategic Marketing and Planning
Total Quality Management

Course Structure for MBA Media Management

Semester One
Introduction to Media in Pakistan
Print Media
Electronic Media
Brand Management
Comparative Management
Advertising Management and Strategy

Semester Two
Public Relations and Event Management
Media Research and Public Opinion
Specialized Communication Skills
Digital Media
Media Law and Business Ethics
Role of Media in World Affairs

MBA after BS Computer Science (18 Months) Program

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 &Cost Accounting

Finance
FIN404   Financial Management

Management
MAN402 Organizational Behavior
MAN403 Entrepreneurship & 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
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

Majors in Human Resource Management
HRM501 Recruitment and Selection
HRM502 Industrial Relations and Labour Laws
HRM503 Employee Training & Development
HRM504 Negotiation Skills & CB
HRM505 Organizational Change & Development
HRM506 Strategic HRM
HRM507 Public Relations
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
MIS 527   Information Security
MIS 528   Advanced Information Security
MIS 530   Information Systems Research
MIS 532   New Perspectives on Organization Info. 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
MKT514   Public Relations and Event Management
MKT519   Marketing of Financial Services
MKT520   Merchandising and Sales Promotion
MKT521   Distribution and Channel Management
MKT527   Integrated Marketing Communication

Majors in Supply Chain and Logistics Management

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

Course Structure

Semester One

Introduction to Managerial and Cost Accounting
Business Communication
Organizational Behavior
Total Quality Management
Marketing Management
Business Ethics

Semester Two

Financial Management
Business Law
Entrepreneurship and Small Business Management
Strategic Management
Methods in Business Research

Semester Three

Elective I
Elective II
Elective III
Elective IV

MBA Finance and Risk Management after BBA / BS (Joint Honors) (One-Year) Program

MBA Finance and Risk Management (one year program), 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

Mathematics
MTH409   Financial Mathematics I
MTH410   Financial Mathematics II

Social Sciences
SSC405   Business Ethics and Financial Responsibility

Elective Courses

Finance and Risk Management
FRM501   Property Risk Management
FRM502   Management of Insurance Institutions
FRM503   Corporate Risk Management
FRM504   Theory of Risk and Insurance
FRM505   Corporate Treasury & Risk Management
FRM506   Financial Regulation for Risk Management
FRM508   Financial Market Issues & Crisis
FRM510   Energy Risk Management
FRM512   International Risk & Financial Reporting
FRM513   Project Risk Management
FRM514   Takaful & Risk Management In Islamic Products
FRM515   International Financial Reporting & Standards

Course Structure

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

Semester Two
Introduction to Financial Risk Management
Financial Mathematics II
Applied Financial Economics
Elective I

Semester Three
Risk Financing Techniques
Advanced Financial Risk Management
Analysis of Financial Statements
Elective II

MBA (Regular)
(Two-Year) Program

The challenging and inspiring MBA program provides graduates an in-depth focus on cutting edge issues in business.

This Master's program requires completion of 78 credit hours of course work, including 26 courses, 2 credit hours of internship of at least six weeks in a firm approved by the College and the comprehensive examination. Students must maintain a CGPA of 3.0 for the conferment of the degree. This program is designed for students with a background in a wide range of disciplines such as, commerce, engineering, law, science, medicine, arts and pharmacy.

Students can take a minimum load of 12 credit hours (four courses) or a maximum of eighteen credit hours (six courses) in a regular semester (Fall / Spring).

Students who are weak in English and Communication Skills are required to take an additional "Business English" course to enhance their language skills.

Foundation Courses

Communication
COM401 Business English*
COM402 Business Communication
COM403 Interpersonal Communication Skills
less proficient students

Economics
ECO403 Macroeconomics
ECO404 Micro and Managerial Economics
ECO405 Seminar in Economic Policy

Law
LAW401   Business Law

Social Sciences
SSC401   Business Ethics

Statistics
STA403   Statistics and Mathematics
STA404   Statistical Inference

Core Business Courses

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

Finance
FIN404   Financial Management
FIN501   Advanced Financial Management

Human Resource Management
HRM401   Human Resource Management

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN405 Strategic Management

Management Information Systems
MIS401   Computer Applications
MIS502   Electronic Commerce

Marketing
MKT401   Principles of Marketing
MKT402   Marketing Management
MKT404   Methods in Business Research

Elective Business Courses*
Refer to Page No. 60.

Courses Structure

Semester One
Introduction to Financial Accounting
Business English*
Business Communication
Macroeconomics
Principles of Management
Principles of Marketing
Statistics and Mathematics
less proficient students

Semester Two
Financial Management
Organizational Behavior
Computer Applications
Marketing Management
Methods in Business Research
Statistical Inference

Semester Three
Introduction to Managerial and Cost Accounting
Micro and Managerial Economics
Advanced Financial Management
Human Resource Management
Business Law
Electronic Commerce
Business Ethics

Semester Four
Interpersonal Communication Skills
Seminar in Economic Policy
Strategic Management
Elective I / Sales Management*
Elective II
Elective III
Elective IV
Internship (2 credit hours)

*Sales Management is a compulsory course for students who wish to do majors in Marketing. These students will be required to take three electives instead of four.

At IoBM, I have come forth as a keen learner, an enthusiastic and diligent student, a compassionate team member and a focused individual. My teachers have helped me and guided me through the unwavering focus on my goals with a planned approach; which indeed is the only way to achieve success. During my MBA program, IoBM has provided me the chance to learn from the most experienced faculty members, who are not only teachers, but facilitators, who make one learn and understand the qualities of a business professional. My privilege has been to study from some professionals as well, who have brought valuable input from the real world through their knowledge and experience. My learning has been enormous at IoBM, which can definitely not be described in a few words. All this learning during my student life at IoBM will most certainly help me to grow and prosper in my professional life.

Anam Nazneen
MBA (Regular)

MBA (Regular)
(Three-Year) Program

This Master's Program requires completion of 108 credit hours of course work, including 36 courses, 2 credit hours of internship of at least six weeks in a firm approved by the College and clear the comprehensive examination. Students must maintain a CGPA of 3.0 for the conferment of the degree. The program is designed for students who have passed BA/BCom/ BSc or 2-Year Bachelor's degree recognized by the Higher Education Commission of Pakistan.

Students can take a minimum load of 12 credit hours (four courses) or a maximum of eighteen credit hours (six courses) in a regular semester (Fall & Spring). Students who are weak in English and Communication Skills are required to take an additional "Business English" course to enhance their language skills.

Foundation Courses

Communication
COM401 Business English*
COM402 Business Communication
COM403 Interpersonal Communication Skills
*less proficient students

Economics
ECO403 Macro Economics
ECO404 Micro and Managerial Economics
ECO405 Seminar in Economic Policy

Law
LAW402 Corporate Law

Mathematics & Statistics
MTH400   Mathematics for Business
STA401   Introduction to Statistics
STA404   Statistical Inference

Core Business Courses

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

Finance
FIN404   Financial Management
FIN501   Advanced Financial Management

Human Resource Management
HRM401 Human Resource Management
HRM505 Organizational Change and Development
HRM506 Strategic Human Resource Management

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN403 Entrepreneurship & Small Business
MAN405 Strategic Management
MAN406 Production and Operations Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN501 Total Quality Management

Management Information Systems
MIS410   Business & Information Technology
MIS502   Electronic Commerce

Marketing
MKT401   Principles of Marketing
MKT402   Marketing Management
MKT404   Methods in Business Research
MKT501   Strategic Marketing and Planning
MKT509   Consumer Behavior

Elective Business Courses*
*Refer to Page No. 60.

Course Structure

Semester One
Introduction to Financial Accounting
Business English*
Business Communication
Macroeconomics
Principles of Management
Business & Information Technology
Mathematics for Business
less proficient students

Semester Two
Introduction to Managerial and Cost Accounting
Interpersonal Communication Skills
Micro and Managerial Economics
Corporate Social Responsibility
Principles of Marketing
Introduction to Statistics

Semester Three
Financial Management
Corporate Law
Organizational Behavior
Marketing Management
Consumer Behavior
Statistical Inference

Semester Four
Advanced Financial Management
Human Resource Management
Production and Operations Management
Total Quality Management
Electronic Commerce
Methods in Business Research

Semester Five
Organizational Change and Development
Strategic Human Resource Management
Entrepreneurship and Small Business
Strategic Marketing and Planning
Elective I / Sales Management*
Elective II

Semester Six
Seminar in Economic Policy
Project Management
Corporate Governance
Strategic Management
Elecitve III
Elective IV
Internship (2 credit hours)

Sales Management is a compulsory course for students who wish to do majors in Marketing. These students will be required to take three electives instead of four.

MBA (Executive) (Two-Year) Program

In addition to the regular MBA program, an executive MBA program is offered on the weekend to accommodate working professionals. Its curriculum is current/ updated and comprehensive providing all the tools and techniques suited to the needs of mid-career and senior level executives. Enrollment in the executive program requires a minimum load of 6 credit hours (2 courses) and the maximum load of 12 credit hours (4 courses) in each of the 3 sessions (Fall, Spring, Summer). MBA (Executive) students in the regular program sponsored by their organizations are not required to take up an internship. The program consists of three groups of courses: Foundation, Core and Electives.

Foundation Courses

Communication
COM401 Business English*
COM402 Business Communication
COM403 Interpersonal Communication Skills
*less proficient students

Economics
ECO403 Macroeconomics
ECO404 Micro and Managerial Economics
ECO405 Seminar in Economic Policy

Law
LAW401   Business Law

Social Science
SSC401   Business Ethics

Statistics
STA403   Statistics and Mathematics
STA404   Statistical Inference

Core Business Courses

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

Finance
FIN404   Financial Management
FIN501   Advanced Financial Management

Human Resource Management
HRM401 Human Resource Management

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN405 Strategic Management

Management Information Systems
MIS401   Computer Applications
MIS502   Electronic Commerce

Marketing
MKT401   Principles of Marketing
MKT402   Marketing Management
MKT404   Methods in Business Research

Business Elective Courses*
*Refer to Page No. 60.

Course Structure

Semester One
Introduction to Financial Accounting
Business English*
Business Communication
Principles of Marketing
Statistics and Mathematics
*less proficient students

Semester Two
Macroeconomics
Principles of Management
Marketing Management
Statistical Inference

Semester Three
Introduction to Managerial and Cost Accounting
Financial Management
Organizational Behavior
Computer Applications

Semester Four
Advanced Financial Management
Human Resource Management
Business Law
Methods in Business Research

Semester Five
Interpersonal Communication Skills
Micro and Managerial Economics
Electronic Commerce
Business Ethics

Semester Six
Seminar in Economic Policy
Strategic Management
Elective I / Sales Management*
Elective II
Elective III
Elective IV

Sales Management is a compulsory course for students who wish to do majors in Marketing. These students will be required to take three electives instead of four.

Studying at IoBM is, without a doubt, one of the best experiences of my life. It is a great privilege to get an MBA from such an esteemed institute. The time I spent at IoBM was fabulous. I nurtured personally and professionally and was made strong enough to stand up against all the hardships in practical life. I know that my sense of pride as an IoBM student is greater because of this. The natural surroundings of the campus are quiet and beautiful and make it easy to concentrate on studying. IoBM provides a very good learning environment with excellent resource materials, especially for students. My life began to change and I learnt the true meaning of trust and support. I realize that coming to IoBM was the best life changing decision I have ever made. When I talk about college to others, I like to share my life story, my experiences and how IoBM helped me.

If I had to describe my IoBM experience in one word, it would have to be 'memorable'. I met a lot of new and wonderful friends along the way and the faculty was great!

Faisal Abdullah
MBA (Executive)

MBA Health, Hospital and Pharmaceutical Management (Two-Year) Program

The program is geared to professionals who aspire to be health care managers. This is a specialized program that amalgamates management skills and knowledge of economics, finance, statistics, and epidemiology and health policy, relevant to those working within the private and government sectors. The program has an integrated and 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 hospitals, health systems management, pharmaceutical industries and population programs. The teaching methodology includes case studies and research projects.

The two-year MBA-Health Management Program is designed to provide students with eleven 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 seven core Health Management courses and four Health electives (amongst a choice of twenty five listed health electives). A supervised research project of three credit hours provides students with an opportunity to apply curricular concepts and hand-on skills to provide solutions to the problems that occur in an organizational setting.

The semester structure integrates complementing 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 Management (Health Services, Hospital, and Pharmaceutical Management) program is offered on weekends. Students are required to complete 25 courses of 3 credit hours each 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

Students weak in English and Communication Skills are required to take an additional "Business English" course to enhance their language skills.

Core Business Courses

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

Communication
COM401 Business English*
COM402 Business Communication
COM403 Interpersonal Communication Skills
*less proficient students

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. 60.

Core Health Courses

MHM401 Introduction to Health Policy, Planning & Management
MHM402 Quantitative Analysis
MHM403 Health Management Information Systems
MHM404 Research and Survey Methodology
MHM405 Pharmaceutical Management
MHM515 Hospital Administration
MHM517 Research Project (3 credit hours)

Elective Health Courses

MHM501 Pharmaceutical Branding
MHM502 Health Economics
MHM503 Financial Management of Health Services
MHM504 Strategic Mgmt. of Health Services
MHM505 Concepts of Primary Health Care
MHM506 Managing Professional Health Care Organizations
MHM507 Introduction to Epidemiology
MHM508 Pharmaceutical Marketing & Quality Assurance
MHM509 Marketing of Health Services
MHM510 Introduction to Demography Methods
MHM511 Population and Health
MHM512 Economics & Management of Pharmaceutical Industry
MHM513 Managing Physicians
MHM514 Environmental Health Assessment & Management
MHM516 Health Program Evaluation
MHM518 Regulatory Affairs at Healthcare Industries
MHM519 Financial Applications in Pharmaceutical Marketing
MHM520 Product Management
MHM521 Pharmaceutical Sales Management
MHM522 Project Management of Health Services
MHM523 Health Ethics
MHM524 Healthcare Human Resource Management
MHM526 Healthcare Leadership
MHM527 Supply Chain and Production Management in
          Pharmaceutical Industries

Course Structure

Semester One
Business English*
Business Communication
Principles of Management
Quantitative Analysis
Computer Applications
less proficient students

Semester Two
Introduction to Health Policy, Planning & Management
Micro and Macroeconomics
Principles of Marketing
Research and Survey Methodology

Semester Three
Introduction to Financial Accounting
Health Management Information Systems
Hospital Administration
Pharmaceutical Management

Semester Four
Introduction to Managerial & Cost Accounting
Financial Management
Human Resource Management
Organizational Behavior

Semester Five
Interpersonal Communication Skills
Business Elective I
Health Elective I
Health Elective II
Research Project *(3 credit hours)*

Semester Six
Business Electives II
Business Elective III
Health Elective III
Health Elective IV

MBA Advertising and Media Management (Two-Year) Program

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

Course Structure

Common Courses

Semester One
Business Communication
Principles of Management
Computer Applications
Introduction to Media in Pakistan

Semester Two
Organizational Behavior
Principles of Marketing
Principles of Advertising
Statistics and Mathematics

Semester Three
Introduction to Financial Accounting
Micro and Macroeconomics
Methods in Business Research
Electronic Media

Semester Four
Financial Management
Human Resource Management
Consumer Behavior
Print Media

Elective Courses for MBA Advertising Management

Semester Five
International Advertising and Promotions
Advertising Management and Strategy
Public Relations and Event Management
Digital Media

Semester Six
Creative Planning and Development
Brand Management
Media Planning
Integrated Marketing Communication

Elective Courses for MBA Media Management

Semester Five
Multimedia and Film Production
Media Research and Public Opinion
Citizen Journalism
Script Writing

Semester Six
Media Law and Business Ethics
E-Commerce and Graphic Designing
Role of Media in World Affairs
Time, Priorities and Conflict Management

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)

MBA Finance and Risk Management (Two-Year) Program

Financial Managers are expected to have knowledge of principles and practices of Financial Risk Management. Therefore, MBA in Finance and Risk Management (two-year) 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 &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 Risk Management
FRM501   Property Risk Management
FRM502   Management of Insurance Institutions
FRM503   Corporate Risk Management
FRM504   Theory of Risk and Insurance
FRM505   Corporate Treasury & Risk Management
FRM506   Financial Regulation for Risk Management
FRM508   Financial Market Issues & Crisis
FRM510   Energy Risk Management
FRM512   International Risk & Financial Reporting
FRM513   Project Risk Management
FRM514   Takaful & Risk Management In Islamic Products
FRM515   International Financial Reporting & Standards

Course Structure

Semester One
Introduction to Financial Accounting
Business Communication
Principles of Management
Model and Inferences

Semester Two
Micro and Macroeconomics
Financial Management
Principles of Marketing
Financial Mathematics I

Semester Three
Introduction to Managerial and Cost Accounting
Principles of Risk Management
Computational Methods in Risk
Financial Mathematics II

Semester Four
Advanced Financial Management
Introduction to Financial Risk Management
Business and Insurance Law
Human Resource Management

Semester Five
Applied Financial Economics
Analysis of Financial Statements
Business Ethics and Financial Responsibility
Elective I

Semester Six
Risk Financing Techniques
Advanced Financial Risk Management
Strategic Management
Elective II

MBA Environment and Energy Management (Two-Year) Program

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 the HEC requirements. The course is particularly designed for schools and school system teachers, managers, administrators, principals, and coordinators.

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
MAN411 Project Management
MAN501 Total Quality Management

Marketing
MKT401   Principles of Marketing

Finance
FIN404   Financial Management

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

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 & Energy Sector

Course Structure

Semester One
Environmental Issues and Management
Principles of Management
Business Communication
Air and Noise Pollution Management

Semester Two
Energy Sources and Management
Industrial & Municipal Waste Management
Introduction to Financial Accounting
Statistical Inference

Semester Three
Renewable Energy and Energy Conservation
Coastal Environment and Management
Principles of Marketing
Organizational Behavior

Semester Four
Green Technology and Energy Analysis
Safety Health and Environmental Management
Financial Management
Human Resource Management

Semester Five
Risk and Disaster Management
Environmental Impact Assessment
Strategic Management
Elective 1

Semester Six
Environmental, Rules, Laws and Regulations
Research and Survey Methodology
Elective II
Project

When I joined IoBM in MBA-MHM, it seemed difficult to adjust with the culture of diversity of the young student population because of a long professional journey in clinical practice, but with time I enjoyed the welcoming and attractive environment of the "State of the Art" University along with mentoring acquaintances and friendly interaction with highly qualified faculty. The students' society ownership further added value to my managerial skills. Life at IoBM broadened the vision of my professional knowledge in the managerial field. I am proud to be a part of IoBM as a student and a health manager through which I have stepped forward to a new horizon of opportunities in the health business.

Major Dr. Shahida Mirza
MBA (Health, Hospital and Pharmaceutical Management)

MBA (Executive)
(Three-Year) Program

In addition to the three-year regular MBA program, an Executive MBA program is offered to executives with 2-year Bachelor's degree on weekend. Enrollment in the executive program requires a minimum load of 6 credit hours (2 courses) and a maximum load of 12 credit hours (4 courses) in each of the 3 semesters (Fall, Spring and Summer).

This Master's program requires completion of 108 credit hours of course work, including 36 courses. Students must maintain a CGPA of 3.0 for the conferment of the degree.

MBA curriculum is current/updated and comprehensive. The program provides all the tools and techniques required for a successful career in business management. The program consists of three groups of courses Foundation, Core and Electives.

Foundation Courses

Communication
COM401 Business English*
COM402 Business Communication
COM403 Interpersonal Communication Skills
*less proficient students

Economics
ECO403 Macroeconomics
ECO404 Micro and Managerial Economics
ECO405 Seminar in Economic Policy

Law
LAW402 Corporate Law

Mathematics
MTH400   Mathematics for Business

Core Business Courses

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

Finance
FIN404   Financial Management
FIN501   Advanced Financial Management

Human Resource Management
HRM401   Human Resource Management
HRM505   Organizational Change and Development
HRM506   Strategic Human Resource Management

Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN403 Entrepreneurship & Small Business
MAN405 Strategic Management
MAN406 Production and Operations Management
MAN411 Project Management
MAN413 Corporate Social Responsibility
MAN416 Corporate Governance
MAN501 Total Quality Management

Management Information Systems
MIS410   Business and Information Technology
MIS502   Electronic Commerce

Marketing
MKT401   Principles of Marketing
MKT402   Marketing Management
MKT404   Methods in Business Research
MKT501   Strategic Marketing and Planning
MKT509   Consumer Behavior

Statistics
STA401   Introduction to Statistics
STA404   Statistical Inference

Business Elective Courses*
*Refer to Page No. 60.

Course Structure

Semester One
Business English*
Business Communication
Macroeconomics
Principles of Management
Mathematics for Business
*less proficient studnets

Semester Two
Introduction to Financial Accounting
Interpersonal Communication Skills
Micro and Managerial Economics
Corporate Social Responsibility

Semester Three
Introduction to Managerial and Cost Accounting
Business and Information Technology
Principles of Marketing
Introduction to Statistics

Semester Four
Financial Management
Organizational Behavior
Marketing Management
Statistical Inference

Semester Five
Advanced Financial Management
Methods in Business Research
Strategic Marketing and Planning
Consumer Behavior

Semester Six
Human Resource Management
Production and Operations Management
Total Quality Management
Electronic Commerce

Semester Seven
Corporate Law
Organizational Change and Development
Strategic Human Resource
Entrepreneurship and Small Business

Semester Eight
Strategic Management
Corporate Governance
Elective I / Sales Management*
Elective II

Semester Nine
Seminar in Economic Policy
Project Management
Elective III
Elective IV

*Sales Management is a compulsory course for students who wish to do majors in Marketing. These students will be required to take three electives instead of four.

MBA Industrial Management after BS Industrial Engineering and Management (One-Year) Program

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 & Cost Accounting

Engineering
ENG408 Facilities Planning

Finance
FIN404   Financial Management

Human Resource Management
HRM502 Industrial Relations and Labor Laws

Management
MAN405 Strategic Management
MAN410 Industrial Management
MAN411 Project Management

Marketing
MKT530   New Product Development

Supply Chain and Logistics Management
SCM502 ERP Systems Design and Implementation

Statistics
STA404   Statistical Inference

Elective Courses

Engineering
ENG405   Env. Impact Assesment & Management
ENG407   Manufacturing Process and Systems
ENG410   Maintenance Management
ENG501   Technology Management

Finance
FIN510   Investment Analysis

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

Management Information Systems
MIS501   Information Systems Management

Marketing
MKT505   Industrial Marketing

Course Structure

Semester One
Introduction to Managerial and Cost Accounting
Industrial Management
ERP Systems Design and Implementation
Statistical Inference

Semester Two
Facilities Planning
Financial Management
Industrial Relations and Labor Laws
Project Management

Semester Three
Strategic Management
New Product Development
Elective I
Elective II

MBA Industrial Management
(Two-Year) Program

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 spe-cifically designed to reflect the challenges faced by traditional manufacturing organizations.

Required Courses

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

Communication
COM402 Business Communication

Economics
ECO401 Micro and Macroeconomics

Engineering
ENG405   Environmental Impact Assessment & Management
ENG408   Facilities Planning

Finance
FIN404   Financial Management

Human Resource Management
HRM401 Human Resource Management
HRM502 Industrial Relations & Labor Laws

Management
MAN401 Principles of Management
MAN405 Strategic Management
MAN406 Production & Operations Management
MAN410 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
ENG407 Manufacturing Process and Systems
ENG410 Maintenance Management
ENG501 Technology Management

Finance
FIN510   Investment Analysis
FIN513   Project Appraisal

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

Marketing
MKT502 Services Marketing
MKT505 Industrial Marketing
MKT530 New Product Development

IoBM gave me what I ultimately coveted, an experience of university that can be at par with international universities. My decision to do my Bachelor's in Business Administration from IoBM has been till date the best judgment call I have made. The best part of IoBM is that here I am able to incorporate extracurricular into my studies. Working as General Secretary of IoBM Club for Entrepreneurs has given me immense exposure and has inculcated in me the ability to incorporate both studies and fun to have the best university life to be experienced.

Khadija Zafar
BBA (Honors)

Supply Chain and Logistics Management

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

Course Structure

Semester One
Business Communication
Industrial Management
Statistical Inference
Principles of Management

Semester Two
Computer Applications
Micro and Macroeconomics
Environmental Impact Assessment & Management
Introduction to Financial Accounting

Semester Three
Principles of Marketing
Human Resource Management
Facilities Planning
Introduction to Managerial and Cost Accounting

Semester Four
Industrial Relations and Labor Laws
Production and Operations Management
Project Management
Design of Experiments

Semester Five
Financial Management
Total Quality Management
Supply Chain Management
Elective I

Semester Six
Strategic Management
Business Process Re-engineering
Elective II
Elective III

MPhil Leading to PhD in Business Management (Two-Year Program)

The MPhil leading to PhD 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 programme 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 16 years of education holding MBA/MCS 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 HEC recognized university are eligible for admission to the MPhil program at IoBM.

Program Structure

MPhil leading to PhD is a 30 credit hours program with 8 courses and one thesis of 6 credit hours. Each of the 8 courses will be 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.

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

Course Structure

MPM601 Advanced Qualitative Research
MPM603 Advanced Quantitative Research
MPM605 Survey of Current Research Literature in Management
MPM607 Seminar in Corporate Governance
MPM609 Seminar in Human Resource Management
MPM611 Advanced Corporate Finance
MPM613 Advanced Consumer Behavior
MPM615 Econometrics

Thesis (06 Credit hours)
                    or
Additional Courses in lieu of Thesis

MPM608 Project / Research Practicum
MPM610 Independent Study

Elective Business Courses
MBA (Regular, Executive and Health)

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 Invest. Banking & 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

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
MAN502 Business Process Re-engineering**
MAN507 Business Etiquette
MAN508 Comparative Management

Majors in Management Information Systems
MIS501 Information Systems Management
MIS503 System Analysis and Design
MIS504 Oracle/Developer 2000

Core courses for three-year students
**Accepted as elective under all disciplines*

Majors in Management Information Systems (cont.)
MIS505 Software Engineering
MIS506 Data Communication & Networking
MIS507 Relational Database Management 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 Organization Information Systems

Majors in Marketing
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

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

Core courses for three-year students

College of Computer Science and Information Systems

BS Computer Science (Four-Year) Program

Keeping abreast of technological advances in the information technology industry, the BS (Computer Science) program has been designed to fulfill the need for a rigorous and enriching academic experience. 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.

The program comprises four years of study over at least eight semesters. It requires completion of 144 credit hours of course work. Students are required to take 48 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. On successful completion, students are required to undergo 2 credit hours of internship of at least six weeks with a business organization, approved by the Institute before a BS (Computer Science) degree is awarded to them.

BS (Computer Science) program consists of three groups of courses: foundation, core and elective.

Foundation Courses

Accounting
ACC101 Introduction to Financial Accounting
ACC201 Intermediate Financial Accounting

Communication
COM101 General English
COM202 Business and Professional Speech
COM203 Methods in Business Writing

Economics
ECO104 Micro and Macroeconomics

Engineering
ENG307   Basic Electronics

Finance
FIN201   Introduction to Business Finance

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

Human Resource Management
HRM301 Human Resource Management

Management
MAN101 Principles of Management

Marketing
MKT301   Principles of Marketing

Mathematics
MTH104   Calculus I
MTH105   Calculus II
MTH201   Discrete Mathematics
MTH204   Linear Algebra
MTH208   Differential Equations and Complex Variables

Political Sciences
PSC301   Pakistan Studies

Religious Studies
REL101   Islamic Studies

Statistics
STA203   Probability Theory and Statistics

Core Courses (Computer Science)

CSC102   Introduction to Computer Science
CSC103   Structured Programming Language
CSC105   Data Structures and Algorithms
CSC201   Low Level Programming Language
CSC202   Digital Computer Logic
CSC203   Object Oriented Programming Language
CSC205   Computer Architecture and Organization

CSC206   Database Management Systems
CSC208   Network Programming Framework
CSC301   Theory of Automata
CSC303   Computer Graphics
CSC305   Systems Analysis and Design
CSC308   Operating Systems Concepts
CSC309   Microprocessor and Applications
CSC313   Numerical Computing
CSC410   Data Communication & Networking
CSC411   Compiler Construction
CSC412   Artificial Intelligence
CSC413   Introduction to Software Development
CSC414   Visual Programming Language
CSC415   Analysis of Algorithms
CSC417   Project
CSC425   Advanced Operating Systems
CSC442   Human Computer Interface

Elective Courses

CSC302   Multimedia Technology
CSC422   Parallel Computing
CSC427   Software Engineering
CSC345   Digital Image Processing
CSC430   Decision Support Systems
CSC434   Software Quality Assurance
CSC435   Distributed Systems
CSC436   Business Process Re-engineering
CSC443   Mobile Computing
CSC444   Electronic Commerce
CSC445   Network Security
CSC447   Object Oriented Database Management System
CSC448   Digital Signal Processing
CSC510   Wireless Communication

Course Structure

Semester One
General English
Introduction to Computer Science
Structrued Programming Language
Foreign Language I
Calculus I
Discrete Mathematics

Semester Two
Methods in Business Writing
Object Oriented Programming Language
Micro and Macroeconomics
Basic Electronics
Foreign Language II
Calculus II

Semester Three
Introduction to Financial Accounting
Business and Professional Speech
Data Structure and Algorithms
Digital Computer Logic
Network Programming Framework
Probability Theory and Statistics

Semester Four
Low Level Programming Language
Database Management Systems
Theory of Automata
Introduction to Business Finance
Linear Algebra
Differential Equations and Complex Variables

Semester Five
Intermediate Financial Accounting
Computer Architecture and Organization
Computer Graphics
Numerical Computing
Principles of Management
Islamic Studies

Semester Six
Operating Systems Concepts
Systems Analysis and Design
Microprocessor and Applications
Human Resource Management
Pakistan Studies
Principles of Marketing

Semester Seven
Data Communication and Networking
Artificial Intelligence
Visual Programming Language
Human Computer Interface
Elective I
Elective II

Semester Eight
Compiler Construction
Project
Advanced Operating Systems
Introduction to Software Development
Analysis of Algorithms
Elective III

BS Actuarial Science and Risk Management (Four-Year) Program

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

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

Communication
COM101 General English
COM203 Methods in Business Writing

Computer Sciences
CSC103 Structured Programming Language
CSC313 Numerical Computing

Economics
ECO101 Principles of Microeconomics
ECO102 Principles of Macroeconomics
ECO304 Introduction to Econometrics

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

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

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

Law
LAW401 Business Law

Management
MAN101 Principles of Management

Marketing
MKT301 Principles of Marketing
MKT404 Methods in Business Research

Mathematics
MTH104 Calculus I
MTH105 Calculus II
MTH203 Financial Mathematics I
MTH204 Linear Algebra
MTH210 Financial Mathematics II
MTH211 Actuarial Mathematics

Pakistan Studies
PSC301 Pakistan Studies

Religious Studies
REL101   Islamic Studies

Statistics
STA203   Probability Theory and Statistics
STA205   Probability Theory and Statistics II
STA210   Sampling Theory
STA301   Model and Inferences
STA302   Methods of Data Analysis
STA303   Time Series analysis & forecasting
STA305   Applied Regression Analysis
STA307   Decision Theory
STA309   Loss Models I
STA310   Loss Models II

Elective Courses

Finance and Risk Management
FRM501   Property Risk Management
FRM502   Management of Insurance Institutions
FRM503   Corporate Risk Management
FRM504   Theory of Risk and Insurance
FRM505   Corporate Treasury & Risk Management
FRM506   Financial Regulation for Risk Management
FRM508   Financial Market Issues & Crisis
FRM510   Energy Risk Management
FRM512   International Risk & Financial Reporting
FRM513   Project Risk Management
FRM514   Takaful & Risk Management In Islamic Products
FRM515   International Financial Reporting & Standards

Course Structure

Semester One
General English
Principles of Microeconomics
Foreign Language I
Probability Theory and Statistics
Calculus I
Structured Programming Language

Semester Two
Introduction to Financial Accounting
Probability Theory and Statistics II
Calculus II
Principles of Macroeconomics
Financial Mathematics I
Islamic Studies

Semester Three
Principles of Marketing
Linear Algebra
Model and Inferences
Introduction to Business Finance
Methods in Business Writing
Financial Mathematics II

Semester Four
Numerical Computing
Business Law
Introduction to Econometrics
Principles of Management
Pakistan Studies
Method of Data Analysis

Semester Five
Financial Derivatives
Actuarial Mathematics
Principles of Risk Management
Stochastic Processes
Financial Econometrics
Corporate Finance

Semester Six
Portfolio Management
Life and Other Contingencies
Enterprise Risk Management
Sampling Theory
Models in Financial Economics I
Methods in Business Research

Semester Seven
Institutional Investments
Models in Financial Economics II
Applied Regression Analysis
Computational Methods in Risk Management
Loss Models I
Elective I

Semester Eight
Decision Theory
Loss Models II
Risk Financing Techniques
Time series Analysis &forecasting
Project
Elective II

MS Computer Science
(Two-Year) Program

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 the 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 they 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
CSC561   Advanced Software Engineering
CSC562   Object Oriented Software Engineering
CSC563   Software Quality Assurance
CSC564   Software Requirement Engineering
CSC565   Software Testing Strategies
CSC571   Advanced Database Mgmt. Systems
CSC573   Data Mining
CSC574   Distributed Systems
CSC575   Parallel & Distributed Computing
CSC576   Parallel & Distributed Algorithms
CSC578   Communication and Info. Policy
CSC581   Neural Networks
CSC582   Pattern Recognition
CSC583   Fuzzy Systems

Course Structure

Semester One
Advanced Research Methodology
Advanced Computer Architecture
Advanced Analysis of Algorithm

Semester Two
Decision Theory
Elective I
Elective II

Semester Three
Elective III
Elective IV

Semester Four
MS Thesis *(6 credit hours)*

College of Engineering and Sciences (CES)

BS Industrial Engineering and Management (Four-Year) Program

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

Communication
COM101 General English
COM402 Business Communication

Computer Science
CSC310 Computer Simulations

Engineering
ENG101 Workshop Practices
ENG102 Engineering Mechanics
ENG103 Engineering Drawing
ENG105 Basic Industrial Engineering
ENG108 Introduction to Thermo-Fluids
ENG109 Industrial Chemistry
ENG201 Design of Machine Elements
ENG202 Production System Design
ENG203 Engineering Economics
ENG206 Manufacturing Process
ENG209 CAD/CAM Applications
ENG217 Materials Engineering
ENG218 Metrology & Statistical Quality Control
ENG219 Industrial Maintenance & Safety
ENG220 Mechanics of Materials
ENG300 Electrical Technology and Instrumentation
ENG303 Production Planning and Control
ENG304 Automation and Robotics
ENG305 Work Study & Methods Engineering
ENG306 Basic Machine Design
ENG307 Basic Electronics

General Sciences
GSC101 Physics

Human Resource Management
HRM301 Human Resource Management

Management
MAN101 Principles of Management
MAN303 Production and Operations Management

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

Marketing
MKT301   Principles of Marketing

Mathematics
MTH202 Engineering Mathematics
MTH208 Differential Equation & 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

Semester One
Engineering Mathematics
Computer Programming and Graphics
Physics
Workshop Practices
General English
Islamic Studies

Semester Two
Introduction to Thermo-Fluids
Engineering Mechanics
Engineering Drawing
Industrial Chemistry
Business Communication
Differential Equation and Complex Variables

Semester Three
Materials Engineering
Pakistan Studies
Design of Machine Elements
Principles of Management
Electrical Technology and Instrumentation
Basic Industrial Engineering

Semester Four
Industrial Applications of Statistics
Mechanics of Materials
Production System Design
Introduction to Financial Accounting
Basic Electronics
Computer Applications and MIS

Semester Five
Production and Operations Management
Human Resource Management
Operations Research
Metrology and Statistical Quality Control
Principles of Marketing
Manufacturing Process

Semester Six
Basic Machine Design
Computer Simulations
CAD/CAM Applications
Engineering Economics
Numerical Computing / Analysis
Industrial Maintenance & Safety

Semester Seven
Production Planning and Control
Design of Experiments
Project I
Elective I
Elective II

Semester Eight
Automation and Robotics
Work Study and Methods Engineering
Project II
Elective III
Elective IV

BE Electrical Engineering in Electronic, Telecommunication, Electrical Power Systems and Computer Systems (Four-Year) Program

BE Electrical Engineering program is launched at IoBM with specialization in Electrical Power Systems, Electronic, Telecommunication and Computer System Engineering. 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 program is a blend of management and engineering courses thus making it distinct from other engineering courses. The emphasis is given to the 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 four above mentioned areas of specialization. The course work offered in the last four semesters are 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 works (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, Electronics, Electrical Power and Computer Systems Engineering 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 General English
COM203 Methods in Business Writing
COM402 Business Communication

Electronic Engineering
ELE102 Basic Electronics Engineering
ELE200 Electronic Devices and Circuits
ELE201 Digital Logic Design
ELE205 Amplifier and Oscillator
ELE302 Integrated Circuits and Applications
ELE370 Instrumentation and Measurements
ELE403 Embedded Systems Design
ELE415 Opto-Electronic
ELE417 Industrial Control Electronic
ELE419 Linear Control Systems
ELE450 Project I & II
ELEXXX Elective I
ELEXXX Elective II

Telecommunication Engineering
TCE200 Electronic Communication System
TCE204 Electromagnetic Theory
TCE205 Signal and Systems
TCE321 Wave Propagation and Antenna
TCE404 Digital Signal Processing Techniques
TCE415 Transmission and Switching
TCE416 Digital Communication
TCE421 FPGA Based System Design
TCE422 Communication Systems
TCE461 Wireless and Mobile Communications
TCE471 Optical Fiber Communication
TCE450 Project I & II
TCEXXX Elective I
TCEXXX Elective II

Computer Engineering
CME102 Fundamentals of Computing
CME104 Computer Programming and problem solving
CME200 Computer Aided Engineering Design
CME201 Microprocessor Systems

CME202 Data Communication and Computer Networks
CME301 Software Engineering Applications
CME302 Computer Organization and Architecture
CME304 Data Structures and Algorithms Analysis
CME306 Database Management Systems Design
CME307 Operating Systems
CME308 Advanced Programming
CME407 Artificial Intelligence and Neural Network
CME408 Multimedia Systems
CME409 Computer Simulation and Modeling
CME450 Project I & II
CMEXXX Elective I
CMEXXX Elective II

Electrical Power Engineering
EPE101 Linear Circuit Analysis
EPE102 Electrical Workshop Practices
EPE200 Network Analysis
EPE300 Power System Analysis
EPE302 Electrical Machines
EPE400 High Voltage Engineering
EPE401 Power System Protection
EPE402 Power Distribution and Utilization
EPE411 Power System Analysis
EPE412 Power Generation and Transmission
EPE413 Power System Protection
EPE416 Power System Stability and Control
EPE417 Advanced Electrical Machine
EPE450 Project I & II
EPEXXX Elective I
EPEXXX Elective II

Engineering Management
ENG203 Engineering Economics

General Sciences
GSC103 Applied Physics

Management
MAN101 Principles of Management

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

Political Sciences
PSC301 Pakistan Studies

Psychology
PSY400 Introduction to Organizational Psychology

Religious Studies
REL101 Islamic Studies

Social Sciences
SSC203 Ethical Behavior

Statistics
STA203 Probability Theory and Statistics

Course Structure

First two years are common for all electrical engineering streamlines (Telecommunications, Computer, Electronic and Power Engineering)

Semester One
General English (3+0)
Applied Physics (3+1)
Linear Circuit Analysis (3+1)
Fundamentals of Computing (3+1)
Calculus and Analytical Geometry (3+0)

Semester Two
Methods in Business Writing (3+0)
Basic Electronics Engineering (3+1)
Differential Equations (3+0)
Computer Programming and Problem Solving (3+1)
Islamic Studies or Ethical Behavior (2+0)
Electrical Workshop Practices (0+1)

Semester Three
Electronic Devices and Circuits (3+1)
Digital Logic Design (3+1)
Network Analysis (3+1)
Linear Algebra (3+0)
Pakistan Studies (2+0)
Computer Aided Engineering Design (0+1)

Semester Four
Microprocessor Systems (3+1)
Data Communication and Computer Networks (3+1)
Electromagnetic Theory (3+0)
Complex Variables and Transforms (3+0)
Signal and Systems (3+1)

Course Structure
Streamline1: Telecommunication Engineering

Semester Five
Electronic Communication Systems (3+1)
Instrumentation and Measurements (3+1)
Probability Theory and Statistics (3+0)
Amplifier and Oscillator (3+1)
Transmission and Switching (3+0)

Semester Six
Wave Propagation and Antenna (3+1)
Principles of Management (3+0)
Linear Control Systems (3+1)
Engineering Economics (3+0)
Digital Communication (3+1)

Semester Seven
Introduction to Organizational Psychology (2+0)
Digital Signal Processing Techniques (3+1)
Wireless and Mobile Communication (3+0)
Elective I (3+0)
Project I (0+3)

Semester Eight
Business Communication (2+0)
Optical Fiber Communication (3+1)
Communication System (3+0)
Elective II (3+0)
Project II (0+3)

Electives
CME414 Digital Image Processing
TCE420 Information Theory and Coding
TCE423 RF and Microwave Engineering
TCE424 Radar Systems
TCE425 Telecom Management
TCE430 Satellite Communication
TCE431 Digital Filter Design
CME420 Multimedia Communication
TCE421 FPGA Based System Design

TCE426 Electromagnetic Compatibility
TCE427 Antenna Theory and Design
TCE428 Mobile and Pervasive Computing
TCE429 Tele-traffic Engineering

Course Structure
Streamline2: Computer Systems Engineering

Semester Five
Probability Theory and Statistics (3+0)
Computer Organization and Architecture (3+0)
Numerical Methods and Analysis (3+0)
Data Structures and Algorithms Analysis (3+1)
Signal Processing Techniques (3+1)

Semester Six
Software Engineering Applications (3+1)
Database Management System Design (3+1)
Engineering Economics (3+0)
Advanced Programming (3+1)
Operating Systems (3+0)

Semester Seven
Introduction to Organizational Psychology (2+0)
Embedded Systems (3+1)
Artificial Intelligence and Neural Networks (3+1)
Elective I (3+0)
Project I (0+3)

Semester Eight
Business Communication (2+0)
Multimedia Systems (3+1)
Computer Simulation and Modeling (3+0)
Elective II (3+0)
Project II (0+3)

Electives Courses
CME410 Object-Oriented Analysis and Design
CME411 Systems Programming
CME412 Software Project Management
CME413 Parallel and Distributed Computing
CME414 Digital Image Processing
TCE415 Digital Communication
CME417 Computer Graphics
CME418 Digital System Design
ELE419 Linear Control Systems
ELE420 Robotics and Application
TCE421 FPGA Based System Design

ELE422   VLSI
CME422 Software Quality Assurance and Testing
CME423 Artificial Neural Networks
CME424 Computer Applications in Engineering

Course Structure
Streamline3: Electronic Engineering

Semester Five
Probability Theory and Statistics (3+0)
Principles of Management (3+0)
Amplifier and Oscillator (3+1)
Linear Control Systems (3+1)
Electrical Machine (3+1)

Semester Six
Instrumentation and Measurements (3+1)
Electronic Communication Systems (3+1)
Engineering Economics (3+0)
Digital Signal Processing (3+1)
Integrated Circuits and Applications (3+1)

Semester Seven
Introduction to Organization Psychology (2+0)
Industrial Control Electronic (3+1)
Embedded Systems Design (3+1)
Elective I (3+0)
Project I (0+3)

Semester Eight
Business Communication (2+0)
Opto-Electronic (3+1)
FPGA Based System Design (3+1)
Elective II (3+0)
Project II (0+3)

Electives Courses
CME414 Digital Image Processing
ELE419 Power Electronics
ELE422 VLSI Design
ELE423 Digital control system
ELE428 Digital Electronics
ELE429 Introduction to Nano-Technology
ELE430 Solid State Device
ELE432 Robotic and Application
TCE461 Mobile and Wireless Communication
TCE462 Wave Propagation and Antenna

Course Structure
Streamline4: Electrical Power Engineering

Semester Five
Probability Theory and Statistics (3+0)
Instrumentation and Measurements (3+1)
Power System Analysis (3+0)
Linear Control Systems (3+1)
Electrical Machine (3+1)

Semester Six
Principles of Management (3+0)
Power Generation and Transmission (3+1)
Engineering Economics (3+0)
Digital Signal Processing Techniques (3+1)
Advance Electrical Machine (3+1)

Semester Seven
Introduction to Organizational Psychology (2+0)
High Voltage Engineering (3+1)
Power System Protection (3+1)
Elective I (3+0)
Project I (0+3)

Semester Eight
Business Communication (2+0)
Power Distribution and Utilization (3+1)
Power System Stability and Control (3+0)
Elective II (3+0)
Project II (0+3)

Electives Courses
EPE415 Power Distribution and Utilization
TCE417 Analog and Digital Communication Systems
EPE419 Renewable Energy Systems
ELE423 Digital Control Systems
ELE424 Integrated Electronic Circuits
ELE425 PLC and Industrial Drives
EPE420 SCADA System

MBA Telecommunication Management (Two-Year) Program

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 system. Students learn the structure and environment of the telecommunication industry, total quality management, strategic planning and financial management with emphasis in 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 & 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 & Policy
TCM404 Management of Telecommunications
TCM405 Optical Communication Network
TCM406 Network Design
TCM408 Advanced Mobile & Wireless Communication
TCM409 Customer Service &Call Center Technology
TCM410 Management of Network Security
TCM411 Telecommunication Marketing
TCM 507 Optimization of Telecommunication Systems

Elective Courses

TCM 501 Management of Telecommunication Regulatory System
TCM 502 The Future of Emerging Technology
TCM 503 Electronic Business, System & Technology
TCM 504 Management of Physical Security Technology System
TCM 505 Telecom. Business Continuity Process & Crisis Mgmt.
TCM 506 Telecommunication Business Process
TCM 508 Managing Telecommunication in Media Application
TCM 510 Managing the Creative Process
TCM511 IP Multimedia Technologies

Course Structure

Semester One
Business Communication
Principles of Management
Introduction to Technology Management
Introduction to Teletraffic Engineering

Semester Two
Introduction to Financial Accounting
Organizational Behavior
Global Communicaion Industry and Policy
Management of Telecommunication

Semester Three
Principles of Marketing
Introduciton to Managerial & Cost Accounting
Advanced Mobile and Wireless Communication
Network Design

Semester Four
Financial Management
Micro and Macroeconomics
Optimization of Telecommunication Systems
Optical Communication Network

Semester Five
Human Resource Management
Total Quality Management
Customer Service and Call Center Technologies
Management of Network Security

Semester Six
Telecommunication Marketing
Strategic Management
Project Management
Elective

People dream and say why? A Health Manager sees a dream and he says, "Why not?" From a novice in the professional world to leading prestigious organizations, from a doctor working at micro level to a "Health Manager" managing at macro level, from a student of medicine to giving Health management consultancy to healthcare providers, IoBM health Management program has added value to my professional life. I appreciated being taught by teachers with real world experience ready to equip us to confront real situations in our demanding careers. MHM program offers a great environment where teamwork is put into practice. The world which is facing rapid globalization of the markets, the program developed the skills where we can fight meritocracy, accept diversity and practice pluralism. MHM program was the most valuable learning experience in my life, I feel that I have received a value added learning environment where I wasn't pushed to accept a job by compromising rather to be an entrepreneur and make positive changes in society. I am proud to be part of this elite league.

Dr. Ali Azeem Rajwani
MBA (Health, Hospital and Pharmaceutical Management)

College of Economics and Social Development (CESD)

BS (Honors) Accountancy, Management and Law (formally BS (Honors) Commerce) (Four-Year) Program

The College of Economics and Social Development (CESD) is a liberal arts college with graduate and undergraduate programmes in the areas of Accountancy, Management & Law, education, economics, media studies and psychology. Research is a core competence of CESD.

BS (Honors) Accountancy, Management and Law 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. It is a weekday program, students may take a maximum of six courses per semester with Summer as an optional semester. This program will lead to MBA in Finance, Marketing or CA. Students have the option of passing the Institute of Chartered Accountants of Pakistan (ICAP) foundation and intermediate examinations simultaneously while obtaining the BS (Honors) Accountancy, Management and Law degree.

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 & EDP Accounting
ACC414 Auditing-I
ACC415 Cost Accounting-II
ACC416 Auditing-II
ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting

Communication
COM103 Functional English-I
COM104 Functional English-II
COM105 Business Communication & Behavioral Studies-I
COM106 Business Communication & Behavioral Studies-II
COM202 Business and Professional Speech

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
FIN506 Investment Banking and Security Analysis
FIN511 Analysis of Financial Statements

Finance and Risk Management
FRM206 Institutional Investments

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
LAW403 Statutory Compliance
LAW404 Arbitration

Human Resource Management
HRM301 Human Resource Management
HRM502 Industrial Relations and Labour Laws

Management
MAN101 Principles of Management
MAN403 Entrepreneurship and Small Business Management
MAN411 Project Management
MAN416 Corporate Governance
MAN502 Business Process Re-engineering
MAN503 Supply Chain Management

Management Information Systems
MIS201 Computer Applications II
MIS413 Information Technology-I
MIS416 Information Technology-II

Marketing
MKT301 Principal of Marketing
MKT404 Methods in Business Research

Social Sciences
SSC202   Environmental Studies
SSC401   Business Ethics

Religious Studies
REL101   Islamic Studies

Statistics
STA101   Quantitative Methods-I
STA102   Quantitative Methods-II
STA301   Model and Inferences
STA302   Methods of Data Analysis

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

Semester One
Functional English I
Quantitative Methods I
Information Technology I
Introduction to Economics and Finance I
Introduciton to Financial Accounting I
Mercantile Law I

Semester Two
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

Semester Three
Financial Accounting I
Taxation I
Business Communication and Behavioral Studies II
Company Law I
Cost Accounting I
Auditing I

Semester Four
Company Law II
Financial Accounting II
Cost Accounting II
Auditing II
Information Technology II
Taxation II

Semester Five
Introduction to Business Finance
The Pakistan Economy
Models and Inferences OR
Financial Management
Islamic Studies
Intellectual Property, Patents, Copyrights
Principles of Management

Semester Six
Methods of Data Analysis OR
Human Resource Management
Principles of Marketing
Computer Applications II
Business Ethics
Internal Auditing & EDP Accounting
Advanced Financial Accounting

Semester Seven
Company Secretarial Practices
Project Management
Methods in Business Research
Advanced Managerial Accounting
Institutional Investments
Supply Chain Management

Semester Eight
Strategic Financial Management OR
Analysis of Financial Statements
Statutory Compliance OR
Business and Professional Speech
Environmental Studies OR
Arbitration
Business Process Re-engineering OR
Industrial Relations and Labour Laws
Investment Banking and Security Analysis OR
Entrepreneurship and Small Business Management
Foreign Language I OR
Corporate Governance

BS (Honors) Media Studies (Four-Year) Program

The BS (Honors) Media Studies program is designed to enable students to develop a sound and broad academic base for a professional career in the media, gain insight into how people perceive, interpret, use, and respond to the media-rich world by emphasizing on the way media create and change the social environments, prepare themselves for professional work in a variety of media related fields.

The program has been developed in collaboration with several media channels, including PEMRA (Pakistan Electronic Media Regulatory Authority), Samaa TV, Dawn News, CNBC Pakistan, Hum TV, Aag TV, ARY,GEO News & Entertainment, Awaz TV, Aaj News & Entertainment, Haq TV, Herald News & Entertainment, Play TV, Express News & Entertainment, Sun Biz, Apna Channel, KTN, Sindh TV, Indus Vision & Music, etc.

The four-years program requires completion of 144 credit hours of course work, including 48 courses and continuous interaction with media agencies through-out the program.

Required Courses

Communication
COM103 Functional English I
COM209 Communication Skills
COM203 Methods in Business Writing

Economics
ECO106   Basic Economics

Islamic Studies
REL101   Islamic Studies

Language
LAN401   Functional Urdu

Law
LAW405   Media Law and Business Ethics

Management
MAN305 International Relations

Management Information System
MIS402   Computer Concepts and Applications
MIS411   Graphics and Animation

Marketing
MKT404   Methods in Business Research

Media Psychology
MPY301   Introduction to Mass Communication
MPY302   Media and Society

Media Studies
MMM301 Photo Journalism
MMM302 Logic and Critical Thinking
MMM303 Outline of Political Science
MMM304 Media Literacy
MMM305 Videography
MMM306 Mass Media in Pakistan
MMM307 World Civilization and Culture
MMM308 Contemporary World Media
MMM309 Creative Writing
MMM310 News Writing and Reporting
MMM311 Introduction to Broadcast Media
MMM312 Introduction to Advertising and Public Relations
MMM313 Theater Studies
MMM314 Online Journalism
MMM315 Feature, Article and Column Writing
MMM316 Sub Editing and Page Design
MMM317 Theories of Communication
MMM318 Economic Journalism
MMM319 Film Studies
MMM320 Post Production and Editing
MMM321 Development Communication
MMM322 Current Affairs
MMM323 International Communication
MMM324 Media Management and Marketing
MMM325 Research Report

Pakistan Studies
PSC301   Pakistan Studies

Social Sciences

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

Statistics

STA201   Quantitative Business Analysis

Elective Courses

Electronic Media

MMM501 Radio News Writing and Production
MMM502 Radio Program Production
MMM503 TV News Writing and Production
MMM504 TV Program Production

Print Media

MMM505 Specialized Journalism
MMM506 Newspaper Production
MMM507 Magazine Journalism
MMM508 Book Production

Advertising and Public Relations

ADV504   Advertising Management and Strategy
MMM509 Creative Concepts in Advertising
MMM510 Media Planning and Marketing

Marketing

MKT526   Public Relations and Event Management

Course Structure

Semester One

Functional English I
Computer Concepts and Applications
Introduction to Mass Communication
Photo Journalism
Introduction to Psychology
Principles of Sociology

Semester Two

Communication Skills
Islamic Studies
Logic and Critical Thinking
Outline of Political Science
Media Literacy
Videography

Semester Three

Methods in Business Writing
Basic Economics
International Relations
Graphics and Animation
Mass Media in Pakistan
Pakistan Studies

Semester Four

Functional Urdu
World Civilization and Culture
Contemporary World Media
Creating Writing
Important Concepts in Philosophy
Quantitative Business Analysis

Semester Five

Media and Society
News Writing and Reporting
Introduction to Broadcast Media
Introduction to Advertising and Public Relations
Theater Studies
Online Journalism

Semester Six

Feature, Article and Column Writing
Sub Editing and Page Design
Theories of Communication
Economic Journalism
Film Studies
Post Production and Editing

Semester Seven

Media Law and Business Ethics
Methods in Business Research
Development Communication
Current Affairs
Elective I
Elective II

Semester Eight

International Communication
Media Management and Marketing
Research Report
Elective III
Elective IV
Elective V
Internship (2 credit hours)

MBA Educational Management (Two-Year) Program

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 the HEC requirements. The course is particularly designed for schools and school system manager, 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
EDM416 Comparative Education Systems
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)
EDM431 Writing and Presenting Educational Research
EDM432 Literature Review
EDM433 Data Collection
EDM434 Thesis Writing

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 & School Systems
EDM508 Knowledge Management
EDM511 Lifelong Learning in Changing Contexts
EDM512 Career Planning and HRM in Education
EDM513 Strategic Management Issues in Education

Course Structure

Semester One
Managing Teaching and Learning
Academic Writing and Seminar Skills
Principles of Management
Psychology and Learning

Semester Two
Teacher Education
Curriculum Management and Planned Change
Organizational Behavior
Introduction to Financial Accounting

Semester Three
Developing Leadership and Management Skills
Research Methods in Education I (Qualitative)
Human Resource Management
Principles of Marketing

Semester Four
Comparative Education Systems
Education Policy and Planning
Research Methods in Education II (Quantitative)
Financial Management

Semester Five
Marketing Education Services
Elective I
Elective II
Elective III

Semester Six
Writing and Presenting Educational Research
Literature Review
Data Collection
Theses Writing

My four years at IoBM were an overall transformative journey- from a quiet, shy girl to a self-assured and confident business professional crafted to face all the hardships of practical life. IoBM provided me good opportunities to organize and participate in social events, workshops and several competitions that not only added to my profile but also groomed me personally and professionally. With a CGPA of 3.71 and as the head of Media and Publications of IoBM Club-IT, I take pride and interest in every achievement and challenge the society offers. I have made genuine friends here, whose friendship I'll cherish forever. All in all, it has been an astounding experience being part of such a great hub of knowledge and a true learning experience. Thanks IoBM!!

Syeda Humaira Akhtar
BBA (Honors)

MBA Educational Management (Three-Year) Program

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 the HEC requirements. The program is designed for students who have passed 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
EDM415 Educational Philosophy and Ethics
EDM416 Comparative Education Systems
EDM417 Educational Counseling
EDM418 Testing in Education
EDM419 Managing Teaching and Learning
EDM420 Academic Writing and Seminar Skills
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)
EDM431 Writing and Presenting Educational Research
EDM432 Literature Review
EDM433 Data Collection
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
SSC403 Social 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
EDM512 Career Planning and HRM in Education
EDM513 Strategic Management Issues in Education

Course Structure

Semester One
Introduction to Psychology
Educational Philosophy and Ethics
Applied Linguistics
English Language Development

Semester Two
Critical Thinking and Reading
Reflective Inquiry in Education
Statistics and Mathematics
Interpersonal Communication Skills

Semester Three
Educational Counseling
Testing in Education
Computer Applications and Systems
Social Psychology

Semester Four
Managing Teaching and Learning
Academic Writing and Seminar Skills
Principles of Management
Psychology and Learning

Semester Five
Teacher Education
Curriculum Management and Planned Change
Organizational Behavior
Introduction to Financial Accounting

Semester Six
Developing Leadership and Management Skills
Research Methods in Education I (Qualitative)
Human Resource Management
Principles of Marketing

Semester Seven
Comparative Education Systems
Education Policy and Planning
Research Methods in Education II (Quantitative)
Financial Management

Semester Eight
Marketing Education Services
Elective I
Elective II
Elective III

Semester Nine
Writing and Presenting Educational Research
Literature Review
Data Collection
Thesis Writing

MSc Organizational Psychology and Human Resource Management (Two-Year) Program

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   Introductions to Organizational Psychology

Management
MAN401 Principles of Management

HRM
HRM401 Human Resource Management

Statistics
STA404   Statistical Inference

Communication
COM402 Business Communication
COM405 Organizational Consulting Skills

Core Courses

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

Human Resource Management
HRM408 Human Resource Issues in Pakistan
HRM501 Recruitment & Selection
HRM502 Industrial Relation & Labor Law
HRM503 Employee Training & Development
HRM504 Negotiation Skills & Collective Bargaining
HRM530 Research Project / Practicum (3 credit hours)

Elective Courses Courses

Psychology
PSY501   Work Motivation Attitude
PSY504   Quality of Work Life
PSY515   Projective Methods

Human Resource Management
HRM531 Pay for Performance & Reward
HRM532 Performance Management
HRM509 Leadership Studies

Course Structure (Career Option I Majors Psychology)

Semester One
Principles of Management
Human Resource Management
Introductions to Organizational Psychology
Statistical Inference

Semester Two
Group Dynamics
Organizational Consulting Skills
Psychological Testing-I
Human Resource Issues in Pakistan

Semester Three
Research Methods
Consumer Behavior
Recruitment & Selection
Industrial Relation & Labor Law

Semester Four
Counseling Psychology
Personnel Psychology
Employee Training & Development
Negotiation Skills & Collective Bargaining

Semester Five
Psychological Testing-II
Behavior Modification in Industry
Leadership & Strategic Change
Research Project / Practicum *(3 credit hours)*

Semester Six
Elective I
Elective II
Elective III

Semester Four
Counseling Psychology
Personnel Psychology
Employee Training & Development
Negotiation Skills & Collective Bargaining

Semester Five
Psychological Testing-II
Behavior Modification in Industry
Leadership & Strategic Change
Research Project / Practicum *(3 credit hours)*

Semester Six
Elective I
Elective II
Elective III

Course Structure (Career Option II Majors HRM)

Semester One
Principles of Management
Human Resource Management
Introductions to Organizational Psychology
Statistical Inference

Semester Two
Group Dynamics
Organizational Consulting Skills
Psychological Testing-I
Human Resource Issues in Pakistan

Semester Three
Research Methods
Consumer Behavior
Recruitment & Selection
Industrial Relation & Labor Law

MSc Organizational Psychology and Human Resource Management (Three-Year) Program

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
MAN201 Personal Management
MAN401 Principles of Management
MAN402 Organizational Behavior
MAN413 Corporate Social Responsibility

HRM
HRM401   Human Resource Management

Marketing
MKT401   Principles of Marketing

Statistics
STA404   Statistical Inference

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

Core Courses

Psychology
PSY402   Counseling Psychology
PSY405   Group Dynamics
PSY406   Research Methods
PSY407   Personnel Psychology
PSY408   Consumer Behavior
PSY430   Psychological Testing-I
PSY431   Psychological Testing-II
PSY432   Behavior Modification in Industry
PSY433   Leadership & Strategic Change
PSY434   Personality Theories
PSY435   Research Project/Practicum
PSY436   Seminars in Organizational Psychology

Human Resource Management
HRM408 Human Resource Issues in Pakistan
HRM501 Recruitment & Selection
HRM502 Industrial Relation & Labor Law
HRM503 Employee Training & Development
HRM504 Negotiation Skills & Collective Bargaining
HRM530 Research Project / Practicum (3 credit hours)

Elective Courses Courses

Psychology
PSY501   Work Motivation Attitude
PSY504   Quality of Work Life
PSY515   Projective Methods

Human Resource Management
HRM509 Leadership Studies
HRM531 Pay for Performance & Reward
HRM532 Performance Management

Course Structure

Semester One
Introduction to Organizational Psychology
Statistical Inference
Principles of Sociology
Computer Applications

Semester Two
Personality Theories
Principles of Management
Principles of Marketing
Business Ethics

Semester Three
Human Resource Management
Organizational Behavior
Personal Management
Business Communication

Semester Four
Corporate Social Responsibility
Group Dynamics
Industrial Relation & Labor Law
Organizational Consulting Skills

Semester Five
Human Resource Issues in Pakistan
Psychological Testing-I
Seminar in Organizational Psychology
Interpersonal Communication Skills

Semester Six
Research Methods
Consumer Behavior
Recruitment & Selection
Research Project/Practicum

Semester Seven
Counseling Psychology
Personnel Psychology
Employee Training & Development
Negotiation Skills & Collective Bargaining

Semester Eight
Psychological Testing II
Behavior Modification in Industry
Leadership & Strategic Change
Research Project/ Practicum

Semester Nine
Work Motivation & Attitude (Elective)
Quality of Working Life (Elective)
Pay for Performance & Reward (Elective)
Leadership Studies (Elective)

MPhil Leading to PhD in Organizational Psychology (Two-Year) Program

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 Masters 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 a 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, the 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 with thesis defense 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 & Measurement

Semester Two
MPP607 Training & Development
MPP609 Personnel Psychology in the Work Place
MPP611 Human Factors in Work Environment

Semester Three
MPP613 Organizational Conflict & Management
MPP615 Organizational Change Management

Semester Four
MPP620 MPhil Thesis (6 credit hours)

MS Economics
(One-Year) Program

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 24 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
ECO508 Development Economics
ECO509 Mathematical Economics

Elective Courses

Economics
ECO507 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 Leading to PhD

MS/MPhil leading to PhD in Education is specially geared for teachers who are teaching at all levels in private and public sector institutions as well as administrators who have an interest in research and would like to pursue their educational career. 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 2000-3000 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 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
MPE601   Advanced Qualitative Research Methodology
MPE602   Advanced Quantitative Research Methodology
MPE603   Research Literature Analysis

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

Semester Three
MPE607 Inclusive Education
MPE608 Readings in Education/Book Review

Semester Four - Six
MPE609   Research Thesis

PhD in Social Sciences
Specializing in Education/Psychology

PhD in Social Sciences 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. The program will address research competencies with its three core and four specialized courses in the two specialization areas of:

1. Education
2. Psychology

Eligibility

- MS/M.Phil in the relevant field of study with 3 CGPA or B-Grade

- Candidates must clear NTS (Subject specific)

- In disciplines where this test is not available, the test will be developed by the University

Program Details

- Duration: 3 to 5 years
- Number of Courses: 6 + Thesis
- Course: 18 credit hours
- Thesis: 6 credit hours
- CGPA required for the award of Degree: Minimum 3.0

Course Structure

Semester One
PSS701   Methods and Issues in Advanced Qualitative Research
PSS703   Methods and Issues in Advanced Quantitative Research

Semester Two
PSS705   Seminar in Interdisciplinary Studies (Education and Psychology)
PSS706   Independent Study

Semester Three
Elective course for Education
PSS707   Education in Social, Political, and Cultural Context
PSS708   Teacher and Teacher Development

Elective course for Psychology
PSS709   Measurement & Assessment
PSS710   Psychology of Personality

Semester Four - Nine
Research Thesis
The successful completion of 18 credit hours will advance the candidate to the dissertation phase of the program. The doctoral dissertation will demonstrate the scholarship and research capabilities of the candidate, specifically, their ability to comprehend, interpret, analyze and synthesize information. The candidate must also show a general understanding and grasp of the domain in which he/she is working and should be well informed about the literature relating to the field. The candidate's ability to apply research techniques to collect data, analyze the information and discuss and generalize results will be examined and evaluated.

Internship and Placement Programs

Internship Program

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

	Minimum CGPA	Semesters of Study Completed at IoBM
MBA	2.8	Two
BBA / BS (Honors)	2.4	Six

> 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 has to suggest 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:

A - Grade	=	3.89 points
B - Grade	=	3.33 points

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 Interned

360 Training
3M Pakistan Pvt. Limited
AA Packaging Industries
AAG TV
Abbot Laboratories Pakistan Limited
ACCA Pakistan
Adamjee Insurance
Adcom Pvt. Ltd.
Adys Sourcing
AEG Travel Services
Afroze Textiles
AIESEC
AKD Investments
AKD Securities
AKD Trade
Al Karam Textiles Limited
Algorithm
Ali Gohar Pharmaceuticals
ALICO
Allied Bank of Pakistan Limited
Alfa Engineering
Alpen Solutions
Al-zeb Industries
Anjum Asim Shahid Associates Ltd.
Apna TV
Arif Habib Investments Limited
Arif Habib Securities Limited
Aroha Labs
ARY Digital Network
Asia Petroleum
Asiatic Public Relations Network
Askari Commercial Bank Limited
Atlas Group of Companies
Atlas Honda Limited
Atlas Lease Limited
Aurora
Automobile Corporation of Pakistan
Avanza Solutions Pvt. Limited
Aventis Pharma Pvt. Limited
Aziz Products
Bank Alfalah Limited
Bank AL Habib
Bank Islami Limited
Bank of Punjab
Barclays Bank Limited
BASF Pakistan Pvt. Limited

Bayer Pakistan Pvt. Limited
BBCL Pvt. Ltd
Berger Paints Pakistan Limited
Blitz Advertising Pvt. Limited
BMA Capital Pvt. Limited
BOC Pakistan Limited
BP Pakistan Exploration & Production
BR&W Pvt. Limited
Brands Image
Brookes Pharmaceutical Laboratories
Burj Bank
Burque Corporation Pvt. Ltd
Byco Petroleum Pakistan Ltd.
Candyland
Cargo Care
Casual Mode Pvt. Ltd.
Cordoba Corporation
Chevron (Formerly Caltex)
CIM Shipping
Circuit Advertising
Citibank N.A.
Citi FM 89
Clariant Pakistan Limited
Commercial Union Assurance PLC.
Concern for Children Trust
Continental Biscuits Limited
Cox & Kings (Agents) Limited
Creative Chaos Pvt. Ltd.
Credit & Commerce Consultants
Crescent Bank Limited
Cres-Soft Pvt. Limited
Cummins Sales & Service
Cupola Pakistan Limited
Cybernet
Cynamid Pakistan Limited
Dalda Foods Pvt. Limited
Dawlance Pvt. Limited
Dawn Group of Newspapers
Deflog
Delta shipping
Deutsche Bank A.G.
Dewan Mushtaq Group
Diamond Impex Corporation
DHL Pakistan Limited
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
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 Foods
Engro Powergen
Engro Vopak Terminal Ltd.
ENI Pakistan Limited
Express News
Fauji Fertilizer
Faysal Asset Management
Faysal Bank Limited
Ferguson's Associates
Fecto Cement Ltd.
First Women Bank
Five by Five Communications
Float Securities Pvt. Ltd.
FM 107 Pvt. Limited
Fontanalia
Genesis Direct
Geo TV
Gerry's Information Technology
Gestetner Pvt. Limited
Ghandhara Nissan Diesel Ltd.
Gillette Pakistan Limited
Glaxo SmithKline Pakistan Ltd.
GM Fashion
Godil Cold Chain Pvt. Ltd.
Gravity Communications
Gulf Commercial Bank Ltd.
H&s Pvt. Ltd.
Habib Bank AG Zurich
Habib Bank Limited
Habib Metropolitan Bank Limited
Harvest Topworth International
Hawk Advertising
Helium Pvt. Ltd.
Higher Education Commission Pakistan
Hilton Pharmaceutical Pvt. Ltd.
Hinopak Motors Limited
Hoechst Marion Roussel Pakistan
Home Express

HSBC Bank Middle East Ltd.
Hum TV
Hyeworth Renault Petersen Pak Pvt. Ltd.
I.Q. Knitwear
IAL Saatchi & Saatchi
IBM – Pakistan
ICI Pakistan Limited
Intel Pakistan Corporation
Interflow Communications Pvt. Ltd.
InterGraphics C&A Pvt. Ltd.
International Advertising Pvt. Limited
International Asset Mgmt. Co. Ltd.
International Brands Limited
Invest & Finance Securities Limited
Invest Capital Pvt. Ltd.
Ismail Industries Limited
ISMAR
ITOCHU Corporation
Jang Group
Javed Engineering Enterprise
J & P Coats Pakistan Pvt. Ltd.
J. Walter Thompson Asiatic Pvt. Ltd.
Jaffer Brothers Limited
Jaffer Business Systems (Pvt.) Ltd.
Jahangir Siddiqui & Co. Ltd.
JCR-VIS Credit Rating Company
Jofa International
Johnson & Johnson Pakistan
JS Bank Limited
JS Global
JS Investments Limited
Kalsoft Pvt. Limited
Karachi International Container Terminal Ltd.
Karachi Stock Exchange Limited
KARSAZ Pvt. Ltd.
KASB Bank Limited
KASB Securities Limited
Khadim Ali Shah Bukhari & Co.
Knoll Pharmaceuticals Limited
Lakson Group of Companies
Lakson Business Solutions Ltd.
Liberty Books
Li Fung (Singapore) Pte. Limited
Lisco Pakistan
Lowe & Rauf Pvt. Limited
Lucky Cement
Macter
Maersk Pakistan Pvt. Ltd.
Maison Cosulting And Solutions
Mamora International

Marina Industries
Martin Dow Pharmaceuticals (Pak) Ltd.
Meezan Bank Ltd.
Merit Packaging Ltd.
Mindshare
MM Group of Companies
MPS Securities
Multinet
Mustaqim Dyeing & Printing Industries
Manhattan Leo Burnett
Marksman Advertising
Marriott Hotel
MCB Bank Limited
MCR Pvt. Limited – Pizza Hut
Mediacom
Meher Associates Pvt. Limited
Merck Sharp & Dohme of Pakistan Limited
Millennium Software Pvt. Ltd.
Mindshare Pakistan Pvt. Ltd.
Mobil Askari Lubricants
Mobilink
Muller & Phipps Pakistan Ltd.
Nabi Qasim Industries
Nafa
Narejo Human Resources
National Bank of Pakistan
National Foods Limited
National Industrial Parks Ltd.
National Marketing Services
National Refinery Ltd.
Naveena Exports Pvt. Ltd.
Nestle' Milkpak Limited
NIB Bank Limited
NIFT
Nippon Paint
Novartis Pharma Pakistan Ltd.
Novo Norsik Pharma
Ocean Express Agencies
Ogilvy & Mather
Opal Laboratories Pvt. Ltd
OTSUKA
Oman International Bank
Orient Communications
Orient Energy Systems
Orix Investment Bank
Orix Leasing Pakistan Limited
Oxygen TV
P&O Nedlloyd
Pak Brunei Investment Company
Pak Gulf Leasing Company Ltd.

Pak Mediacom Pvt. Limited
Pak Oman International Bank
Pak Suzuki
Pakistan Beverage Ltd.
Pakistan Credit Rating Agency
Pakistan Currency Exchange
Pakistan International Airlines
Pakistan International Container Terminal
Pakistan Petroleum Limited
Pakistan Refinery Limited
Pakistan State Oil Co. Limited
Pakistan Tobacco Company Limited
Pak-Kuwait Investment Co.
PARCO
Parke Davis & Co. Limited
PEL
Pepsi Cola International Limited
Pfizer Laboratories Limited
Pharmatec
Philips Electrical Industries Limited
Philip Morris International
PICIC Commercial Bank
PICIC Insurance
pkstudent.com
Popular Fabrics
Prestige Communications Pvt. Ltd.
Procter & Gamble Pakistan Limited
Qasim International. Container Terminal Ltd.
Qatar Airways
Qubee
Reckitt Benckiser Pakistan Limited
Red Cut
Regent Plaza Hotel
Relacom Pakistan
Reuters Limited
Rhone Poulenc Rorer Pakistan
Roche Pakistan Limited
Royal Bank of Scotland
Sanofi-Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
Saudi Pak Commercial Bank Limited
Schneider Electric
Shadman Cotton Mills Limited
Shamrock Communications
Sharp-Filter Pvt. Ltd.
Shell Pakistan Limited
SHELL Tameer
Sheraton Hotel
Shield Pakistan
Sidat Hyder

Siemens Pakistan Limited
Silchem
Skyline
Soneri Bank Ltd.
Spectrum Communications
Standard Chartered Bank Limited
State Bank of Pakistan
Sui Southern Gas Company
Summit Bank Ltd.
Symmetry
Synergy Advertising Pvt. Limited
Tapal Tea Pvt. Limited
Target Resourcing
Tariq Abdul Ghani & Co.
Taurus Securities Limited
TDAP
Telenor Pakistan Pvt. Limited
Tetrapak
Texpo Pakistan
Tharparker Sugar Mills
The Aga Khan University & Hospital
The Citizens Foundation
The Financial Daily
The First Micro Finance Bank Ltd.

THK Associates Pvt. Ltd.
Topline Securities
Total
Ufone
Unicon International
Unilever Pakistan Limited
Union Bank Limited
Union Leasing Limited
Unisys Pakistan Pvt. Limited
United Bank Limited
United Electrical Engineers Pvt. Ltd.
Universal Express
Warid Telcom Pvt. Limited
Westminster & Eastern Financial. Services
W Woodwards Pakistan Ltd.
World Call
World Wide Cargo Service
Wyeth Pakistan Limited
Xenith Public Relations (Pvt.) Limited
Xcess Logistics
Zeppelin Communications
Zong
Zulfiqar Industries

Placement Program

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. In the past we have assisted our graduates in finding careers for our alumni as well. 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 Bi-Annual Graduate Directory

MBA graduates are invited to showcase their resumes in IoBM's bi-annual Graduate Directory. This publication is circulated to about 150 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 for only 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.

Firms Employing IoBM Graduates

A C Nielsen	AKD Securities
Aba Ali Habib Securities	Alfalah Securities
Abacus-Global	Ali Asghar Textile Mills Ltd.
ABAMCO Limited	Ali Gohar & Co. Limited
ABN Amro Bank N.V	Al-Meezan Bank Limited
Abu Dawood Trading Company	Al-Mughal Trading Corporation
ACCA	Alstom Pakistan (Pvt.) Limited
Ace Insurance Limited	American Pacific Enterprises LLC
Adam Motor Co., Limited	Anjum Asim Shahid Associates Limited
Adcom Pvt. Limited	APTECH Computers Education
ADM Denim	Arif Habib Bank Limited
Aftab Associates	Arpatech Pvt. Ltd.
Aga Khan Education Services	Artal Group of Companies
Agfa Gaveart Pakistan	ARY Communications
AIG Pakistan	ARY Digital Television Network

Firms Employing IoBM Graduates

ARY Shopping Channel
Asiatic Public Relations Network Ltd.
Askari Bank Limited
Attock Cement Pvt. Limited
Australian Education Commission
Aventis Pharma Pakistan Limited
Axact Cyber Solutions
Axis Communications
Bank Alfalah Limited
Bank Al-Habib Limited
Bank Islami Limited
Barclays Bank Limited
BASF
Bayer Pakistan
BDO Ebrahim & Co. Chartered Acc.
BenchMatrix
Berger Paints Pakistan Limited
Bhoja Air (Pvt.) Limited
Blitz Advertising (Pvt.) Limited
Blue Communications
BMA Capital Management Limited
Bosch Pharmaceuticals
BP Pakistan Exploration & Production
Breezecom Pvt. Ltd
Bridgestone Tires Pakistan Limited
British Oxygen
Burj Bank Ltd.
Business Plus
Cadbury Pakistan Ltd.
Candyland Industries Limited
Capital Management (Pvt.) Limited
Caresse Cosmetics, Santcos Limited
Citi Security
Citibank N.A.
Clariant Pakistan Limited
Clicktrade
Coca Cola
Colgate Palmolive Pakistan Ltd.
Contact Plus
Continental Biscuits Pvt. Limited
Contract Advertising
Converge Technologies Pvt . Ltd.
Creative Chaos Pvt. Ltd.
Creative Factor
Crescent Commercial Bank Limited
Crescent Insurance

Cupola Pakistan Limited
Dadabhoy Investments Pvt. Ltd.
Dadex
DAMCO
Dawlance (Pvt.) Limited
DAWN Group of Newspapers
Descon Engineering
Deutsche Bank
Dewan Group
DHL Pakistan Limited
DMK Consultancy
Dubai Islamic Bank
Dupont Pakistan
EDGE Financials
EFU General Insurance Limited
EFU Life
Eli Lilly Pakistan Pvt. Limited
Emirates Bank Ltd.
Emirates Global Islamic Bank Limited
Engage Consulting
English Biscuits Manufacturers Ltd.
Engro Foods Ltd.
Engro Pak Tank Terminals Limited
ENI Pakistan Limited
EPFirms
Epony Industries (Pvt.) Limited
Etilize Pvt. Ltd.
Evernew Entertainment
Faysal Asset Management Ltd.
Faysal Bank Limited
Ferguson Associates
First Capital Equities Pvt. Limited
Forex Financial Products
Forte Pakistan Pvt. Ltd.
Freight Systems Co. Ltd.
Friends of Literacy & Mass Education
Gatron Industries Ltd. / Novatex Ltd.
GEMCO Pakistan Ltd.
Giga Group of Companies
GlaxoSmithKline Pakistan Limited
Global Seafood Marketing
Global Securities Pvt. Ltd.
Green Star Social Mkt. Pvt. Ltd.
Gul-Ahmed Textile Mills Pvt. Ltd.
Habib Bank AG Zurich
Habib Bank Limited

Habib Metropolitan Bank Ltd.
Habib Oil Mills Limited
Haleeb Foods, Lahore
Hinopak Motors Limited
Hirelabs
Home Express
HRS Global
HRS International
HSBC Bank Middle East Ltd.
Hum TV
I. T. Link Online
IAL Satchi & Satchi
IBL Group
IBM Pakistan
ICI Pakistan Limited
IGI Financial Services
Indus Bank Limited
Indus Motors Company
Industrial Development Bank of Pakistan
Infoline / Dow Jones
Intel Pakistan
Interflow Communications Pvt. Ltd.
International Advertising Pvt. Ltd.
International Asset Management Company
INVATERRA
Invest & Finance Securities Limited
Islamic Investment Bank
J. Walter Thompson Asiatic (Pvt.) Ltd.
Jaffer Brothers Limited
Jahangir Siddiqui & Co. Limited
Jason Group of Companies
Johnson & Johnson Pakistan Ltd.
JS Bank Limited
JS Investment
Junctionz
KalSoft (Pvt.) Limited
Karachi Electric Supply Company
Karachi International Container Terminal Ltd.
Karachi Stock Exchange Limited
KASB Bank Limited
KASB Capital
KASB Funds Limited
KASB Securities
Khadim Ali Shah Bukhari & Co. Ltd.
KPMG Taseer Hadi & Co.
KZR Associates
Lakson Group of Companies
Land O'Lakes, Inc.
Lane 12
Lasmo Oil Pakistan Limited

Live Securities Pvt. Ltd.
Maersk Sealand
Magnus Investment Advisors Ltd.
Majsons Corporation
Manhattan Leo Burnet
Maple Pharmaceuticals Pvt. ltd.
Markematics Pvt. Ltd.
Mass Advertising Pvt. Ltd.
MCB Bank Limited
Meat One
Media Max Pvt. Limited
Mehran Enterprises
Merck Marker Pvt. Ltd.
Metropolitan Bank Limited
MGH Group
Mind-Share Pakistan Pvt. Limited
Mobil Askari Lubricants
Mobilink
Mobitel, KSA
Monsieur
MS Associates
Muller & Phipps Pakistan Pvt. Ltd.
Mustafa & Co. Pvt. Limited
Nabiqasim Industries
National Clearing Company of Pakistan Ltd.
National Commodity Exchange
National Foods Limited
National Fullerton Asset Management Ltd.
National Industrial Parks Ltd. (NIP)
National Insurance Company
National Investment Trust
Naveena Export Pvt. Limited
NDLC – IFIC Bank Limited (NIB)
Nestle' Milkpak Limited
Net Space Systems
New Era Industries
New Jubilee Insurance Co. Limited
Next Generation Innovations
Nike Pakistan Limited
Novartis Pharma Pakistan Limited
Oman National Electronics, Dubai
Oratech Systems Pvt. Limited
Orient Public Relations
Orix Investment Bank Pakistan Ltd.
Orix Leasing Pakistan Limited
Oxford University Press
P & O Nedlloyd
Packages Limited
Pak Mediacom Pvt. Limited
Pakistan Petroleum

Pakistan Services Limited
Pakistan State Oil Company Ltd.
Pakistan Telecommunication Co.
Pakistan Television Corporation
Pak-Kuwait Investment Co. Ltd.
Pak-Suzuki Motors Co. Limited
Paktel
Parke Davis & Co. Limited
Pastel Communications
Pegasus Consultancy (Pvt.) Ltd.
Pfizer Laboratories Limited
Philip Morris International
Philips Electrical Co. of Pakistan
Pizza Next - MFC Pvt. Ltd.
Plastech Products (Pvt.) Ltd.
Premier Systems Pvt. Ltd.
Prestige Communications Ltd.
Procter & Gamble
Qubee
Reckitt Benckiser Pakistan Ltd. Renayssance
Rhone Poulenc Rorer Pakistan Ltd.
Roche Pharmaceuticals Limited
Rohi International Pvt. Ltd.
Roshan Media
Royal Bank of Scotland
S13 - Systems Innovations Pvt. Ltd.
Salsoft Technologies Pvt. Ltd
Samba Bank
Sanofi-Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
Saudi Pak Commercial Bank Ltd.
Saudi Pak. Leasing Co. Limited
SBT Japan
Searle Pharmaceuticals
Shabbir Tiles
Shafi-Reso Chemicals
Shaheen Airlines
Shangrila Pvt. Ltd.
Shell Pakistan Limited
Sidat Hyder
Siemens Pakistan Limited
Sindh Education Foundation
Singer Pakistan Limited
So Safe Pakistan
Stancos Pvt. Limited
Standard Chartered Bank Limited
Starcom Pakistan
State Bank of Pakistan
STEP Consultants
Stitchers International

Streebo
Sun Consultants
Super Trading Inc.
Synapse Consulting
Sysnet Pakistan Pvt. ltd.
Target Resourcing
Taurus Securities Ltd.
TBH Employment and Consulting Services
TCS (Pvt.) Limited
Teach for Pakistan
Telenor Pakistan Limited
TenPearls
The Aga Khan University & Hospital
The Bank of Khyber
The First Micro Finance Bank
The Learning Organisation
Thinkline
Third Eye Managed Services
Time & Vision Advertising
TNI - Worldwide Partners Inc.
Total Lubricants
Travelport
Triple E Pvt. Limited
TV One - Airwaves Media Pvt. Ltd.
Uniferoz
Unilever Pakistan Limited
Union Bank Limited
Unisys Pakistan Pvt. Limited
United Assets Management Co.
United Bank Limited
United Consultants Pvt. Limited
United Marine Agencies
United Registrar of Systems Limited
United Sales Pvt. Limited
US Consulate, Karachi
Versa Canada Inc.
Visa International (Asia Pacific) Ltd.
Vision Express
Warid Telecommunication
Waterlink Group of Companies
Weekend World Marketing Limited
Westminster & Eastern Financial Services Ltd.
World Tel
World Wildlife Fund for Nature Pak
WorldCall Broadband Limited
Xenith Public Relations (Pvt.) Ltd.
ZAP Infotech Inc.
Zeppelin Communications
ZH Technologies Inc.
Zishan Engineers Pvt. Ltd
Zulfeqar Industries Limited

Management Excellence Center

Management Excellence Center

The Institute of Business Management (IoBM) proudly announces the launch of its Management Excellence Center (MEC) – a prized product of its successful evolution as a top-rated business and management school. Over the last fifteen years, IoBM has endeavored relentlessly to enhance its image and reputation, and made strategic diversifications and investments in disciplines that add value to its offerings. We enter our seventeenth year with the same sense of confidence and trust in ourselves. The MEC follows an immersive approach to service excellence, whether customized or generic, aimed at organizational change. It provides consultancy to organizations on the development and implementation of effective strategies. Its training programs are designed with excellence and rigor to make every organization's experience a valuable one.

Programs at MEC
Leadership Management Excellence Program (LME) offers Customized Training & Need Assesment Services

MEC's LME program intends to provide a better understanding of the actual and perceived training and support needs of the organization by employing a need assesment tool specifically designed for each client. The comprehensive and effective need analysis would translate the organizational goals into a reality, determine whether training is needed and, if needed, specify what that training should accomplish, and gather information about present practices and compare these practices to the desired way of doing business. This will help the MEC team to develop customised trainings for the concerned organization and its employees using the extensive resource pool available to MEC.

Management Excellence Training Program (MET)

Open Enrolment Training

Driven by the passion for enhancing professional capabilities and skills of the corporate sector in Pakistan, MEC offers an overarching range of training programs and interaction opportunities with the excellence and rigor that is designed to add substantive value to an organization.

Initiatives by MEC

- Seminars and Conferences
- Public & Private Partnerships
- Lectures by Foreign Experts on Specialized Topics
- Administration of Entrance Tests
- Collaboration with Relevant Organizations, Institutes and Associations
- Advisory/Consultancy Services
- Entrepreneur Skills Development

The Federation of Pakistan Chambers of Commerce and Industry (FPCCI) commissioned MEC to prepare a comprehensive review on the performance and prospects of the large scale manufacturing sector. The study was published by FPCCI in December,2010. Beside analysis of overall manufacturing sector performance, it reviewed progress during 2010 in the pharmaceutical, engineering, automobile, textile and wearing apparel sub-sectors on the basis of an econometric forecasting model. The study was appreciated in the national press and among policy making circles.

On behalf of the Planning and Development Department, Government of Sindh, MEC successfully conducted Third Party Validation Assessment on proposals submitted by NGOs / CSOs in the areas of health, water and sanitation, education, skills development, legal aid and multi sectorial projects in Sindh. Currently MEC is working on projects with Indus Motors and TDAP.

Activities at MEC

- Conference on Floods 2010, Causes, Impact, Relief and Rehabilitation - April, 2011
- Writing skills - April, 2011
- The Art of Win-Win Negotiations - April, 2011
- Credit Risk Management - April, 2011
- Creative Writing - May, 2011
- HR Diploma Module IV - May, 2011
- Training for P&D Department, Government of Balochistan - May, 2011
- How to avoid politics at workplace - May, 2011
- Finance for Non-Finance Executives - June, 2011
- English Language Proficiency - June, 2011
- HR Diploma - "Results Driven Performance Management" - June, 2011
- Gordon Simpson, SVP HR Asia Pacific - DHL - June, 2011
- Career Planning - June, 2011
- Merchandising Skills - July, 2011
- Training Session for CHS - July, 2011
- Credit Analysis & Risk Management - July, 2011
- Futures Trading on Pakistan Mercantile Exchange - July, 2011
- HR Diploma - Compensation & Benefits - September, 2011
- Finance for Non Finance Executives - September, 2011
- Laws of Branding - September, 2011
- Workshop on Teaching, Learning and Curriculum Development, by Prof. Dr. Phil. Friedrich Karl Rothe - October, 2011
- Adobe Illustrator and Photoshop - October, 2011
- HR Diploma - Talent Management & Employer Branding - October, 2011
- Launching Ceremony of ACCA preparatory courses - October, 2011
- From Teaching to Learning - November, 2011
- The Professional Manager - November, 2011
- HR Diploma - Learning Organizations - November, 2011
- Interactive Session with Ambassador of the Kingdom of the Netherlands - November, 2011
- Merchandising Skills- November, 2011
- HR Diploma - Leadership Development - December, 2011
- Management Convention - December 2011
- Certificate in English Language Proficiency - January-April, 2012
- HR Diploma - Aligning HR with Business Strategy - January, 2012
- Workshop on Rubrics - January, 2012
- CFA Institute Local Investment Research Challenge - February, 2011-2012
- Launching Ceremony of SINDH ECONOMIC SURVEY (2009 - 2011) - February, 2012
- Topsim General Management Game by Dr. Dietger Mainz - February, 2012
- Disaster Management and Emergency Preparedness - February, 2012
- Conference on Long Term Debt Financing: Issues and Challenges for Pakistan - March, 2012
- HR Diploma - HR during Change, Mergers and Acquisition - March, 2012
- Visit of Dr. Zsuzanna Fajcsak and Mr. Tony Lazaro from Australia - March, 2012
- Interactive talk - US speaker Mr. Aakif K. Ahmad - March, 2012
- Seminar on MARCON - March, 2012
- Uplifting Service by Ron Kaufman - Live & in Person - April 2012

Research at IoBM and MEC

- 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 CBM is research intensive and every optional course is designed to include a research component.

Pakistan Business Review

IoBM publishes Pakistan's first refereed academic business research quarterly. PBR is abstracted and indexed by the American Economic Association in the ECONLIT, the Journal of Economic Literature, USA and recognized by the Higher Education Commission (HEC). 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, Bochun University, Germany, the United Nations Industrial Development Organization, the International Association for Clean Technology, Austria, 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, Indiana University and The Aga Khan University, Karachi. All full time faculty members are on the editorial board and contribute research papers on a regular basis. Pakistan Business Review is in its twelfth year of continuous publication.

International Conferences

An international Conference, funded by the HEC is held on an annual basis. The Second Sindh International Conference was held in January 2010 to discuss the Sindh Economic Survey 1972-2008 prepared at IoBM. Two international conferences are planned for the current academic year 2011-2012, one on Management Capacities and the other on Labor Policies in Pakistan. These conferences will provide a platform for the presentation of research at IoBM.

Textbooks

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.   Money and Banking in Pakistan (now in its sixth edition)
2.   Financial Management in Pakistan
3.   Business Ethics in Pakistan

Another textbook on Financial Institutions in Pakistan is under preparation and will be published by the Oxford University Press in 2011.

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.

Quality Enhancement Cell (QEC)

QEC is a separate department headed by a Director, Deputy Director, Statistical Officer under the Rector. It regularly monitors quality of teaching. All courses are approved by departmental Board of Studies. Course outlines and teaching plans have to be approved by the departmental heads and the Dean at the beginning of each semester. Each course is audited at the end of the semester. A comprehensive curriculum review to align teaching with market needs and academic best practices is currently under process.

The Quality Enhancement Cell of IoBM, set up to enhance the quality of teaching and learning of various programs of the Institute, has been successfully functioning since 2008. Recently, IoBM has been rated by the Higher Education Commission as one of the top institutions (W-4 category-highest) and one of the best performers in terms of the performance of its QEC on the basis of Self-Assessment Report of programs. .The students learning outcomes, feedback from students, alumni, employers, faculty is regularly analyzed for continuous improvement. QEC is an Institutional member of Asia Pacific Quality Network.

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.

Administrative and Academic Requirements

Comprehensive Examination

After completion of their MBA program all students are required to pass a comprehensive examination conducted by the Institute. The comprehensive examination provides students an opportunity to integrate, synthesize and apply the various aspects of academic achievements and overall work done in their chosen majors and the core courses studied during 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.

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:

Grade	Marks	Grade Points
A+	96-100	4.00
A	91-95	3.89
A-	87-90	3.78
B+	84-86	3.67
B	79.83	3.33
B-	75-78	3.00
C+	69-74	2.67
C	64-68	2.5
D	60-63	1.5
F	<60	0.00

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 (Hons) 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.

Discipline

IoBM stands out among other universities for its special emphasis on maintaining good order and discipline among its students. It reserves the right to prescribe such regulations from time to time 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:

(a)   impose a fine of such amount as it thinks fit;

(b)   order the student to pay compensation to any person or body suffering injury, damage, or loss as a result of the student's conduct;

(c)   make an order banning the student from specified premises or facilities for a certain period or on such terms as it thinks fit;

(d)   rusticate the student for such period as it thinks fit;

(e)   expel the student;

(f)   award 'F' (fail) grade to a student cheating in an examination or a part of the examination concerned;

(g)   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.

Readmission Policy

- Students are allowed to take a semester break without any formal approval.

- Registration may be deferred for maximum of 2 semesters with justification and approval of the Executive Director Admissions, with a copy given to the student and one in student's file. Beyond this period another application is required to extend the leave period.

- A break of two – three semesters is allowed if a student is going on official work like on a project or training. Advance information and official letter from the employer is necessary.

- Maximum break allowed for rejoining the Institute is two years with justification and approval from the Executive Director Admissions. If they come back after more than 2 years, they are required to reapply and go through the admissions process.

- Students who complete their Bachelor's from IoBM can register for one year MBA without appearing for the Aptitude Test and Interview. However, if after Bachelor's they have withdrawn their Security Deposit, they have to reapply for admission to Master's program.

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.
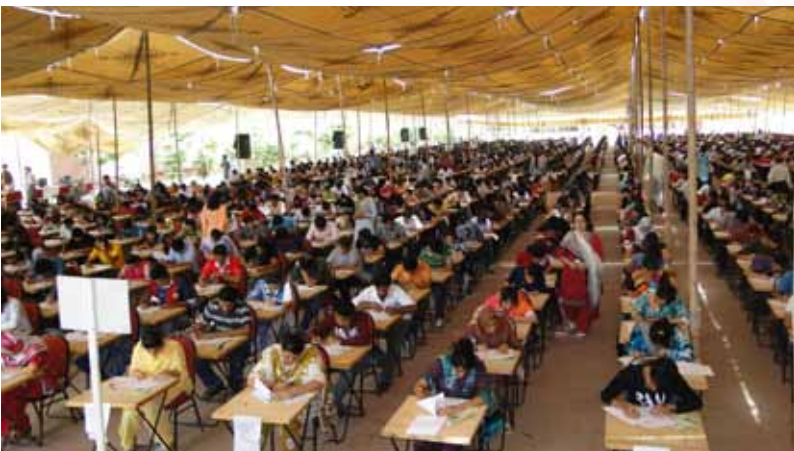
Examination Norms

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 tradionally 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 college policy all question papers are to be returned along with the answer scripts.
> Students are required to bring their own stationary & 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 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.

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.

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
- 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
- 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, ACA, 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 one-year post qualification work experience (only for MBA Executive)
- 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:

- Master's degree in relevant field with high second division or CGPA 3.0 on scale of 4 from HEC recognized Institutes/Universities in Pakistan OR from overseas.

In addition:
- Success in aptitude test and interview conducted by IoBM
- Minimum 50% cumulative Score in GAT General Test is required

Eligibility for entrance to PhD Program:
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.

- Success in aptitude test and interview conducted by IoBM.
- Minimum 60% cumulative Score in GAT/GRE-Subject Test is required

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.

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-cum-merit basis. Currently about 25% of the students are currently receiving some form of financial aid.

HEC - Japanese Need Based Merit Scholarships
The Government of Japan in collaboration with the Higher Education Commission (HEC) Pakistan is offering scholarships to Pakistani students. The objective is to provide opportunities to talented students who cannot afford higher education.

Sixteen (16) scholarships are being offered for a period of five (5) years to students who are currently enrolled or desire to get admission, both for under-graduate and 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.

Shell Need Based Merit Scholarships
Shell need based merit scholarships are awarded by Shell Pakistan Pvt. Ltd. for students enrolled in undergraduate and graduate programs based on both need and merit.

Bilkent University Scholarship
Bilkent University, Turkey, offers full scholarship to IoBM students to take courses at Bilkent Business School as visiting students for one academic year.

Janmohammad Trust and Tabba Foundation
Generous scholarships and financial assistance are available through Janmohammad Trust and Tabba Foundation. Many current students are availing assistance through these programs.

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

Fee Structure*

IoBM operates on a self-financing basis as a non-profit institution. All students are required to pay a one-time CAUTION MONEY of Rs. 15,000/- which is refundable only as per students refund policy. The fee structure for various degree programs, per semester, is as follows:

	Registration Fee	Tuition Fee* (Per Course)	Tuition Fee (Per Semester) Full Load**	Total Fee* (Per Semester)
All Bachelor's Programs (Four-Year)	10,000.00	10,500.00	63,000.00	73,000.00
All Master's (Regular) Programs (One, Two and Three-Year)	10,000.00	11,500.00	69,000.00	79,000.00
All Master's (Executive & Weekend) Programs (Two and Three-Year)	7,000.00	11,500.00	46,000.00	53,000.00

* *Subject to change*
** *Six courses for weekdays, four courses for weekend classes*

Summer session fee is charged on the basis of courses taken. Convocation fee of Rs. 10,000 is charged on completion of the degree program, inclusive of degree charges of Rs. 3,000. MBA executive 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.

Students 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 the first semester, they are not entitled to a refund of caution money.
- Students who have successfully completed their program can claim a refund within a 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

I. 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.
II. If a student drops a course/ courses or semester after the due date, full tuition fees will be charged.
III. 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.
IV. 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.
V. 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.
VI 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.

Fresh Entrants

- In case a candidate, after getting admission, decides to withdraw from the Institute/semester, he / she will not be entitled to claim tuition fees.
- 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 refund of tuition fees.

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:

I. 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.
II. If a student has deposited Registration fees but does not get registered, registration fees would be refundable/carried forward to the next semester.
III. 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.

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.

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
- Mr. Justice Zahid Hamid, Judge High Court of Sindh
- Chairman Higher Education Commission or his nominee
- Education Secretary, Government of Sindh, or his nominee not below the rank of an Additional Secretary
- Mr. Abdul Ghaffar Adamjee
- Professor Dr. Noshad Sheikh
- Mr. Salahuddin Qureshi
- Mr. Muhammad Ali Tabba
- Mr. Talib Syed Karim
- Deans of respective Colleges
- Mr. M.W. Jahangir, Secretary Executive Council

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
- Dr. Syed Irfan Hyder

Board of Studies

The following departments exist in the Institute:

College of Business Management (CBM)
Communication, Management, Marketing, Human Resource Management, Health & Hospital Management, Accounting and Finance, Environment & Energy Management, Risk Management, Industrial Management, Advertising & Media Management and MPhil Business Management.

College of Computer Science and Information Systems (CCSIS)
Mathematics and Statistics, Computer Science & MIS and Actuarial Science.

College of Economics and Social Development (CESD)
Economics, Commercial and Professional Studies, Media Studies, Education, Policy & Area Studies, Business Psychology, Social Sciences and Organizational Psychology.

College of Engineering and Sciences (CES)
Industrial Engineering, Electrical Engineering and Telecommunication Management.

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
- Mr. Z. A. Nizami
- 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. Shoaib Nabi Ahmed

Faculty

Rector & Executive Director, Corporate Affairs & MEC

Talib S. Karim, Rector & Executive Director Academics Corporate Affairs and 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.

Faculty of College of Business Management (CBM)

The Dean

Prof. Dr. Javed A. Ansari, has a Master's degree from the University of Karachi, an MSc from the London School of Economics and a PhD from the University of Sussex. His research interests include financial and industrial economics, modern capitalism and modernist and post modern political and moral philosophy. He has worked in British universities, UN agencies and financial institutions in Pakistan.

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, Associate Professor 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 15 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.

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 educationist 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.

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, 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.

Muhammad Rizwan Siddiqui, Lecturer in Accounting & Finance, is a qualified Chartered Accountant from the Institute of Chartered Accountants of Pakistan, Forensic Accountant from Forensic Global (USA) and Bachelor in Commerce from Karachi University. He has 7 years work experience working in different organizations, KPMG, Silk Bank and World Vest Base (Malaysia).

Sanam Taimoor, Instructor in Accounting & Finance is an MBA with majors in Finance from IBA and a certified ACCA Professional. She has nearly three years experience in teaching fundamental Finance and Accounting courses preceded by four years experience of handling managerial tasks at the family's manufacturing business. She is very passionate about teaching and loves nurturing and developing young minds and has been associated with IoBM for the last one and a half years.

Tasneem Zahir, Lecturer in Accounting and Finance, holds an MBA in Finance from IBA and has two years experience of teaching various Finance based courses before joining IoBM in 2011.Her research interests are in the areas of Banking and Accounting.

Communication

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.

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 5 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, 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 Masters 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 programmes 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.

Health, Hospital and Pharmaceutical Management

Dr. Asima Faisal, Head of the Department, MBA Health Management Program at IoBM holds an MBBS, in addition to MBA in Health and Hospital Management from IoBM. She has served Dow University of Health Sciences (DUHS) in different capacities, i.e., as Director Media & Marketing and later as Director Programs for the Institute of Health Management within the same University. She is also a Member of the subject Committee for pharmaceutical representative training and assessment from the National Testing Service. She has been a counselor for the British High Commission to universities in the United Kingdom for pursuing avenues of internationalization of Higher education. She has also been 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 activities and conducting TV shows on various medical and health management issues of the society. In South City Hospital Clifton, she served as Manager Administration for more than 5 years and at present, she is doing consultancies for health education in GlaxoSmithKline, for their Continuing Medical Education programs (CME) all over Pakistan. Having such a rich experience in multidisciplinary fields of Health Management and education, Dr. Asima is currently planning to pursue a PhD.

Dr. Humeira Jawed Abidi, Lecturer in Health and Hospital Management, holds an MBA (Health Management) from IoBM and MBBS from Sindh Medical College. 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 plans to enrich her academia by enrolling in a PhD program.

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 7 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 visitng faculty in leading business schools.

Fauzia Kanwar, Lecturer, Management, holds an MBA (Marketing) and BBA Honors from IBA. She has working experience of 4 years in which she has been associated with companies like Samsung Electronics, Sony Ericsson Mobile Communications International and Nokia Pakistan. She has been associated with IoBM since August 2010.

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.

Unzela Anjum Hasani, Lecturer, Human Resource Management has completed Master's in Public Administration (MPA), specializing in HRM. She has 9 years of corporate experience in the fields of Office Management, Recruitment & Training and Development in companies like Shell Oil, Microsoft Pakistan, IKEA, Astera Software (USA) and GemNet Pvt. Ltd. She has teaching experience of 1 year as a visiting faculty teaching HRM and Public Relations Courses to Master's and Undergraduate students at the University of Karachi. She was actively involved in Event Management and organizing Government Level conferences at Microsoft.

Deep Kiran, Instructor, Human Resource Management, holds an MBA degree in HR from Bahria University. She worked as Management Trainee officer in Ihsan Sons Textile (Pvt) Limited. She has undergone various training programs in the HR function. Her research interests are in the areas of Human Resource and Management.

Marketing

Javaid Ahmed, Senior Fellow and Department Head of Marketing. He is a Certified Board Director, a Member of the Chartered Institute of Marketing (UK), Fellow of the Chartered Institute of Management (UK), Member of Mensa and a UK Chartered Engineer. He has a MBA with Distinction from Lancaster (empirical research awarded 1st prize by the British Institute of Management) and BSc Engineering (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 is on the Jury of the EFP Prime Ministers' Corporate Award of Excellence and is a management research reviewer of the Academy of Management, USA. 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 thirteen selected professional presentations and workshops.

Samin Ahmad, Associate Professor, Marketing has an MBA in Marketing from IBA and has more than thirty years experience in the field of Marketing and Supply Chain Management with leading multinationals. His last assignment was with Unilever Pakistan as a Senior Manager.

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.

Ejaz Wasay, Senior Fellow, Marketing, holds an MBA (Marketing) from IBA and BSc in Chemistry, Zoology and Botany from Adamjee Science College. He has working experience of 34 years in which he has been associated with companies like UBL as Head of Marketing Services & Corporate Communication, SSGC as Head of Corporate Communication, Orient McCann-Erickson as Executive Director for 5 years, Gillette Pakistan, Gillette du Brasil& Gillette Middle-East in various capacities as Marketing Manager, Senior Brand Manager and as Marketing Director. He has teaching experience of 8 years in which he taught at IBA, HIMS and IoBM as visiting faculty for the last 6 years.
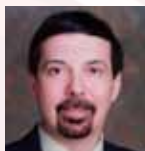
Riaz Khan, Senior Fellow, Marketing holds Bachelor degrees from Florida International University, Miami, Florida. USA in Industrial Engineering Technology and also in Electronics Engineering Technology and a Master's degree in International Marketing from the University of Houston, Houston, Texas. USA. He possesses over 32 years of professional experience at senior level, mainly as international marketer working for various multinational companies in Pakistan and around the world. He was Executive Director Marketing in Trade Development Authority of Pakistan (previously known as EPB) and has also worked for other leading organizations like Philips NV Holland, Pak Arab Refinery Limited, UNDP, Brookshire, etc. His research interests are in the area of international marketing and its environment. He has presented several research papers at various international conferences and seminars held in Mexico, New York, Bangkok, Brussels, Frankfurt and other venues. He has been a visiting Professor in MBA Programs at various universities in USA.

Saadiyeh Said, Assistant Professor in Marketing, holds an MBA from the Institute of Business Administration. She has 19 years of professional experience in the field of Marketing and Consumer Research.

Saamena M. Hassan, Senior Lecturer, Marketing, has done her MBA from IBA. Subsequently, she joined the Pakistani banking industry in the area of credit cards marketing. During her ten year association with the industry, she has been a part of the credit card launch for Bank Alfalah, ABN Amro (now Faysal Bank) and MCB Bank Ltd. Her last assignment was at MCB Bank Ltd, as Vice President, Credit Card Loyalty. Prior to joining IoBM, she was a visiting faculty in one of the local business Institutes.

Faisal Masood Kazi, Lecturer, Marketing, holds an MBA (Marketing) from IoBM& Bachelor's degree in Computer Science from FAST, Institute of Computer Science, University of Karachi. He also holds a certification in Java language (JCP) from Sun Microsystems, and has attended a number of Marketing & IT workshops /conferences & training sessions. He possesses 13 years of industry experience at management positions in Marketing with companies like Gul Ahmed textiles, Dewan Farooque Motors, and RIMMEL cosmetics, & in the IT industry in Software Development, Project Management & Customer Support departments. He holds 4 plus years of experience in teaching at graduate and undergraduate level, in various renowned universities of Pakistan. Currently he is pursuing his MPhil Degree in the area of Management Sciences.

Nida Shaukat, Instructor, Marketing, is an MBA (Gold Medalist 2008) from IoBM. She has worked in the marketing department of a leading English newspaper, multinational pharmaceutical, advertising agencies and KESC before joining IoBM as permanent faculty. Currently, she is enrolled with the University of London for her second Master's degree. Her areas of research interest include brand management and marketing communications.

Case Study Cell

Shahnaz Meghani, Associate Professor and Head of Case Study Cell, has a Master's in Business Administration from IBA. Her industry experience has been in FMCGs sector. She has worked for multinationals and has been associated with training for more than 18 years. She has published research papers on employee motivation, organizational culture, product failures and the influence of chemists on end users.

Faculty of College of Computer Science and Information Systems (CCSIS)

Computer Science and MIS

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.

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.

Dr. Sarwan Abbasi, Assistant Professor of Computer Science, holds a PhD and MS from Université de Paris SUD-XI and is a gold medalist in MS (IT) from Hamdard University Karachi. His interests include Usability, Cognitive Ergonomics, Human-centred design, and application of Human factors (HF) in technology and informatics. He joined the CCSIS department at IoBM in August 2011 and teaches computing and French courses. As of 2012, he has 6 years of (5 years pre-doctoral + 1 year post-doctoral) teaching and supervisory experience, as well as 2 years of professional industry experience.

Dr. Waseem Asghar Khan, Assistant Professor (HEC Approved Superviser)Department of Mathematics, earned his PhD degree from COMSATS, Institute of Information Technology, Islamabad (2012) in the field of Numerical Analysis and Optimization (Applied Mathematics), MPhil also from CIIT, Islamabad and Master's degree from Govt. College University Lahore in Mathematics. He has 3 years of teaching experience at both undergraduate and Post graduate levels. Before joining IoBM as permanent faculty member, Dr. Waseem served for 2 years in HITEC University Taxila Cantt as a Lecturer and has served for six months in CIIT, Islamabad as a Research Associate under the project scheme of Higher Education Commission. He has vast experience of international conferences in various countries including United States of America (USA), Greece and Malaysia. He has more than sixteen research papers accepted in well reputed journals. He is a reviewer of many international journals. He is also member of many societies (Chawalla Mathematics Society as President "GC University, Lahore, Pakistan and Member of Center of Research for Public Health (CRPH).

Dr. Syed Arshad Raza, Assistant Professor of Computer Science has done his PhD in Management Information Systems from the Edith Cowan University (ECU), Western Australia, and MSc in Information and Computer Science from King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia. He has published a number of research articles in international journals, book chapters and international conferences. He has 7 years of teaching experience at KFUPM and two years of teaching experience as a part-time staff in MIS related courses at ECU. His research interests include iterative heuristics, database systems and web applications development. He has also worked as an IT Consultant at CRMOnline Pty Ltd in Perth, Australia.

Saghir Muhammad, Senior Lecturer in Information Systems and Accounting, holds a Master's Degree in Business Administration with specialization in Management Information Systems. He possesses a diploma in Computer Science and a specialized diploma in DBMS. Moreover, he has completed management courses from NIPA and NILAT. His industry experience includes working with Pakistan Steel Mills and Orasoft. He has over ten years of teaching experience at various universities/institutes.

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's 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.

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.

Najmus Saher Shah, 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.

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.

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.

Muhammad Moin Uddin Ali Khan, Senior Fellow & Head of Quality Enhancement Industrial Engineering and 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.

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.

Zeeshan Ellahi Vohra, Lecturer Industrial Engineering, holds an MSc Degree from the University of Manchester. He has specialized in Manufacturing Management, Advanced Manufacturing Technologies, Consultancy Tools, CAD/CAM, Advanced Machining Technologies and E-Manufacturing. He also holds a BE Mechanical Engineering degree from NED University.

Hira Anwar, Lecturer in Industrial Engineering, holds M.Engg Degree (Industrial Management) from NEDUET and secured 1st position in the respective discipline. She has done B.E (Industrial & Manufacturing) from NEDUET. She also has 4 years of professional (Habib Group) & 4 years of teaching experience (NED & IoBM). She is a certified Six Sigma Green Belt holder.

Abdul Shakoor Memon, Adjunct Faculty, Industrial Engineering, is an MSc Engineering from UMIST, Manchester, UK and BE Mechanical from Sindh University. He has also served as an Associate Professor at Sindh University, Jamshoro. He has over 30 years work experience at Sui Southern Gas Co. holding different positions related to his field.

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 posseses 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.

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.

Adnan Rauf, Senior Lecturer in Mathematics, holds MSc in Industrial and Business Mathematics from the University of Karachi and MS in Industrial Mathematics with specialization in "Mathematical Modeling and Scientific Computing" from TU Kaiserslautern, Germany in 2004. He has taught at FAST and Hamdard University.

Hina Samreen, Instructor 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.

Mohammed Ather Akhlaq, Lecturer, Computer Science has done his M.Phil in Management Information Systems from IoBM. He has also received Master 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.

Actuarial Science and Risk Management

Fakhir Musharaf, Assistant Professor and Head of the Department, Actuarial Sciences and Risk Management, 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, Senior Lecturer in Actuarial Science and Risk Management, 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.

Telecommunication

Dr. Bilal Alvi, Professor and Head of the Department, holds a PhD in Optical Fiber Communication from University of Salford, UK in 1993. He completed MS in Optical Fiber Communication from University of Salford UK in 1989. He completed BS in Electronics Engineering, DCET from NED University in 1982. He has working experience of 29 years in the corporate sector in which he has been associated with Softweb Corporation USA as System Engineer, Tera Beam Kirkland, USA as Senior Optical Engineer, Network Development and Project, Saudi Telecom Company in Saudi Arabia as Fiber Optics Transmission System Expert, Pakistan Space and Upper Atmosphere Research Commission (SUPERACO) as Senior Engineer etc. He has full time teaching experience of 8 years in which he was working as Chairman, Department of Electronics and Telecommunication Engineering at Sir Syed University of Engineering & Technology. He has worked as an Associate Professor at Bahria and Hamdard University. He has altogether 13 publications and conference proceedings out which 12 have been published internationally i-e in Canada, India, Taiwan, UK etc. He can teach courses like Electronics, Telecommunication, Basic Electronics, Integrated Electronics, Mobile Communication, Optical Communication, etc.

Wamiqul Haq, Lecturer in Telecommunication, has completed two years Master's studies (MSc) in Electrical Engineering (Specialization in Embedded Systems), from Sweden Hogskolan i Jönköping, with an electronic and electrical background. He has an extensive knowledge within the field of electronics in automation and in wireless technology. His main area of interests are Wireless Sensor Networks and PLC-Automation.

Adnan Alam, Lecturer in Telecommunication, holds a Master's of Computer Science and Master's of Science in Telecommunication from Hamdard University. He is currently enrolled in PhD in telecommunication.

Mujtaba S. Memon, 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.

Osama Mahfooz, Assistant Lecturer, Electrical Engineering, holds a BE degree in Electronics from the PAF-Karachi Institute of Economics & Technology. He is currently enrolled in MBA Telecommunication Management program in IoBM. He has completed a CCNA Exploration certification from Aptech. He also has two research publications in journal of CCSIS, IoBM that is PJETS (Pakistan Journal of Engineering Technology & Science).

Faculty of College of Economics and Social Development (CESD)

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.

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, LL.B 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, Head of the Department, Economics, Director Research and Chief Editor, Pakistan Business Review (PBR), 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 PhD 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 of 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 and has taught at various business institutions before joining IoBM. He has actively been involved in teaching, research and administration. His primary research interests are in the areas of Monetary Economics, Econometrics and Macro Economics. He has published many research papers in reputed journals of Pakistan. He has read papers at national conferences. He has also worked as project economist and coordinator on different research projects funded by HEC and FPCCI.

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.

Syed Ghayyur Alam, Senior Lecturer in Economics, holds an MA in Economics from the University of Karachi as well as Master of Applied Sciences (MAS) in Economics from AERC, University of Karachi. His research interests include Macro Economics and International Trade.

Qazi Muhammad Adnan Hye, Research Fellow, Economics has an M. Phil (Economics) from the Applied Economics Research Centre (AERC), University of Karachi. He also has an MAS (Economics) from the AERC and Master's in Economics from Islamia University, Bahawalpur. He has 38 publications to his credit out which 15 are ISI indexed and 34 are in international journals, while four are local publications. He has published in The Journal of Risk Finance (UK), Chinese Management Studies (UK), China Agricultural Economic Review(UK), Middle Eastern Finance and Economics (USA), Banking and Finance Letters (Turkey), Romanian Journal of Fiscal Policy (Romania), Asia- Pacific Business Review (India), South East European Journal of Economics and Business (Sarajevo), World Applied Sciences Journal (Iran), African Journal of Business Management (Africa), African Journal of Agricultural Research (Africa). He has also read papers at various conferences.

Amnah Abbas, Lecturer in Economics, holds an MBA Banking and Finance degree and an MSc in Economics. She has more than five years teaching experience in subjects ranging from Economics, Statistics to Banking to her credit. She is currently involved in researches related to banking efficiency in Pakistan.

Bismah Malik, Lecturer in Economics, holds MAS from the Applied Economics Research Center and MA in Economics from the University of Karachi. She has working experience of three years and her last appointment was with BMA Capital as an Economist. She has also worked for the British Council as Education Promotion Officer and as an Assistant Information Officer.

Education

Prof. Dr. Nasreen Hussain, heads the Education Department and the PhD programme. She has a PhD in Education and brings to academia over 30 years of diverse teaching, administrative, research, and consultancy experience. She has edited two books as well as written articles and book chapters. Her two books were published by the Oxford University Press and the Cambridge Scholars Publishing, UK. Dr Hussain is the External Moderator for the University of Cambridge and has received British Council, Hornby Trust, USIS, Aga Khan University and Aga Khan Development awards to pursue her academic career and research projects. She has completed a number of research projects at national as well as international levels in diversified areas. Her forte is in qualitative research methods with a special focus in field research. Inter alia, her specialization includes educational research, teacher education and development, curriculum design, and materials development.

Samra Javed, Senior Assistant Manager, Management Excellence Center (MEC) and Senior Lecturer in Education and Social Sciences, 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 Education.

Center for Policy & Area Studies

Dr. Syed Imdad Shah, Senior Fellow with the grade of Professor and Head of the Center for Policy & Area Studies, has done his PhD in European Studies and MA in International Relations from the University of Karachi. He has published several articles of International repute and has been associated as Senior Scientist in the "CLIMA" Project of the European Union. He is a Salzburg Seminar Alumni from Austria, and has availed the European Union Scholarship in 2000 at the University of Strathclyde Glasgow Scotland, UK. He has a vast experience in research and teaching at the Area Study Center for Europe, University of Karachi.

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.

Dr. Bettina Robotkais, Professor of South Asian History, holds a PhD from Humboldt University Berlin, Germany in the field of South Asian history and has 26 years of teaching experience in this field in Germany and Pakistan. Her research interest lies in the political system of Pakistan.

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 & Assistant Professor, Department of Business Psychology, earned a Doctor of Philosophy in Psychology from the University of Karachi, Pakistan. Her research focuses on social problems, adolescents, organizational issues, personality, family and marriages, and Psychometrics. She has worked on research project on Community Health Sciences at the Aga Khan University and Hospital. She has published more than twelve research papers in national and international repute journals and presented research papers in various international conferences. She has organized, "First National Conference on Application of Social Sciences in Pakistan", also an Editor & reviewer of International Journal of Psychological Studies, Canada, Journal of Pakistan Psychological Association (JPPA). and Associate Editor of the International Journal of Interdisciplinary Social Sciences, USA. She is recipient of Group Study Exchange Program Fellowship 2011 for Pennsylvania, USA, hosted by the Rotary Foundation International.

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" to be edited by Roy Moodley., Uwe P. Gielen., & Rosa Wu and published by Routledge, New York.

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 Business 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 Psychological Well-being.

Islamic Studies / Philosophy Unit

Asad Shahzad, Assistant Professor in History of Ideas and Ethical Theory, holds an M. Phil. degree in Philosophy (Philosophy of Globalization) from IoBM, and a Master's degree 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 columns for different newspapers on religious, political and social issues. He has presented several papers at national and international conferences; two of the topics are: "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. The latest paper that he contributed to PBR is "Prospects of the Transformation of the Rawlsian Liberal Democratic State into Universal Capitalist State" published in January 2012 issue. He earned his M. Phil. in Philosophy (Philosophy of Globalization) from the Institute of Business Management in 2011. Currently, he is involved in research in the area of the philosophy of globalization and ethical theory.

Media Studies

Shahida Kazi, Senior Fellow and Head of Department of Media Studies and Media Management /Advertising, is an MA in Journalism from the University of Karachi. She has worked as Professor and Chairperson, Mass Communication department, Karachi University and Jinnah University for Women. A pioneering woman journalist, she has also worked in the Daily Dawn, and Pakistan Television Corporation as Senior News Editor. She is the author of three books and a large number of research articles. She has also guided a number of PhD students.

Sabeen Jamil, Junior 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 for 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.

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ACA, (APA)

Muhammad Haseeb
MAS, (AERC), MSc, (KU)

Muhammad Irshad Iqbal
CA, (ACA)

Muhammad Jiyad Shaikh
MS, (SZABIST)

Muhammad Najeeb Agrawala
MSC, (UMIST)

Muhammad Omer Khan
MA

Muhammad Shahid Iqbal
MPhil, (KU)

Muhammad Siddiq Khatri
MBA, (IBA)

Muhammad Tahir
MA, (KU)

Muhammad Zia Kayani
LLB

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Naveed Ilyas
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Nayyar Nizam
MBA, (Arizona State University, USA)

Neil Peter Christy
BE, (Lahore)

Noman Siddiqui
MA Education, University of London

Noman Nasir
MBA, (LUMS)

Noman Noor Muhammad
Associate (Society of Actuaries)

Nuzhat Khan
MSc, (Analytical Chemistry)

Obaid-ur-Rehman
CA, (LLB)

Obaidullah Muslim
MA, Diploma in Arabic Teaching

Pervez Mobin
MBA, (UK)

Rafay Ali Khan
MSc, (UK)

Rafique Ahmed Khan
MA, Economics, (USA)

Rahat Aziz
LLM, (SM Law College)

Raheel Yousuf
MBA, (IoBM)

Rana Farid
MA, Economics

Rehan Saeed
MBA, (IBA)

S. M. Mahboob-ul-Hassan
MA, (KU)

Sadia Saad
MBA, (Finance)

Saghir Ahmed Khan
MA Economics

Sajjad Hussain
MBA, (Allama Iqbal Open University)

Sajjad Siraj
MBA, (IBA)

Salah Uddin
MA in Economics, (Punjab University)

Samra Shahzad
MBA, (IBA)

Samre Qutb
MPA, (KU)

Samreen Naseem
MBA, (IoBM)

Sanam Pathan
MS, (SZABIST)

Sarwat Ahson
MBA, (IBA)

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Shah Saad Husain
MS, (Michigan) MBA, (IBA)

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Shaikh Abdul Qadir
MS, (NED)

Shamimuddin Ahmed Khan
MS in Telecommunication

Shamimuddin Ahmed Zuberi
MBA, (IBA)

Shazad Sikandar
MBA, (BA)

Sheikh M. Faraz Naseem
MBA, (IoBM)

Shujauddin Sheikh
MA, (KU)

Sohail Ahmed Khan
MSc, (University Ulm, Germany)

Sohail Sultan
MBA, (IoBM)

Syed Ahmed Abbas Zaidi
MBA, (IoBM)

Syed Firasat Hussain
MSc, (KU)

Syed Aqeel Zafarul Hasan
MA, (Govt. College Lahore)

Syed Babar Ali
MBA, (IBA)

Syed Kamran Abbas Naqvi
MAS, (KU)

Syed Khaleeq Ahmad
MBA, (IBA)

Syed Muhammad Irfan
Masters of Engineering

Syed Rizwan Athar
MCS, (Hamdard University)

Taha Khan Javed
MBA, (IBA)

Tahir Sartaj
CA, (CIMA)

Talha Kidwai
BE, (NED)

Tariq Saeed
MBA, (Preston)

Tauseef Lateef
MPhil in Sociology, (KU)

Umair Zia
MBA, (IBA)

Zafar Kamal
MS, (USA)

Zahid Khan
MBA, (IoBM)

Zia Mustafa
ACMA, APA (PIPFA)

Administration

Administration

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

Members of the Administration

Mr. 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 & Executive Director
Academics, Corporate Affairs & MEC
BS, Systems Engineering, University of Arizona, USA
MA, Economics, University of Arizona, USA

Manzoor Hussain Bhutto
Advisor to President
MA, Economics

Dr. Akhlaq Ahmed
Advisor to President
MSc, (University of Karachi)
PhD, (Exeter University, England)

M. W. Jahangir
HoD, Corporate Affairs
BCom., (Sindh University), CA Finalist (ICAP)

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MSc, Information System, (USA), MBA, (IBA)
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Certified Information Systems Auditor (CISA)

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Maqsood Ahmed
Head, Department of
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MBA (MAJU), ACMA-II

Dr. Syed Shahanshah Hasan
Medical Advisor & Incharge SAC
MBBS (Dow Medical College)

Azam Hashmi
Course Coordinator
MBA (IBA)

Lt. Cdr. (R) Sartaj Hussain
Incharge Security
BA (Islamabad)

Imdad Ali Mugheri
Incharge, Admissions
LLB (KU), MBA (University of Sindh)

Qazi Syed Naiyer
Incharge, Central Store & Record
BSC, (Dacca University)

Sharik Zamir
Assistant Controller of Examinations
MPhil (Iqra University), MEd (Peshawar)

Syed Suleman Jaffer Hatmi
Proctor & Chief Protocol Officer
BA (KU)

Masood Hasan
Senior Accountant
MBA (BIZTEK)

Abdul Khaliq
Senior Officer, Internship & Placement
MBA (IBA), LLB (Hyderabad)

Munawar Ahmed
Admin Officer
BA

Mohammad Zeeshan Ahmed
Examination Officer
BCom (KU)

Muhammad Kashif
Computer Programmer
BSC (Preston)

Rashid Aqeel
Internal Audit Officer
BCom (KU)

Abdul Qadeer
Registration & Admissions Officer
BCom (KU)

Maira Akhtar
Officer, MEC
MBA (IoBM)

Saima Wasim
Officer, MEC
MBA (IoBM)

Mehmood Ahmad
Senior Accountant
BCom (India)

Humayun Rashid
Senior Sports Officer
MA & BEd (KU)

Shakeel Ahmed
House Keeping Officer-II
BA (KU)

Fraz Khan
Computer Programmer
BCom (KU)

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Accounts Officer
CA (Intermediate)

Naeem Mirza
Assistant Librarian
MLIS, (KU)

Manzoor Hussain
Assistant Librarian
MLIS (KU)

Rabail Gul
Internship & Placement Officer
MBA (IoBM)

Zara Omar
Officer, QEC
MSc (Statistics) (KU)

Muhammad Masood Khan
Senior Personnel Officer
BSc (KU)

Amna Yousuf
Student Counselor
MBA (IoBM)

Muhammad Arif Shaikh
Senior Maintenance Officer
Diploma of Associate Engineering

Syed Mustafa Hussain
Academics Officer
MA (KU)

Barira Anas
HR Officer
MBA (Hamdard University), MSc, (IoBM)

Muhammad Zahid
Accounts Officer
ACCA

Moin Jilani
Network Officer
BCom (KU)

Muhammad Asim
Accounts Officer
ACCA

Muhammad Aijaz Ladhani
HR Officer
BCom (KU)

Course Descriptions

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. On completion of the course, students should develop a thorough understanding of accounting records, learn how to record transactions and develop an ability to apply accounting concepts, principles and practices.

ACC102/103   Introduction to Financial Accounting I & II
The objective of this course is to enable students to understand fundamentals of accounting theory and apply it to basic financial accounting. The course will help them to develop knowledge and understanding of financial statements and the techniques used to prepare financial statements including necessary underlying records.

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.
Pre-requisite: *ACC 101*

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).
Pre-requisite: *ACC 102/103*

ACC203/304   Financial Accounting I & II
These courses are designed to provide understanding of accounting methods, and procedures as followed by business organizations. It systematically covers the accounting process of classification, summarization, presentation in the light of established accounting principles set out by International Accounting and Reporting Standards in the preparation of financial statements.
Pre-requisite: *ACC 102/103*

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. It gives students managerial accounting concepts applicable to planning, controlling & decision making.
Pre-requisite: *ACC201/302*

ACC302   Accounting and Financial Information Systems
This course provides an understanding of computer based accounting and hands on training of application of accounting package.
Pre-requisite: *ACC 101/201, CSC 203*

ACC305/415   Cost Accounting I & II
The course is designed to equip candidates an understanding of the importance of the role of cost accounting in planning and controlling the wide range of organizational and manufacturing cost. The students are expected to acquaint themselves with a comprehensive knowledge of established practices of cost accumulation methods and learn the application of this knowledge to basic planning, control and decision making.
Pre-requisite: *ACC 102/103*

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.
Pre-requisite: ACC201

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.
Pre-requisite: ACC301

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 the course 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.
Pre-requisite: ACC 102/103

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.
Pre-requisite: ACC101/201/402

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.
Prerequisite: ACC301/401/410

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. The course develops a road map of financial analysis from both the creditor's and equity investor's point of view.
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 strategy; 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.

Acturial 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 Kolmogrov equations. Limiting probabilities. Balance equations.

Pre-requisite: *STA205*

ARM601/602   Models of Financial Economics I & II

This course aimed to provide the complete understanding of pricing of various types of options, Modelling of stock prices, Binominal 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

COM101/401   General English / Business English
This course has been designed to enhance the students' understanding and use of writing skills in English based on critical reading thereby inculcating a maturity of thought appropriate to students in their freshman year.

COM102   Business Communication I
Employees as well as employers need to be able to write effective messages, whether for supervisors or themselves in business and industry. 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 write, rewrite and edit business messages in a positive tone for specific purposes and solving real life business communication problems.
Pre-requisite: *COM 101*

COM103/104   Functional English I & II
The objective of this syllabus is to help students communicate effectively in English language through proper usage of vocabulary and knowledge of English grammar. It will provide a basis for composition and comprehension, practical use of grammar and writing mechanics.

COM105/106   Business Communication and Behavioral Studies I & 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 skills, negotiation skills and leadership qualities in the students.

COM201   Business Communication II
This course builds on the skills students acquired in COM 102 by applying them to advanced business writing situations such as reports, proposals and formal research reports. Students will learn to respond to requests for proposals from a real life organization. They will also research and write an executive research report that solves a real business related problem. Students will learn the research and writing techniques necessary for complex professional documents.
Pre-requisite: *COM 102*

COM202   Business and Professional Speech
This course is designed to improve the students' interpersonal, intrapersonal and public communication abilities to analyze topics, support assertions with proof, amplify ideas, structure messages, use language in appropriate and imaginative ways, and deliver messages with effective vocal and physical behavior. Basics of oral communication, principles and context of communication; interviewing skills, public discussion, group problem solving, public speaking are the salient features of the course.
Pre-requisite: *COM 201/203*

COM203   Methods in Business Writing
Essential to effective business communication is the preparation of business letters and other documents, including memoranda and job resumes. The student learns to write clear, coherent, effective messages that reflect consideration of writer's intent and reader's response. Organization and format appropriate to a given situation are stressed, so are the revisions and editing to produce an acceptable copy.
Pre-requisite: *COM 101*

COM209   Communication Skills

The main objectives of the course are to help learners improve in all four skills of the English language, utilize them in catering to their immediate academic needs accurately, and integrate the language learned in their field of specialization successfully.

COM402   Business Communication

This course aims at creating awareness of the current norms and conventions of written business communication. It teaches students how to plan, organize, and write correct and effective "reader friendly" business documents appropriate for use in today's global business environment.

COM403   Interpersonal Communication Skills

This course has been designed to enable students to develop skills in the areas of interpersonal communication, as well as personal management. After completion of this course students would have a better understanding of interpersonal relationships and the role that communication plays in such relationships.

Pre-requisite: *COM 402*

COM405   Organizational Consulting 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. Topics include business development, project management, cost estimation and report writing. The course emphasizes learning techniques used for successful group presentations and skills for effective oral and written communication.

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.

Pre-requisite: *CME100*

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.

CME201   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, memory and I/O synchronization, wait state, 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*

CME202   Data Communication & Computer 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.

CME301   Software Engineering Applications

To study various software development models and phases of software development life cycle. The concepts of project management, change control, process management, software development and testing are introduced through hands-on Team Projects.
Pre-requisite: CME101

CME302   Computer Organization and Architecture

Overview of main computer architectures and their performance comparison, instruction set architecture, CPU design, and cache memory, different designs of cache memory system, virtual memory system, and address mapping using pages, pipeling, super scaling, and threading, instruction level parallelism (ILP), introduction to parallel processing. Branch prediction, pre-fetching, multithreading.
Pre-requisite: ELE201

CME304   Data Structures and Algorithms Analysis

To understand the basic data structures and the abstract data structures anduser defined data structures and their applications to represent various information types.Design and analysis of various algorithms for solving various searching, and sorting problems.
Pre-requisite: CME100

CME306 Database Management Systems Design

User interface, data independence, user view, three data models (relational, hierarchical, network, object oriented), conceptual, logical and physical database design and evaluation, normalization, query languages, query optimization, security, integrity and concurrency protocols, introduction to SQL and its application to RDBMS. Database design, model building, data table, forms & reports. Database administration.
Pre-requisite: CME304

CME307   Operating Systems

Evolution of Operating systems, Process and CPU management, Problems of cooperative processes, Synchronization and scheduling algorithms, Deadlocks, Memory management and virtual memory, Relocation, External Fragmentation, Paging and Demand Paging, Secondary storage, Security and Protection, File systems, I/O systems, Multithreading, Kernel and User Modes, Protection, Introduction to distributed operating systems.
Pre-requisite: CME304

CME308   Advanced Programming

To acquaint the students with the advanced structure, operation, programming, and applications of computers.
Pre-requisite: CME100

CME407   Artificial Intelligence and Neural Network

To teach the concepts, applications, and methods of artificial intelligence. To understand the concepts of neural technology, learning algorithms and training and using them to solve complex classification and recognition problems.
Pre-requisite: CME100

CME408   Multimedia Systems
The course covers design, use and applications of multimedia systems. It introduces acquisition, compression, storage, retrieval and presentation of data from different media such as images text, voice and video. Current multimedia tools would be used to develop multimedia projects.
Prerequisite: *CME101*

CME409   Computer Simulation and Modeling
This course emphasizes the development of modeling and simulation concepts and analysis skills necessary to design, program, implement, and use computers to solve complex systems/products analysis problems regarding software engineering discipline. The key emphasis is on problem formulation, model building, data analysis, solution techniques, and evaluation of alternative designs/processes in complex systems/products. Overview of modeling techniques and methods used in decision analysis, including Monte Carlo simulation and systems dynamics modeling are presented.
Pre-requisite: *CME308, MTH403, TCE301*

CME410   Object-Oriented Analysis and Design
In this course student will learn to perform Analysis on a given domain and come up with an Object Oriented Design (OOD). Various techniques will be discussed and practiced which are commonly used in analysis and design phases in the software industry. Unified Modeling Language (UML) will be used as a tool to demonstrate the analysis and design ideas and an object oriented programming language such as Java would be used to implement the design. Various cases studies will be used throughout the course to demonstrate the concepts learned in theory. A strong in class participation from the students will be encouraged and required during the discussion on these case studies.
Pre-requisite: *CME301, CME307*

CME411   System Programming
Demonstrate mastery of the internal operation of Unix system software including assemblers, loaders, macro-processors, interpreters, inter-process communication.
Pre-requisite: *CME307*

CME412   Software Project Management
To develop ability to plan and manage software development projects successfully, maximizing the return from each stage of the software development life cycle.
Pre-requisite: *CME301*

CME413 Parallel and Distributed Computing
This course covers the architecture and enabling technologies of parallel and distributed computing systems and their innovative applications. We will cover scalable multiprocessors, distributed clusters, P2P networks, computational Grids, virtual machines, Internet Cloud and Case studies. The course aims to discuss state-of-the-art supercomputers and distributed computing systems for high-performance computing, e-commerce, and web-scale Internet applications.
Pre-requisite: *CME302, CME307*

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*

CME417   Computer Graphics
Study of various algorithms in computer graphics and their implementation in any programming language.
Pre-requisite: CME308

CME418   Digital System Design
This course introduces students to the design of digital logic circuits, both combinational and sequential, and the design of digital systems in a hierarchical, top-down manner. Students are also introduced to the use of computer-aided design tools to develop complex digital circuits and to prototyping designs using programmable logic devices and field-programmable gate arrays.
Pre-requisite: CME301

CME420   Multimedia Communication
To develop familiarity with the science and technology of multimedia communication.
Pre-requisite: TCE200

CME422   Software Quality Assurance and Testing
Choose and apply appropriate quality control systems, standards, practices,and processes. Conduct effective inspections, reviews and audits. Understand CMM conceptsand methods, and able to evaluate the current software engineering maturity by usingexternal certifications to enhance existing practices.
Pre-requisite: CME301

CME423   Artificial Neural Networks
This course presents an overview of the theory and applications of artificial neural network and fuzzy systems to engineering applications with emphasis on signal processing and control. The objective of this course is on the understanding of various neural network and fuzzy systems models and the applications of these models to solve engineering problems.
Pre-requisite: CME407

CME424   Computer Application in Engineering
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, and data-base software, design principles of transaction processing and executive support systems.
Pre-requisite: CME308

CME450   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).

Computer Science

CSC102/400   Introduction to Computer Science
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.

CSC103/401   Structured Programming Language
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.

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.
Pre-requisite:　　　*CSC103*

CSC109　　　Introduction to 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.

CSC201/403　　　Low Level Programming 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.
Prerequisite:　　　*CSC105*

CSC202　　　Digital Computer Logic
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.
Prerequisite:　　　*GSC101, CSC102*

CSC203　　　Object Oriented Programming Language
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.
Pre-requisite:　　　*CSC103*

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.
Prerequisite:　　　*CSC201, CSC202*

CSC206　　　Database Management 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.
Pre-requisite:　　　*CSC102*

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.
Pre-requisite:　　　*CSC203*

CSC211   Programming for Engineers
Procedural versus object oriented programming languages, object oriented design strategy and problem solving, Pointers, File handling, objects and classes, member functions, public and private members, dynamic memory management, constructors and destructors, templates, object encapsulation, derived classes, class hierarchies, inheritance and polymorphism, operator overloading, stream class, practical design through Object Oriented Programming. Graphics hardware. Fundamental algorithms. Applications of graphics. Interactive graphics programming — graph plotting, windows and clipping, and segmentation. Programming raster display systems, Differential Line Algorithm, panning and zooming. Raster algorithms and software — Scan-Converting lines, characters and circles. Scaling, Rotation, Translation, Region filling and clipping. Two and three dimensional imaging geometry (Perspective projection and Orthogonal projection) and transformations. Curve and surface design, rendering, shading, color and animation.
Pre-requisite: CSC109

CSC213   Computer Communication & Networks
Synchronous and asynchronous communications, Modes of transmission ASCII codes and data stream with parity, Guided Transmission Media (Twisted Pair, Coaxial Cable and Optical Fibre), Wireless (terrestrial and satellite). Line Configurations, Null Modem, Data Link Control, Flow Control Techniques, Stop & Wait, Sliding Window, Error control techniques, reverse error detection techniques (parity, CRC), switched networks (circuit switched, message switched and packet switched), Broadcast n, Packet Radio Networks, Network Topologies, LAN Architecture, LAN System & Network Standards, Ethernet and Fast Ethernet (CSMA/CD), Token Ring And FDDI etc., OSI Model, TCP/IP protocol suit, Introduction to IEEE802 Family. Connectivity Devices (modems, hubs, repeaters, bridges, routers), Resource Sharing, Managing User Accounts And Group, Implementing Security, Disaster Recovery, Protecting Data, Recovering From System Failure.
Pre-requisite: CSC109

CSC301   Theory of Automata
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.
Pre-requisite: MTH201

CSC302   Multimedia Technologies
The course covers design, use and applications of multimedia systems. It introduces acquisition, compression, storage, retrieval and presentation of data from different media such as images text, voice and video. Current multimedia tools would be used to develop multimedia projects.
Prerequisite: CSC203

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.
Pre-requisite: CSC203

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.
Prerequisite: CSC206

CSC308   Operating Systems Concepts
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*

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.
Pre-requisite: *CSC201, CSC205*

CSC313   Numerical Computing
This course covers the study of errors, calculations and importance in numerical computing, various methods of solution of non-linear equations, Newton's Method and Conditions of convergence.
Pre-requisite: *MTH105*

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.
Prerequisite: *CSC303*

CSC410   Data Communication & Networking
The course focuses on Data Communications and network management wverview, review of computer network technology, standards, models, and language.
Prerequisite: *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*

CSC414   Visual Programming Language
The course introduces a visual programming concepts, which may cover the topics: using and customizing the development interface, application and class wizards, resources, dialog boxes and control the gallery, writing and using ActiveX controls, Optimizing and debugging, building macros with scripting language and tools.
Pre-requisite: *CSC 203*

CSC415   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.

CSC417   Project
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

CSC 422   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.

CSC427   Software Engineering
The course introduces the basic concepts & modern tools & techniques of software engineering, stresses the development of reliable & maintainable software via systems requirements & specifications and software design methodologies.
Prerequisite: CSC305

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

CSC442   Human Computer Interface
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

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

CSC447   Object Oriented Database Management Systems

The students will learn how the principles of design impact on the design of database management systems; develop an entity relationship diagram to respond to a data management issue; differentiate between relational and object-oriented database management systems; develop and use strategies to plan and implement a database management system; and provide examples of file system concurrency control and distributed databases.
Pre-requisite: *CSC203, CSC204*

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*

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.

CSC547   Analysis of Algorithms

Introduction; asymptotic notations; recursion and recurrence relations; divide-and-conquer approach; sorting; search trees; heaps; hashing; greedy approach; dynamic programming; graph algorithms; shortest paths; network flow; disjoint Sets; polynomial and matrix calculations; string matching; NP complete problems; approximation algorithms.

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, markove 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

The Requirements Elicitation Process: Joint Application Design, Prototyping, Requirements Inspections, Quality Function Deployment, Scenarios. Organizing and Analyzing the problem. Software Behavior Specification: State-oriented, Function-oriented, Object-oriented. Formal Methods, etc.

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-trough'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

Comparison of conventional and fuzzy logic. Fuzzy set theory, fuzzy logic, approximate reasoning and fuzzy logic control system. Concept of artificial neural networks. Single layer networks, multilayer network, supervised and unsupervised networks. Applications of neural networks in control systems, sensor processing and communications. Fuzzy neural integrated 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 the course 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

The course will focus on microeconomic theory and its applications includes: concept of duality in the context of consumption and production decisions; general equilibrium: linear and non-linear models, fixed coefficient technology, contract curve and production possibilities frontier; aggregation issues, decision-making under uncertainty, expected utility theory, its critiques and alternatives; competitive equilibrium, welfare analysis in a partial and general equilibrium setting; the Stolper-Samuelson theorem, the Rybcznski theorem, Walrasian competitive adjustment mechanism, existence and stability of salrasian equilibria; existence and stability of walrasian equilbria, pareto optimality, effeciency of perfect competition; the expected utility hypothesis, the expected etility eheorems; concepts of game theory; theory of form under uncertainty, production uncertainty; price and cost uncertainty, consumption and saving decisions under uncertainty; market imperfections and failures with special reference to public goods, externalities, taxes and subsidies; attitudes towards risk, the measurement of risk aversion; measurement and optimization of social welfare; market power and information asymmetries; social choice and welfare and mechanism design.

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
The course deals with issues pertinent to research in economics including: 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 erogeneity; co-integration tests, Johansen's estimator; generalized linear models for binary and categorized dependent variables; random effect models for panel and other multilevel structures 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, stake 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.

ECO508   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 introduces students to the nature of language and the way in which language is acquired and used in society. It also 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. One of the aims would be to teach the participants to analyze reading texts and understand the main ideas and views through the use of a variety of authentic academic reading formats.

EDM406   Education Policy and Planning
The topics in the course include empirical and legal research on education policy issues at the local and state levels facilitating communication between education leaders and policymakers subjected to judicial legislation, legal aspects of administration in institutions of higher education, statutes and case law related to liability, due process, student rights, admission, employee relations and property use.

EDM412   Marketing Education Services
The course trains teachers for certification in intensive business and training. This course offers a study of business and marketing trends, goals, teaching procedures, tests and measurements, special helps, teaching materials, and technologies utilized in the field of education.

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 school. It will also provide specific standards of ethics to cover most situations encountered by the students to protect their welfare. The course also educates the learners to function according to the ethical standards of the discipline.

EDM416   Comparative Education Systems
This course not only covers a comparison of two different countries but also focuses on comparisons within a single country over time. It analyzes the data and insights drawn from practices and situations in other countries. It aims to highlight the relationship between education and society and establishes generalized statements about education that are valid in more than one country.

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 example, counseling in the sphere of educational and behavioral problems and students' career growth.

EDM418   Testing in Education
The course aims to discuss ways by which teaching and testing can be integrated. It will focus 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. The course will also focus on teacher beliefs and the evaluation of books and teaching materials. Practical application of the methods will be experienced in practical sessions based on peer observation, micro-teaching, and simulation.

EDM420   Academic Writing and Seminar Skills

This course will develop the participants' skills in writing General English through the study of grammar and usage, sentence structure, principles of writing academic essays, and the use of American Psychological Association (APA 6th edition) writing style. It also aims to equip the participants with editing and proof reading strategies to help them refine their drafts. The second section of this course focuses on students' participation in academic seminars, discussions, and presentations through a variety of practical approaches. Learners will be expected to engage with the subject in a more active way by discussing ideas and sharing opinions with the participants during seminars.

EDM423   Reflective Inquiry in Education

The course will help participants gain an insight into the concept of reflective inquiry in teaching; an invaluable teaching tool for challenging times. It will bring together essential perspectives of researchers, practitioners and theoreticians about reflective inquiry to offer a comprehensive treatment of the inquiry from a holistic perspective, including historical background, current issues, and future directions.

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 for teachers operating at different levels. The course also focuses on the various stages of pre-service and in-service models to help participants arrive at an informed engagement with teacher training theories and practices. This involves taking participants from needs analysis to evaluation, and linking with the 'managing teaching and learning' course.

EDM425   Developing Leadership and Management Skills

This course introduces some of the basic theories and issues related to leadership and management in educational settings and how they might work in a range of situations and national/international cultures. 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. It is intended to help the participants 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 across the social sciences, especially in education. Methods covered include interviews narrative inquiry, action research, focus group, oral history, participant observation, and textual analysis. In addition, the skills of analyzing qualitative data and the capability to prepare instruments for testing generalizations in small and contrasting settings are emphasized. The courses will also help participants to prepare proposals for their research project. 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)

This course is designed for participants who have a limited knowledge of research methods and provides an understanding of definitions and meanings of keywords such as hypothesis, theory, variables, and constructs. 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.

EDM431   Writing and Presenting Educational Research

This course is designed to guide the participants with the writing process for scholarly purposes. It introduces the key aspects such as genre, style, and the language used in writing research papers and facilitates the participants to write and present research proposals and reports orally as well as in writing. In addition, it further builds on the writing and language skills introduced in Academic Writing and Seminar Skills course, with special emphasis on the correct use of APA.

EDM432   Literature Review

This course is intended for participants preparing to write a master's thesis. It will explain what literature review is and offer insights into the form and construction of literature review. The course will also give an insight into the stages in the development of literature review, the patterns to organize it and the resources to develop literature review.

EDM433   Data Collection

This course will focus on methods and techniques of data collection in both primary and secondary research including testing hypothesis, analysis, interpretation, drawing inference, data types, etc. The students will learn how to make effective choice of data collection methods and deal with the problems that arise during data collection. The course will also teach them how to do pilot study/ pre test.

EDM434   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. The investigation could take the form of empirical research or it could be based on desk research, making use of already available data.

EDM502   Managing Higher Education Systems

The course assesses the performance of higher education institutions and obstacles encountered in academic and administrative work in the departments as well as identified possible solutions. 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. It will examine identification of time invested in educational process, its measurement and regulation, its effect on the efficiency of education, concept of quality control on administrative aspects in public and private institutions, and obstacles in the way of applying this model in the field of education.

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 which offer clear criteria for development and improvement in both public and private school system.

EDM508   Knowledge Management

This course is based on a range of organizational practices specifically to identify, create, represent, distribute and adopt insights and experiences. It will focus on application of knowledge management for research and curriculum development 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 change. Debates around the impact of globalization will be central to the analysis of lifelong learning. Particular attention will be given to examining the inter-relationship between lifelong learning and wider debates about citizenship and the changing nature of work and organizations.

EDM512   Career Planning and HRM in Education

This course deals with the management and personnel subsystems: concepts, functions, and practices in education sector. It is designed to guide students through academic and career exploration and planning processes, and provide strategies and skills necessary for a lifetime of career-related decision making. It will also examine assessment and reflection techniques to define and clarify educational and career plans and methods of researching academic and career opportunities.

EDM513   Strategic Management Issues in Education

This course covers knowledge of strategic management models and theories and practices in the field of education. It examines concepts, information, and skills related to strategic planning, identifying objectives of educational organization, transforming strategic planning to procedural planning, particularly merging the elements of planning and budgeting to achieve management efficiency and develop stimulating members of educational organization.

Electrical Power System Engineering

EPE101   Linear Circuit Analysis

The course introduces electrical engineering, basic circuit and systems concepts, and mathematical models of components, Kirchhoff'slaws, resistors, sources, capacitors, inductors, and operational amplifiers, solutions of first and second order linear differential equations associated with basic circuit forms.

EPE102   Electrical 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   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.
Pre-requisite: EPE100

EPE-300   Power System Analysis

This course has been designed to introduce the importance of analyzingvarious aspects of power system. It covers power flow studies and fault analysis of both symmetrical and unsymmetrical faults in power networks. This forms the basis for powersystem operation, control and protection.
Pre-requisite: EPE200

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

EPE400   High Voltage Engineering
The diverse conditions under which a high voltage apparatus is used necessitate careful design of its insulation and the electrostatic field profiles. The principal media of insulation used are gases, vacuum, solid and liquid or a combination of these.

EPE401   Power system protection
The course presents different types of relays, relaying schemes, circuitbreakers and fuses. Topics like discrimination and coordination are also introduced.

EPE402   Power Distribution and utilization
Students are introduced to the basics of power distribution systems andeffective utilization of power in heating and illumination applications.
Pre-requisite: EPE-200

EPE411   Power System Analysis
This course has been designed to introduce the importance of analyzingvarious aspects of power system. It covers power flow studies and fault analysis of both symmetrical and unsymmetrical faults in power networks. This forms the basis for power system operation, control and protection.
Pre-requisite: EPE-200, EPE-402

EPE412   Power Generation
The students learn different power plant and modes of energy conversion togenerate electrical energy in this course and the concepts of fuel cells are introduced.
Pre-requisite: EPE-402

EPE413   Power System Protection
The course presents different types of relays, relaying schemes, circuitbreakers and fuses. Topics like discrimination and coordination are also introduced.
Pre-requisite: EPE402

EPE416   Power System Stability & Control
Different aspects of power system operation, monitoring and control arecovered with an emphasis on SCADA systems.
Pre-requisite: EPE402

EPE417   Advanced Electrical Machine Design
Discussion of design and loading of Power Transformers and Inductionmotors is introduced and electrical equipment installation; commissioning, testing andtroubleshooting practices are discussed.

EPE419 Renewable Energy Systems

The course will cover a brief history of energy, reasons of shortage and load shedding, fuel problems for energy, alternative fuels and itsproblems, power from wind, its environmental impact, costs and economics of alternative fuels, energy from bio-mass and solid waste itsproblems and environmental impact, etc.

Pre-requisite: *EPE402*

EPE420 SCADA System

Teach various industrial applications of electronics including heating, welding,speed control of electrical machines, photo-electric devices, x-ray, PLCs, and dataacquisition.

Pre-requisite: *EPE250*

EPE450 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)

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*

ELE205 Amplifier and Oscillator

This course introduces the concept of Operational Amplifier, Mathematical operations, Practical Considerations, Differentiators & Integrators. Integrated Circuits analysis and its applications. Filter Design, Types and Operation. Oscillators design includes General Consideration, Criteria for Oscillation, Basic Circuit Requirements. RF Oscillator Circuits design, types and operation. Phase-shift Oscillators: Principle of Operation, Wien Bridge Oscillator, Integrated timers. Voltage Controlled Oscillator, Phase Lock Loop. IC Voltage Regulators, Switch Mode Power Supplies.

Pre-requisite: *ELE102*

ELE302 Integrated Circuits & Applications

Introduction to Integrated Circuits, IC Fabrication Process, Monolithic Integrated Circuits, Introduction to MOS Technology, Basic Electrical Properties of MOS and BiCMOS Circuits, Basic Digital Building Blocks using MOS Transistors, Basic Circuit Concepts, Ultra-fast VLSI Circuits and Systems.

Pre-requisite: *ELE200*

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 Control Electronic
Introduction to power electronics; solid-state devices used in power electronics: power diode, power BJT, power MOSFET, SCR, GTO, IGBT, TRIAC, DIAC, Industrial Drives : DC Drive, AC Drive. Stepper Motor Drive.Transducers : Force and Pressure Measuring Transducers, Linear Variable Differential Transformer, Speed and Position Transducers, Semiconductor Photoelectric and Temperature Transducers, Halt Effect Transducers/Sensors. Programmable Logic Controller : Definition of a PLC, I/O interfaces, Memory, Processor, Programming Languages & Devices. PLCs of SIMATIC FAMILY. Some other commercially available PLCs. Power Distribution in Industries, SCADA and DCS.Electric heating: Principles and applications; induction and dielectric heating; highfrequencywelding. Spot welding control.
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*

ELE420   Robotics and Applications
Introduction to robots, robot fundamentals and applications, classification of robots, robot hardware, robot sensors, robot/system integration; provides a comprehensive treatment of the mathematical modeling of robot mechanisms and the analysis methods used to design control laws for these mechanisms.

ELE422   VLSI Design
Teach VLSI system design including system specification, verification, and fabrication.
Pre-requisite: *ELE302*

ELE423   Digital Control System
Teach the theory and methods for the analysis and design of digital control systems including theory of sampling, discrete transfer functions, z transform analysis, and stability.
Pre-requisite: *ELE419*

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 nano-technology.

Pre-requisite: GSC103

ELE450   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)

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.

ENG 102   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 o 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 includes: 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.

ENG407   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-in time in production of quality products and services, integrating supply chain & by understanding working and benefits of CNC machines and automated processes.

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.

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 Environment

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 plans.

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.

EEM405 Renewable Energy and Energy Conservation

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.

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 problems, 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 mange 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.

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: ACC101/201

FIN202/404 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: ACC402, 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

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. 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.

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.

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. The course will also cover structure, conduct and performance of firms, relationship of various market structures and business operations and resource allocation, as well as an analysis of firms' strategic behavior.

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. They will discover how companies use banks, and techniques such as currency swaps and hybrid bond structures. In the end, the goal is to apply state-of-the-art techniques to the international firm's investment, financing and risk management decisions.

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. Mathematical models of actuarial reserving. Introduction to the design of unit linked products and introduction to profit testing methods. Use of the stationary population model. Multiple life models; joint life, last survivor, contingent insurance:- values of premiums for multiple life annuities and assurances and reversionary annuities and compound statuses.
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. The goal of this e–course is to introduce you to some of these initiatives, show you where to access ERM information and generally to help you learn and implement ERM at your organization. You will even be introduced to ERM for individuals.
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. We will discuss approaches to measuring credit risk and determining default probabilities and company ratings based on financial ratios (logit, probit, and discriminate analysis, decision trees etc.).
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. Topics include understanding insurance as a risk financing technique, insurance plan design, forecasting accidental losses and risk financing needs, self-insurance plans, retrospective rating plans, reinsurance and its importance to risk financing plan, captive insurance plans, finite and integrated risk insurance plans, capital market risk financing plans, noninsurance contractual transfer of risk, and purchasing insurance and other risk financing services.
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. This course provides a systematic and advanced treatment of financial risk management. It focuses on interest rate risk, market risk, liquidity risk, credit risk and operational risk.
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. Topics covered in this course include, Introduction to Financial Risk Management, Derivative Basics, Option Basics, Stochastic Volatility Modeling, The Yield Curve, Value-at-Risk & Risk Measurement Methods, Credit Risk, Bank Capital and Basel I & II.
Pre-requisite: *FRM403*

FRM501   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. An examination of the major commercial property loss exposures including fire, business interruption, crime, inland marine, ocean marine, and miscellaneous property coverage. The different risks are analyzed to select optimal combinations of risk treatment and insurance for financial protection against property losses.

FRM502   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. The goal of this course is to equip students with concepts and tools that will help them respond to management challenges in a rapidly evolving industry.

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. The approach to the topic is quantitative. The course is ideal for students with strong quantitative backgrounds who are seeking to understand issues pertaining to risk management and to master modern methods and techniques of risk control.

FRM504   Theory of Risk and Insurance

Nature of economic risk and its effect on allocation of resources. Preferences among risky prospects: expected utility theory and the theory of risk aversion. Subjective versus objective probabilities. Market allocation of risk and the role of insurance markets under complete information. Insurance under asymmetric information, moral hazard, and adverse selection. Can insurance markets function well in a competitive equilibrium? Role of asset markets in allocating risk. How some risks corporations face are associated with price fluctuations and can be hedged in financial markets. Hedging strategies using futures markets, and options and other derivative assets. Hedging credit risks.

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 & 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. Project finance & risk management entail the following topics.Overview of project finance, Understanding key project risks, assessing project, Contractual structure, Project financing in the financial system.

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. These products are based on principles that are driven by Profit and Loss (P&L) sharing policies. Both the structure of all Islamic financial contracts and the P&L policies need to fully comply with Shariah (Islamic) laws.

FRM515   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. At the end, students can interpret the International Accounting Standards (IAS), and can analyze the effects on accounting and reporting for business entities operating at an international or national level.

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, Kirchoff 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

Wave Motion, Mathematical Concepts of Simple and Damped Harmonic Motion, Analytical Treatments of Superposition of Waves, Concepts and Applications of Diffraction and Polarization of Light and Sound Waves, Thermo dynamical Concepts and Basics of Electrodynamics, Electric Charge, Coulomb's Law, Electric Field and Intensity, Electric Potential, Capacitors and Charge Storage Concepts, Magnetism, Magnetic Fields, Faraday's and Lenz's Laws, Ampere's Law and its Applications, Eddy Currents, Inductance, Induced Current and Their Applications (Transformers, Generators Etc.), AC Signals (Average and RMS Values), Electric and Magnetic Circuits, Electric Current, Resistance, Ohm's Law, Simple Resistive Circuits (Series and Parallel), Kirchhoff Laws, Network Theorems (DC Analysis), RC and RL Circuits, Linear Coefficient of Expansion of Metals, Specific Heat and Temperature of a Hot Body.

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. Study of 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.
Pre-requisite: *MAN401*

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.

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: *MIS103 / MHM404*

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.

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 class, 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 / MHM401*

MHM501   Pharmaceutical Branding
This course emphasizes on the expressional 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. Demand and supply of health and medical care are examined as they involve consumers, patients, nurses and hospitals.
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: *MHM401 / 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. It identifies quality assurance as an integral structured organizational process for involving personnel in planning and executing standardized improvements in systems.

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. Solutions to service price, promotion and distribution problem are also discussed.

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.

Pre-requisite:　　　*MHM401, MHM404*

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. It examines strategies for mutually beneficial linkages between hospitals and physicians to realize the goals of hospitals.

Pre-requisite:　　　*MHM401 / MHM515*

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. Personal and professional skills necessary to provide a wide range of services and quality care in hospitals are emphasized upon.

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:　　　*MHM404*

MHM517   Research Project
A capstone course involving a supervised research project, applies curricular concepts and skills to 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, environmental concerns and WTO.
Pre-requisite: MHM405 / MHM515

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   Heath 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. The course will cover the ethical problems related to death, reproductive rights, the ethics of transplants, cloning and the biomedical research with exclusive focus on ethics related to pharmaceutical industry including the IFPMA code, drug laws and intellectual property rights.
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 case 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

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. In addition, a personal assessment of personality type will also involve how self-knowledge can help in developing leadership capabilities.
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. The key will be to understand the link between supply chain structures and logistical capabilities in pharmaceuticals.
Pre-requisites: MAN401 / MHM405

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. The pedagogical objective of the course is to impart specific actionable skills to students.
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. The course also focuses on grievance handling, problem solving and role of social partners in industrial conflict resolution; labor and productivity bargaining; labor laws and international labor standards and their influence on industrial relations.
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. It also focuses on the importance of employee development for organizational excellence and in this context deals with issues of career planning, career development and succession planning with an emphasis on special issues in training and development, special challenges in career management and the future of training and development.
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

HRM505   Organizational Change and Development
The course will help students gain insight into Behavioral Science techniques and practices to help corporate managers and practitioners to formulate and implement changes that promote organizational effectiveness and efficiency and improve quality of life and environment.

HRM506   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. It will explain the core systems of HR like training & development, performance management, succession planning, career planning & development, management development, competency profiling, etc.
Pre-requisite: HRM 301/401/402

HRM507   Public Relations
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

HRM508   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

HRM509   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

HRM510   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

HRM511   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. Students will study the new concepts and prevailing practices of performance management besides learning skills of managing the employee-employer expectation and tools of performance evaluation and appraisal.
Pre-requisite: HRM 301/401/402

HRM517   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.

HRM518   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.

HRM519   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.

HRM530   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. 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.

HRM531   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.

HRM532   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 organization- level performance indicators, align 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 and 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.

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.

Law

LAW101/102   Mercantile Law I & II
The course aims to enable the students to develop a professional approach towards matters connected with Mercantile Law in the performance of their duties as chartered accountants.

LAW103/104   Company Law I & II
This course provides candidates with knowledge of the Companies Ordinance, 1984, and helps them to develop an understanding of their application to corporate and other business environment, excluding advanced topics such as provisions relating to arbitration, arrangements and reconstruction, prevention of oppression and mismanagement, winding up, etc.

LAW201/402   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 & joint ventures, raising finances from different modes like issuance of different types of shares, debentures (TFCs) and other capital maintenance issues; practical aspects of holding and managing company meetings and decision making; powers, duties & responsibilities of directors and other company officers in the light of corporate laws & governance; practical aspects of mergers & acquisitions and the reasons and consequences of liquidations.

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. Half of the seats in the seminar are reserved for students from MIT departments other than Sloan.

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 an in-depth study of law relating to commercial associations/ entities with a particular focus on companies. The topics includes legal system/framework of Pakistan, an introduction to the concepts and sources of laws; different aspects of contract laws as in day to day commercial life, performance/ dischargement of the contract with particular emphasis on the specialized contracts made by companies, e.g., agency, industry & guarantee, bailment (which includes carriage of goods & pledges). Topics also include the selected parts of partnership laws and sale of goods laws.

LAW403   Statutory Compliance

This course provides advanced investigation skills to implement effective case management systems to monitor statutory compliance, identify breaches and enforce compliance. This course is a nationally accredited course designed for those personnel who have a role in monitoring and enforcing legislation or other statutory obligations on the public or private sector.

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 by examining a broad range of issues, including commercial pressures. The course also introduces laws and ethics in the Pakistani context, especially issues of freedom of expression, absolute vs. responsible freedom, code of conduct and ethics of APNS and CPNE.

Pre-requisite: MMM438

LAW406　　　　Professional Ethics and Legal Issues

This course addresses the legal and ethical issues in organizations from a multicultural perspective. The course explores managerial decision-making and reinforces ethical considerations in test decision making, employment selection, compensation, performance appraisal and general treatment of employees at work. 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 of the American Psychological Association and the Society of Human Resources Management 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.

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. The course is carefully crafted to present traditional OB concepts integrated with important contemporary OB management issues and insights so as to ensure organizational success. The student must learn to critically analyze and apply principles to specific, real or created situations.
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. Students interested in careers as human resource management specialists and managers can gain technical knowledge about selection, performance appraisal, training, compensation, workforce diversity, work and family programs, and strategic human resource management.

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. Particular emphasis is laid on managing a new venture during early operations, growth and expansion.
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 includes 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. Through case studies, students will develop skills relating to the application of industry and competitive analysis, the ingredients of an attractive strategic plan, the importance of building a sustainable competitive advantage and the special demands of operating in an increasingly global competitive environment.
Pre-requisite: MKT 302/402, MAN 301/401, 302/402, HRM 301/401/402

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 benchmarking 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. The course enhances the students' understanding of the strategic aspects of managing human resources in an environment, which is constantly changing.

MAN410 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. This means that a company's responsibility to society should start with ensuring that it produces high quality products or services and it does this with the least environmental impact and with the most benefits primarily for its employees, then for consumers, the local community, shareholders and others. Further this responsibility must be executed on a continuing, sustainable basis. Supporting a cause while intrinsically commendable in itself, comes later and even when it is taken up, it must necessarily have a direct relationship with the company business.

Pre-requisite: *MAN 401*

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. By doing this, it also provides the structure through which the company objectives are set and the means of attaining those objectives and monitoring *performance*

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. Topics like buyer supplier relationship, new product development, specifications and standards, procurement of equipment, cost analysis, pricing, negotiations, supply development, supply chain score card, SCOR models, IT applications to SCM, green supply chain are focused using case studies. Research report is a requirement of the course.

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.

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.

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, flow charting and algorithm design, processing methods and programs, types of computer languages, types of computer software an 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 applications 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. It provides mathematical and practical knowledge of graphical standards necessary to meet the requirements of today's industrial engineering practices.

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

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   Visual Basic
The course provides an introduction to Visual Basic, database access objects, maintaining databases using Visdata, input validation rules, creating user interface, error handling using VB, an overview of SQL server, active X data object, security issues, report writing, etc.
Pre-requisite: MIS 404

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. Students would also learn about organization, logical design, and methods of computer usage in the area of mathematical science, algorithm development and presentation, number systems, flow of control; basic number codes.

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: *MIS413*

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 & multi-list 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 (key management, certificate authorities, standards, WWW security, transport and tunnel mode, secure sockets layer, Secure Electronic Transactions (SET), e-Auctions, e-advertising; CRM, supply chain management, internet banking, e-Government and future of e-commerce and technological needs.
Pre-requisite: *MIS401*

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

This is the introductory course in Marketing. It will introduce the freshman class to the universal core marketing principles and concepts of internal and external value creation. This will be achieved through understanding the marketplace and customer needs and wants followed by designing customer driven marketing strategy with the goal of getting, keeping and growing target customers. Next is the development of a marketing program that delivers superior value, builds profitable customer relationships and creates 'customer delight' culminating in the company reaping the rewards by capturing value from customers. It will lay a foundation of cognitive bricks upon which builds the utility proposition of the buyer and the profit proposition of the corporation. Students will begin to grasp how each prin-ciple contributes to the bottom line. It will provide the basis required for the students successful participation in the next, more practical, case based course Marketing Management.

MKT302/402   Marketing Management

This is an upper level marketing course that incorporates a lecture and project-based approach to marketing management. The characteristics and management of markets are described in topics that include the marketing environment, components of the marketing mix, market segmentation, and planning. The objective is to further reinforce the learning of the Principles of Marketing through an enhanced application of pedagogy specifically through the use of case studies and more tutorial emphasis. Through an in-depth semester-long project, students will be provided the opportunity to apply those marketing planning and decision-making skills.
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

This course teaches the function that links the consumer, customer, and public to the marketer through information. Students learn methods to collect information, manage and implement the data collection process, analyze, and communicate the findings and their implications.

MKT501   Strategic Marketing and Planning

This course develops an understanding of the techniques, concepts, approaches and skills in marketing management and strategy planning. It incorporates strategic management techniques developed from models for the corporate environment, campaign marketing for the public environment and international marketing
Pre-requisite: MKT 301/401, 302/402

MKT502   Packaging, Printing and 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

This course helps students to acquire a full understanding of the function of advertising in the marketing process, develop their skills in designing an effective advertising campaign and judging and evaluating the advertising proposals. The course will familiarize them with the process and techniques of advertising production, its budgeting & control process.
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 delivers the basic principles of understanding buyer decision processes. The course begins with providing an orientation on the concept of consumer behaviour and its evolution with changing times with a focus on emerging segmentation and targeting. The course progresses on analysing consumer as an individual and discusses theories and marketing applications based on motivation, personality, learning, attitude and communication. After the student has acquired a basic view on the individual buying behaviour, the course advances in understanding how the social and cultural settings have an effect on consumer decision making and group dynamics.

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. It describes the steps, problems and issues involved in the implementation and execution of a project of direct marketing.
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. The students will learn the skills needed to visualize, create, launch, and manage brands. Students will also learn techniques to grow and manage single brands and brand portfolios through extensions and handling brand name changes by proper planning and techniques, specially through use of brand metrics, and brand activations. Students will be exposed to contemporary developments in branding theories and brand management techniques trough exposure to new literature.
Pre-requisite: MAN401, MKT 302/402

MKT512   Export Marketing
The course offers a guide to the practicalities of entering international markets. The topics includes international trade and regional comparative advantage, soliciting markets, documentation and financing of exports.
Pre-requisite: MKT 302/402

MKT514   Event Management
Courses on event management are the talk of the town nowadays because of the element of glitz, glamour, flamboyance and style as-sociated with important social and corporate events like marriages, company conferences, seminars, workshops, product launches and a host of other activities. This course teaches the student to plan for such events right from brainstorming to the final execution.

MKT517   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.

MKT519   Marketing of Financial Services
This course teaches students how financial products- banking and insurance primarily- are marketed. Students are taught through local examples and made to apply marketing concepts to local players in the industry.
Pre-requisite: MKT 301/401, 302/402

MKT520   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

MKT521   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

MKT526   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.
Pre-requisite: MKT 302/402

MKT527   Integrated Marketing Communication
The objective of this course is to provide students with an understanding of integrated marketing communication (IMC) 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

MKT530   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. Segmentation, pricing, profitability, distribution strategies in the light of conjoint portfolio analysis are also included.

MKT531   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. The course incorporates environmental, demographic and social issues into the discussion of retail operations.

Mathematics

MTH101   College Algebra
The course is a review of exponents, equations and inequalities, function notation, composition and inverse, linear, quadric, polynomial, exponential and logarithmic functions and their graphs.

MTH102   Pre-Calculus
This course is designed for those students who have not studied mathematics in intermediate or equivalent. It helps students in learning basic mathematical skills like, algebra, factorization, geometry and trigonometry. Introduction to functions and matrices would also be a part of this course. Students who have already passed a mathematics course in intermediate or equivalent are exempted.

MTH103   Calculus for Business Decisions
The aim of the course is to develop the ability to analyze problems logically, recognize when and how a situation may be represented mathematically, identify and interpret relevant factors and, where necessary, select an appropriate mathematical method to solve problems. The course includes the concepts and business application of functions, differential and integral calculus, optimization methodology, transformation and assignment model.
Pre-requisite: *MTH 101*

MTH104/401   Calculus I
The course covers the functions and graphs, system of linear equations, Crammer's rule, sequences, limits and continuity, differentiation, chain rule, mean value theorem, maxima and minima and integration of simple functions.

MTH105/402   Calculus II
The course includes techniques of integration, areas between curves, continuity of functions of several variables, partial differentiation, differentiation derivations, line integral, multiple integral, calculus of variations, etc.
Pre-requisite: *MTH104/401*

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.

MTH201   Discrete Mathematics
The course will cover mathematical fundamentals of computer science and some techniques of discrete mathematics. The topics covered will include: proposition calculus, predicate calculus inference imprecation, recursive functions, sequences and series, inclusion/exclusion, recurrence relations, graphs and trees, Boolean algebras, and ordered sets. The course emphasizes introducing students to formal mathematical notation and proofs and concepts useful in computer science. Other topics include computer related arithmetic, propositional and predicate logic.

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.

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. The third part the course will show how to use these tools for pricing various types of derivatives (European, American, Asian, etc.) in the context of continuous models such as Black-Scholes. The relation with PDEs will be explained and numerical issues will be discussed. Models for interest rates and associated pricing problems will also be presented. In the last part of the course generalizations to stochastic volatility models and calibration issues will be discussed.

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, disarmament analysis, logistic regression, canonical co-relation analysis. Principal components, factor analysis, LISREL models, cluster analysis and multi dimensional scaling 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. Applications relating to design and analysis of problems, capacity planning, inventory control, waiting lines, and system reliability and maintainability will also be included in the course.

Pre-requisite: *MTH 205*

MTH208   Differential Equations and Complex Variables

Differential equation is of fundamental importance in engineering mathematics because many physical laws and relations appear mathematically in the form of such equations. The course of differential equation will give us an understanding of how to transform the given physical situation to its corresponding mathematical model.

Pre-requisite: *MTH 202*

MTH209/409   Financial Mathematics I

Time value of money, simple interest, compound interest, accumulation function, future value, present value/net present value discount factor,discount rate (rate of discount),convertible mthly, nominal rate effective rate, force of interest, equation of value, annuity-immediat , annuity-due, perpetuity, payable mthly, level payment annuity, arithmetic increasing/decreasing payment annuity, geometric increasing/decreasing payment annuity, term of annuity, loans, principal, interest, term of loan, outstanding balance, final payment (drop payment, balloon payment), amortization sinking fund .

Pre-requisite: *MTH104*

MTH210/410   Financial Mathematics II

Bonds price, redemption value, par value/face value, coupon, coupon rate, term of bond , yield rate callable/non-callable book value, book value accumulation of discount general cash flows and portfolios, yield rate/rate of return, dollar-weighted rate of return/ time-weighted rate of return, current value, duration (macaulay and modified), convexity, portfolio, spot rate, forward rate, yield curve, stock price, stock dividend Immunization, cash-flow matching; immunization (including full immunization); redington immunization. The term structure of interest rates, continuous models, stochastic approaches to interest are featured in the course.

Pre-requisite: *MTH209/409*

MTH211   Actuarial Mathematics

Advanced problems in the mathematical theory of life contingencies; force of mortality, 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*

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.

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: *MTH105 / MTH202*

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 202*

Media Management / Studies

MMM301   Photo Journalism

The purpose of this course is to provide training to students in the technical and aesthetic aspects of photography and enable them to take good photographs.

MMM302   Logic and Critical Thinking

This course seeks to develop the faculties of reasoning and critical thinking in the students. It will also include the fostering of an analytical approach to reading, listening and viewing messages from the media.

MMM303   Outline of Political Science

This course seeks to apprise the students of the evolution of political ideas and the development of political institutions. It will discuss the rise of the state, and the institutions of legislature, executive and judiciary and their working in different countries.

MMM304   Media Literacy

This course has been designed to make students understand and analyze the messages that are being imparted by the media. It is aimed at making students aware of the content and critically analyzing the basic purpose and meaning of what they have read or viewed.

MMM305   Videography

The purpose of this course is to teach students how to make films: the use of the video camera, shooting images and putting them together in proper form. This is a practical course.

MMM306   Mass Media in Pakistan

This course will study the history and development of the media in Pakistan from the beginning to the present day. It will also discuss the role being played by the media today, Government – media relations, and issues concerning the media.

MMM307   World Civilization and Culture
This course seeks to apprise students of the world's common heritage. The achievements of the great civilizations of the past – the Egyptian, Babylonian, Greek, Roman, and their contribution to world culture. It will also discuss the contribution of the west and of Islam towards art, culture, music, literature, science and philosophy.

MMM308   Contemporary World Media
This course will provide an overview of the history and development of media in the world and the working of important world media organizations both print and electronic. It will also deal with issues of the world news flow and problems concerning the media today.

MMM309   Creative Writing
This course seeks to develop the writing ability of students. They will be trained to write paragraphs, essays, stories, letters and articles dealing with different subjects.

MMM310   News Writing and Reporting
This course will teach students what news is, how to identify a possible news story, how to gather information about it and how to present it in a proper style. It seeks to teach the techniques of reporting and news writing of different types of stories such as crime, courts, political, social, education, health, etc.

MMM311   Introduction to Broadcast Media
This course is designed to apprise the students of the structure and working of electronic media organizations – radio and television. It will teach the basics of radio and TV programs and the production, direction and scripting of different types of programs.

MMM312   Introduction to Advertising and Public Relations
This course is designed to introduce students to the principles and techniques of advertising and public relations. It will deal with the structure of the Advertising and PR industries, types of advertising, construction of effective advertising messages, preparation of press releases, handouts and effective use of media.

MMM313   Theater Studies
This course will seek to study the role of theater as a medium of Mass Communication, both in the world perspective as well as in Pakistan. It will also deal with the dynamics of producing, directing, scripting and acting for the stage.

MMM314   Online Journalism
This course is meant to familiarize students with the potential of the net as a medium of communication. It will enable students to produce news, articles and other materials to be disseminated on the net, besides creation of websites, and techniques of publishing and marketing online editions of their papers and magazines.

MMM315   Feature, Article and Column Writing
This course is designed to develop writing skills of students for advanced journalistic writing such as features, articles, reviews, columns and editorials. It is a practical course.

MMM316   Sub Editing and Page Design
The purpose of this course is to make students familiar with the techniques of copy editing, headline making, and page layout, besides rewriting, restructuring and improving copy. It will also teach composing and computerized page making techniques. This is a practical course.

MMM317   Theories of Communication
This course aims to apprise students of different concepts about the role of media, and the effects of the media on the individual and society. It will provide an overview of the different theories formulated in this regard.

MMM318   Economic Journalism
The purpose of this course is to enable the students to write news reports and articles on economic issues and matters dealing with business and finance. It is a practical course.

MMM319   Film Studies
This course will discuss the history and evolution of film as a medium of Mass Communication. It will throw light on the film industries of different countries and the various genres of films. It will also give practical training on film production, direction and other aspects of film making.

MMM320   Post Production and Editing
This is a practical course that will deal with different aspects of post production of films and videos, i.e., editing, dubbing, mixing, etc.

MMM321   Development Communication
This course will highlight the importance of communication for social and economic development. It will give a theoretical perspective on development, development issues of Pakistan, as well as planning communication campaigns for health, education, human rights, etc.

MMM322   Current Affairs
This is a course based on newspaper reading and will seek to discuss different problems and issues prevalent in Pakistan as well as the world. Students will be expected to give their perspective on different issues.

MMM323   International Communication
This course is aimed at helping students analyze the role of the media in this age of globalization. It will focus on the positive role the media can play in increasing communication among nations and in conflict resolution.

MMM324   Media Management and Marketing
This course will deal with the application of management techniques with regard to working of media organizations. It will include planning, organizing, personnel and crisis management.

MMM325   Research Report
Students will do a research report or thesis on some aspect of the media or communication.

MMM410   Introduction to Film / Cinema
Such aspects of introduction to film/cinema are learnt in theory and practice as planning, organizing, directing, controlling and promoting, including hands-on training given by professionals in an ideal work-like atmosphere enabling students to excel in careers, jobs or business.

MMM411   Introduction to Radio
The course will focus on the importance of the radio, nature of the medium, broadcast by objectives, target audience, areas / population covered, planning, production and presentation, formats (drama, music, feature, documentaries, investigative reports, interviews, road shows, musical stories, discussions, magazines), computer planning systems, terminologies of broadcasting (OB, Vet, DJ, Dubbing, Cue, Fading…..), broadcast engineering (kinds of transmitters, frequency spectrum, process of sending and receiving signals), what is AM (MW), FM (SW, LW), copyrights / royalty, legality of broadcasting, ethics of broadcasting, feedback (listeners' participation, surveys).

MMM412 Media Time and Priorities Management
This course aims at providing fresh ideas and insights for media personnel to manage time and priorities in a 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.

MMM414 Introduction to Television
The course will focus on companies and channels…terrestrial, satellite, cable: basic difference and distribution system, areas and audiences covered; videotapes discs and view data, viewing trends; audience information, planning, buying and selling; sponsored programs and campaigns, structure of rate cards/station costs, frequencies of impact, computers in planning, programs and campaigns and human interest programs of interest.

MMM415 Media Sponsorships and Supplements
The objective of this course is to help students how to plan, organize, direct, control and promote sponsorships and supplements for the media in order to generate business. The course emphasizes on advertising and supplements for the print media through building and capitalizing on potential clients and contacts and on the editorial, layout and production side of supplements. Similarly, the dynamics of seeking and coordinating sponsorships for the electronic media, including private TV and FM radio channels, will also be emphasized.

MMM416 Introduction to Web (New Media)
Students are introduced to multidisciplinary field of Electronic Commerce. The course covers 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 (key management), certificate authorities, standards, WWW security, transport and tunnel mode; Secure Sockets Layer, Secure Electronic Transactions (SET), e-auctions, e-advertising, CRM; Supply Chain Management, internet banking, e-government and future of e-commerce and technological trends.

MMM417 Media Programming and Product Development
Students are familiarized with contemporary trends in planning, organizing, directing and controlling programming and product development.

MMM418 Media Planning and Buying
The purpose of media planning is to conceive, analyze and select channels of communication that will direct advertising to the right people in the right place and at the right time. As the media becomes more complex and challenging over the years, media decisions become even more critical and the clients even more demanding. In this new advertising environment media planning and buying have become more complicated due to media options, fragmentation of the audience, cost, increasing complexity in the media buying and increasing competition. This course provides students with a comprehensive study of the subject and they will be able to understand the importance of the elements of media strategy.

MMM419 Media Entrepreneurship
To provide an understanding of the person and the process of creating and growing a new media venture, this course introduces the media entrepreneurial perspective and focuses on all the elements in the entrepreneurial process that are part of creating a new venture. It introduces students to aspects of financing a new media venture through alternative sources of capital. Particular emphasis is laid on managing a new venture during growth, early operations and expansion.

MMM420 Media Brand and Image Management
Brand Management considers strategies to build and effectively manage brand equity. It covers the role of brand awareness and image, brand extension principles, integrated marketing communications, and financial and marketing research measures.

MMM421   Media Sales
This course enables students to acquire pertinent knowledge and information pertaining to concerned clients and customers and the sales strategy of media management at large.

MMM422   Strategic Media Marketing
Strategic Marketing is an understanding of the technique, concepts, approaches and skills in marketing management and strategy planning. It incorporates strategic marketing techniques developed from models for the corporate environment, campaign marketing for the public environment and international marketing.

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.

MMM424   Media in World Affairs / International Media
The media is an important vehicle for creating an atmosphere conducive to harmonious international relations. It includes Editorial comments, headlines and news giving a particular twist to upcoming conferences, negotiations, etc. and have a major impact in forming concerned public opinion. The course covers pertinent aspects such as media professionals vision and understanding of world affairs, their ability to manage sensitive situations skillfully and congenially and their positive and potential coordination with relevant national and international organizations.

MMM425   Future Concepts and Trends
This course incorporates the contemporary tools and techniques regarding technological and business aspects of the Media Management program comprehensively including print and electronic media as well as advertising and communication and media oriented public affairs and promotional strategies.

MMM426   Crisis and Conflict Management
The fact that conflicts and crises arise in challenging and changing media situations, irrespective of print or electronic media, or all media oriented advertising and public relations, there is a growing need for techniques in crises and conflict management. This course offers an efficient and effective account of the measures or modus operandi devised and adopted to manage conflicting and critical individual, organizational and promotional situations in the vibrant fields of mass communication, public relations and corporate affairs pertaining to Pakistani job conditions, client interaction or work environment.

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*

MMM431   Imaging and Photo Journalism
This course is characterized by quick, easy and workable and affordable ways and means to use the camera traditionally or digitally for the pictorial content which is a part and parcel of journalism. It not only covers the technical aspects of photography.

MMM433   FM Radio Dynamics
The course will highlight the subject in its various forms and manifestations, including the procedure, paraphernalia and personel involved in setting up an FM Radio Channel. Planning, programming, production and presentation.

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 T.V, 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*

MMM501   Radio News Writing and Production

This course seeks to impart the basics of news production and editing for radio. Students will be taught news selection, news writing, editing, presentation and will be responsible for producing and recording entire news bulletins themselves. This is a practical course.

MMM502   Radio Program Production

In this course students will be taught to produce different types of programs for the radio, including feature programs, documentaries, talk shows, magazine programs and radio plays. This is a practical course.

MMM503TV   News Writing and Production

This course will impart the elements of writing and producing news programs for television. It will include selection of news, drafting of news, compilation of bulletin, shooting and scripting of news films and news features and production of complete bulletin.

MMM504   TV Program Production

In this course students will be taught to produce different types of programs for TV. It will include talk shows, documentaries, plays, magazine programs and general programs. The entire program including pre production, lighting, shooting, recording and editing, up to final presentation will be done by students. This is a practical course.

MMM505   Specialized Journalism

In this course, students will select the field of their specialization – sports, environment, science, arts, fashion, women's issues, etc. and will be imparted intensive training in writing news, features and articles related to that field. This is a practical course.

MMM506   Newspaper Production

The dynamics of producing a newspaper, from news gathering to editing, composing, page making and finally printing will be taught to students in this course. They will be expected to bring out first a weekly and later a daily newspaper by themselves.

MMM507   Magazine Journalism

In this course the students will be taught the process of bringing out a complete magazine by themselves. Collection of material, selection of material, editing, rewriting, proof reading, pictorial content, layout, etc. will be done by students themselves. They will have to bring out first a monthly magazine and later a weekly as part of this course. This is a practical course.

MMM508   Book Production

This course will teach students the process of book editing and production. It will include reading and editing manuscripts, composing, illustrations, designing, and printing. Students will be expected to bring out at least one book per group at the end of the course. This is a practical course.

MMM509   Creative Concepts in Advertising

Creation of advertising campaign from concept to execution will be the objective of this course. Students will be required to produce advertisements for both the print and the electronic media. This is a practical course.

MMM510   Media Planning and Marketing

This course will mainly deal with selection of proper media and strategies for marketing of products and ideas. This is a practical course.

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 Leading to PhD 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. It will also consider the ways in which research practices have become technologically reconfigured, and how this promises to impact upon qualitative research methods and practices.

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. The key topics include theory building, quantitative research methods, the development and validation of measuring instruments, ethical concerns related to research, the internal and external validity of research data, and the effective communication and implementation of research results. The course will develop students' capacity to frame research questions, derive appropriate research designs, and develop awareness of the range of alternative approaches likely to be of use in research, particularly in the course of MPhil programme. Emphasis will be laid on probability, sampling theory and multivariate regression analysis.

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. All journals accessible electronically or in print at the institute will be used. Students will be required to select articles from a specific field and submit Weekly Report Form (WRF) and Article Evaluation Form (AEF) describing the selected article.

MPM607   Seminar in Corporate Governance
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. Project covers a range of issues specific to business analysis and management as well as to the general theme of environmental sustainability as applied to business.

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 and learn to become effective and efficient HR functional heads and facilitators in formulation and implementation of organizational strategy.

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. For independent study, the participants will be provided a suitable faculty member of the university, who is able to facilitate in completing the process of research and publication.

MPM611   Advanced Corporate Finance

The course has been designed to give extended / advanced knowledge about Corporate Finance. Case study approach will be used at the end of every major chapter. Extended topics like option valuation, risk and real options in capital budgeting, financing and dividend policies will be studied at length. The modern concepts of capital market financing and risk management will be taught through case studies. Practical scenarios related to mergers, corporate restructuring and international financial management will be analyzed and discussed in detail.

MPM613   Advanced Consumer Behavior

Based on the premise that the consumer is at the epicenter of all marketing strategy, this course examines in depth the complex behavioral processes of consumer and the patterns of responses to different direct or indirect marketing stimuli or actions. Decision patterns in a variety of situations are analyzed with special reference to individual and group influences.

MPM615   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. The emphasis is given on linking micro and macro economic theory to estimation techniques, and interpreting the results of various quantitative exercises. Additional emphasis is placed on procedures for dealing with economic data, developing a research proposal, and in developing critical thinking skills useful in applied economic analysis.

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 context of testing and measurement; the testing process; test standardization; reliability and validity; intelligence and its appraisal; personality assessment; special domain testing; occupational applications; large-scale measurements; ethics and prospects.

MPP607   Training & Development

This course is designed to develop theoretical and applied perspectives on the role of training and development, needs assessment, design, development, delivery and evaluation of training and development in organizational contexts. Emphasis is placed on specific development of learning and performance outcomes throughout the training and development process.

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   Organizational Change Management

This course is designed to introduce students to the major approaches for managing both planned and unplanned organizational changes. It reviews diagnostic techniques for identifying organizational problems and examines how strategic organizational change can achieve increased quality, productivity and employee satisfaction.

MS/MPhil in Education Leading to PhD

MPE601   Advanced Qualitative Research Methodology

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. It will also consider the ways in which research practices have become technologically reconfigured, and how this promises to impact upon qualitative research methods and practices. The course also introduces the participants to APA writing style and concepts of academic writing.

MPE602   Advanced Quantitative Research Methods

This course is a platform for providing MPhil students with a broad range of quantitative research methods skills that are relevant across different disciplines. The students are introduced to topics involved in developing appropriate research strategies for investigating organizational and institutional issues and concerns. Latest literature review, presentations and research article summaries constitute its essential part. The students learn to analyze data through software such as SPSS and EVIEWS. The unit is also designed to facilitate the completion of an applied research project within the specific discipline of the students.

MPE603   Research Literature Analysis

The course will help student gain an insight into a systematic and analytical approach of doing literature review. This course will help them analyse the literature published on the given topic and evaluate it in terms of its relation to the chosen topic of secondary research. The course will provide a step by step guidance starting from formulating a problem and finding material pertinent to their area of interest to writing a full- fledged report. The course will be mainly practical and classroom activities as well as evaluation will contribute to overall objective of the course.

MPE604   Developing a Research Project

This course will make the students undergo the whole process of completing a research project starting from brain storming a suitable topic to writing a comprehensive research report. The course work will help the students identify their own areas of interest in the field of Education. The course will be mainly practical and classroom activities as well as evaluation will contribute to overall objective of the course, i.e., successful completion of a research topic.

MPE605　　Economics of Education

This course is designed to introduce participants to economic theory and practice as it pertains to educational systems and their impact on economic growth. Course material applies general economic principles and theories (e.g., investment, labor, productivity, cost, efficiency, supply and demand) to the context of education. The course will explore the decisions of individuals and families to invest in education, investigating both the private and social benefits of their investments; investigate how tuition rates and public policies effect opportunities for the education investments in higher education and analyze proposed reforms of these policies; analyse educational outcomes in schools, and which school inputs are more or less effective in producing desired educational outcomes. These questions lead to the introduction of several societal goals -- efficiency, equity, and liberty that must be considered when making decisions about the allocation of education resources.

MPE606　　Global Issues 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 students to apply the philosophical knowledge they gain in a practical context.

MPE607　　Inclusive Education

This course will give students an understanding of the instructional needs of diverse students: linguistically and culturally diverse as well as students with learning difficulties and disabilities. Participants will learn effective teaching and assessment strategies that aim at improving achievement of such students. The course will be highly interactive and will incorporate classroom-based activities and readings. The course will also include micro teaching sessions emphasizing a supportive attitude towards the diversified needs of students that ensures effective teaching and learning in classrooms.

MPE608　　Readings on Education/Book Review

This course will introduce the participants to contemporary classic and education collection of readings in selected taken from some of the most influential educational theorists and practitioners of the past, together with some widely-read contemporary theorists to correlate with their goals and stimulate thinking, debate 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 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 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. 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, not the substantive social scientific issue investigated. The skills of academic writing will be developed to enable participants to write effective academic papers.

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 (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.

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 disciplines of social sciences with a special focus on education and psychology. Separate seminars will be conducted and in each seminar, participants will be provided with knowledge and literature that will help them to understand important facts, principles and theories of the proposed disciplines. The seminars will also serve as a platform to discuss and analyze current issues using an interdisciplinary social science perspective.

PSS706 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 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 participants 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.

PSS707   Education in Social, Political and Cultural Context

The course takes an expanded view of education that 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. The course bridges research, policy, and practice in order to understand learners' experiences in educational institutions and how communities shape their educational, social, economic, and political opportunities. It also focuses on the dynamics of globalization and the ways in which migration and immigration impact learners' opportunities to learn and to participate in society.

PSS708   Teacher and Teacher Development

The course focuses on multiple, often overlapping research and practice topics about teachers and teacher development such as the histories, contexts, and workforce contours of teaching and teachers; the lives, unheard and heard voices and careers of teachers from entry to retirement; teacher preparation programs and practices; and the role of teachers in institutional reform and education policy.

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. Professional standards for testing are reviewed and consulted at all phases of the course. Ethical issues in testing, integration of testing in the overall assessment process, overall assessment of individual differences, diversity issues in testing, and cultural fairness and bias in testing will also explored.

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. Emphasis is on the importance of learners recognizing belief systems and underlying assumptions inherent in various personality models that accurately reflect their own personal perspectives and to recognize strategies and approaches in psychology that reflect identified personality theories as foundation.

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

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. The relative merits and drawbacks of major research methods are explored. This course will help students to understand and critically evaluate research reports. Students will also learn how to carry out the entire research process, starting with identifying the research problem and ending with a thesis or research report.

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 Behavior

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.

PSY430   Psychological Testing I

This course is designed to provide an introduction to concepts, theories, and methods regarding psychological testing and measurement. It will focus on areas such as psychometric principles (e.g., validity and reliability), test and item analysis, test construction, and applications of psychological testing in industry.
Pre-requisite: PSY 400

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. It enables students to become proficient in understanding the attitudes, behavior and cognitions of personnel in organizations.

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. Professional excellence is fostered by sharpening capabilities in time management, report writing, and information dissemination, while considering content appropriate to the audience.

PSY436   Seminar in Organizational Psychology

This course covers the most recent advances, issues and problems in industrial and organizational psychology through relevant professional journals, technical literature, legislation and judicial decisions, advanced research techniques, and consulting practice 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.

PSY504   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

The course begins with a discussion of how different messengers of Allah came to spread His word. It discusses the need for Islam, the five pillars, the life of the Prophet Muhammad (PBUH), the companions of the Prophet (PBUH), several Surahs, Ahadiths, and Ayats.

Supply Chain and Logistics Management

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. Topics like buyer supplier relationship, new product development, specifications and standards, procurement of equipment, cost analysis, pricing, negotiations, supply development, supply chain score card, SCOR models, IT applications to SCM, green supply chain are focused using case studies. Research report is a requirement of the course.
Pre-requisite: *MAN 101/401*

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- chain- management tracking- and- tracing are investigated using the case study approach.

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.

SSC103   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.

SSC301   History of Ideas
The course has been divided into different sections, e.g., man, theory of knowledge, ethics, politics, religion and science. The course will logically discuss the most representative ideas related to each section and attempt to put them together into an overall picture of man and his relation to the world.

SSC302   Important Concepts in Philosophy
This course will seek to discuss the history of ideas, from the ancient Greeks to the present, and the contribution of important philosophers.

SSC401   Business Ethics
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 proceeds 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.

SSC403   Social Psychology
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, mass media, and socioeconomic class on individuals and groups. The course is based on the basic concepts, theoretical and research perspectives on social processes. Students examine the selected forms of social reaction patterns, including socialization, attitudes, language acquisition, collective behavior, deviant behavior, prejudices, and violence.

SSC405   Business Ethics and Financial Responsibility
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.

SSC406   Psychology and Learning
The course examines major theories of learning with relevance to instrumental and classical (Pavlovian) 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.

SSC501   Epistemology and Moral Philosophy
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

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.

STA201/401   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. The topics include inequalities, function notation and inverses, linear, quadratic, polynomial and exponential functions and mathematics of finance.
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 201/401

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, from an actuarial viewpoint and Survival models provides an introduction to actuarial mathematics and statistics.
Pre-requisite: STA203

STA207   Statistics for Engineers

Basic concept of probability, conditional probability, independent events, Baye's formula. Concept of random variables, discrete and continuous one and two dimensional random variables, probability distributions, marginal and joint distributions and density functions. Important probability distributions (Binomial, Poisson, Uniform, Normal, Exponentials and Hyper-geometric). Mean, variance, moments and moment generating functions, linear regression and curve fitting. Central limit theorem, autocorrelation and cross-correlations, power spectral density functions and stochastic processes.

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 simple random sampling, sampling with unequal probabilities, stratification, single-stage and multi-programming are taught in this course. Regression, analysis of variance and hypothesis testing; data and regression analysis using MiniTab will also be included.

Pre-requisite: *MTH201, STA203, STA301, STA302*

STA301/402   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 frame-work of programming are taught in this course. Regression, analysis of variance and hypothesis testing; data and regression analysis using MiniTab will also be included.

Pre-requisite: *MTH201, STA203, STA302, 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 serves as an introduction to the use of statistical methods for analyzing and forecasting data observed over time. The topics include; trigonometric regression, periodogram/spectral analysis, smoothing autoregressive moving average models regression with auto correlated errors, linear filters and bivariate spectral analysis. Stress on methods and applications, software implementations are extensively used in assignments.

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

Common sampling models in business and economic problems, information from data, likelihood function of parameters, choices of models, Bayes' Theorem, subjective basis for probability, sequential nature of Bayesian inference, prior and posterior distributions of parameters in binomial, Poisson, exponential and normal populations, comparison of two normal distributions, predictive distributions, decision theory, utility, risk aversion, extensive form of analysis, two-action problems, point estimation, best population problems, economics of sampling. Dependence of observations in economic and business data, trend, moving averages, autoregressive series, non-stationary models and their applications, Bayesian estimation of parameters, adaptive forecasting, control theory, elements of difference calculus, 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
The course introduces the use of statistical & mathematical methods to proceed beyond the collected data in the area of decision-making. The course includes frequency distribution, measures of central location, measures of dispersion, linear equation, quadratic, exponential & logarithmic function, mathematics of finance, matrix algebra differentiation & optimization. A systematic exposure to the statistical analysis of business situations covering descriptive statistics will also be provided.

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 various 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 using MINITAB, SIMULA.
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 addresses, from a statistical perspective, how experiments should be designed so that the effects of the factors being tested can be distinguished from one another and from the variability inherent in the system. We will consider several design types, from practical and mathematical standpoints, such as Randomized Blocks, Latin Squares, Two-Level Factorial and Fractional Factorial designs, and Taguchi's Robust Design. Students will use statistical software to analyze real data and complete a term project.
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 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, hyper geometric, 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
Teach the design of digital electronic circuits with field programmable gate array (FPGA).Introduction to digital design and FPGA, FPGA architectures, SRAM-based FPGAs, permanently-programmed FPGAs, circuit FPGA-based system design, logic design process, combinational network delay, power and energy optimization, arithmetic logic elements, logic implementation using FPGAs, FSM design, ASM design.
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 fiber 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.

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.

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.

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; Emphases 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. Strong emphasis is placed on analysis, monitoring and evaluation of network security. Intrusion and detection strategies are reviewed. An in-depth overview of vendors and other security resources is covered.

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. Emphasis is on applying scenario planning tools and techniques as a way to develop and respond to evolving industry scenarios.

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 organizational 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.

TCM515   Multimedia Communication

This course introduces technologies for multimedia communications. 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. The H.32x series, standards for audiovisual communication systems in various network environments, will be described. Current research results in multimedia communications will be reviewed through student seminars in the last weeks of the course.

TCM516   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.

TCM517   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.

TCM518   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.

TCM519   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.

TCM520   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.

TCM521   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 ae 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

The students in this course 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.

Certificate Courses

External students are allowed to register for 15-week Certificate Courses of their areas of interest. The following are some of the Certificate Courses being offered during 2010-2011:

Accounting
Accounting Information Systems
Advanced Financial Accounting

Finance and Banking
Analysis of Financial Statements
Corporate Finance
Money and Capital Markets
Treasury and Fund Management

Human Resource Management
Strategic Human Resource Management
Salary and Compensation
Leadership Studies

Marketing
Advertising
Personal Selling
Brand Management
Media Planning

Advertising and Communication Management
Principles of Marketing
Principles of Advertising
Advertising Research
Client Management

### Health Services Administration
Strategic Management of Health Services
Pharmaceutical Marketing and Quality Assurance

Management Information Systems
Oracle/Developer 2000
Software Engineering
Data Communication and Networking
Programming in C++

Sales Management
Effective Territory Design
Basic Selling Skills
Distribution and Channel Management
Merchandising

Fall 2012

Registration and Fee Payment
- On board students   Saturday, July 14, 2012 to Thursday, August 30, 2012
- New students   Saturday, July 28, 2012 to Wednesday, August 15, 2012

Last day to drop courses without penalty	Thursday, August 30, 2012
Orientation	Saturday, September 01, 2012
Commencement of Regular Classes	Monday, September 03, 2012
Commencement of Executive Classes	Saturday, September 08, 2012
Last day to drop courses with penalty	Sunday, October 21, 2012
Eid-ul-Azha*	Saturday, October 27, 2012 and Sunday, October 28, 2012
Iqbal Day	Friday, November 09, 2012
Muharram*	Saturday, November 24, 2012 and Sunday, November, 25, 2012
Classes End	Sunday, December 16, 2012
Break	Monday, December 17, 2012 to Sunday, December 23, 2012
Quaid-e-Azam's Birthday	Tuesday, December 25, 2012
Final Exam	Monday, December 24, 2012 to Monday, January 07, 2013

Exam Schedule for Regular and Executive Students

Week	Exams	Regular	Executive
6th	1st Hourly	10/08 - 10/11	10/13 - 10-14
11th	2nd Hourly	11/12 - 11/14	11/17 - 11/18
16th	Final	11/12/2012 to 01/07/2013	

* Subject to the appearance of moon
Note: All dates are subject to change. Students will be informed of the changes well in advance.

Spring 2013

Registration and Fee Payment
• On board students	Saturday, November 17, 2012 to Sunday, December 16, 2012
Last day to drop courses without penalty	Thursday, January 10, 2013
Commencement of Regular Classes	Monday, January 14, 2013
Commencement of Executive Classes	Saturday, January 19, 2013
Eid-e-Milad-un-Nabi*	Friday, January 25, 2013
Last day to drop courses with penalty	Sunday, February 24, 2013
Classes End	Sunday, April 21, 2013
Break	Monday, April 22, 2013 to Sunday, April 28, 2013
Final Exam	Monday, April 29, 2013 to Monday, May 13, 2013
Labour Day	Wednesday, May 01, 2013

Exam Schedule for Regular and Executive Students

Week	Exams	Regular	Executive
6th	1st Hourly	2/18 - 2/21	2/23 - 2/24
11th	2nd Hourly	3/25 - 3/28	3/30 - 3/31
16th	Final	4/29/2013 to 5/13/2013	

* Subject to the appearance of moon
Note: All dates are subject to change. Students will be informed of the changes well in advance.

Summer 2013

Registration and Fee Payment
- On board students   Saturday, March 30, 2013 to Sunday, May 05, 2013
- New students   Saturday, March 23, 2013 to Sunday, March 31, 2013

Last day to drop courses without penalty   Sunday, May 12, 2013
Orientation   Saturday, May 18, 2013
Commencement of Executive Classes   Saturday, May 18, 2013
Last day to drop courses with penalty   Sunday, June 30, 2013
Eid-ul-Fitr*   Friday, August 09, 2013 to Saturday, August 10, 2013
Independence Day   Wednesday, August 14, 2013
Classes End   Sunday, August 18, 2013
Final Exam   Saturday, August 24, 2013 and Saturday, August 31, 2013
                                                       Sunday, August 25, 2013 and Sunday, September 01, 2013

Exam Schedule

Week	Exams	Executive
6th	1st Hourly	6/22 to 6/23
11th	2nd Hourly	7/27 to 7/28
16th	Final	8/31 & 9/1 to 9/7 & 9/8

Summer Crash 2013

Registration and Fee Payment
- On board students   Saturday, March 30, 2013 to Sunday, May 05, 2013
- New students   Saturday, March 23, 2013 to Sunday, March 31, 2013

Last day to drop courses without penalty   Sunday, June 02, 2013
Commencement of Regular Classes   Monday, June 10, 2013
Last day to drop courses with penalty   Saturday, July 13, 2013
Classes End   Thursday, August 08, 2013
Eid-ul-Fitr*   Friday, August 09, 2013 to Saturday, August 10, 2013
Independence Day   Wednesday, August 14, 2013
Break   Friday, August 09, 2013 to Sunday, August 18, 2013
Final Exam   Monday, August 19, 2013 to Thursday, August 22, 2013

Exam Schedule

Week	Exams	Executive
5th	Mid-Term	7/8 - 7/11
11th	Final	8/19/2013 to 8/22/2013

* Subject to the appearance of moon
Note: All dates are subject to change. Students will be informed of the changes well in advance.