

Institute of Business Management

Catalog 2013-2014



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

There is nothing as thought-provoking and heart-warming as sharing ideas and insights about life, education and career with the younger generation, especially our students. As new entrants to IoBM, your key to long lasting success lies in having a positive mindset.

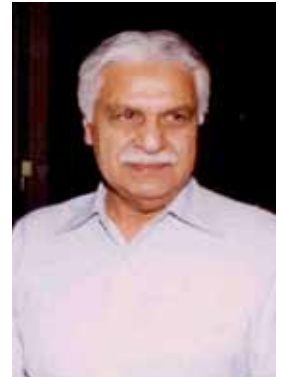
IoBM's educational programs are confidence building, imparting meticulous teaching and training, and providing a creative and professional emphasis. IoBM alumni placed in leading national and multinational companies and IoBM's top national and international ranking are its testimony.

Whether you are a student of humanities, social sciences, science and technology or business management, your success lies in simple study tips as being regular and attentive in class, learning lessons on a daily basis, timely revision and giving due respect to discipline and decorum of the institution.

While academic knowledge remains of paramount significance, the remarkable role of IoBM student societies in grooming students' practical skills to organize and promote career-oriented events is reflective of their promise and potential. Please be mindful whether it is a reputed Business School or a vibrant corporate environment, communication skills are key to your career success.

Besides the brand credibility that IoBM students enjoy and benefit from, IoBM offers a harmonious blend of academic excellence and career focused training with overall personality development. I welcome you aboard to make the most of the opportunities that IoBM offers in letter and spirit.

Illahi Buksh Soomro
Chancellor



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Welcome to IoBM From the President



Welcome to the Institute of Business Management (IoBM), where a healthy, research-led learning environment, assiduously nurtured over more than seventeen years, awaits you.

Since our very inception, we have continuously endeavored to enhance our core institutional strengths, and have invested in people, systems and infrastructure, so as to be able to impart sound knowledge and professional skills as well as instill sterling values in our students. It is hardly surprising therefore, that many of our alumni today hold leadership positions in organizations here and abroad, while others successfully manage their own businesses.

Our progress has been facilitated because of the close collaboration between our four faculties, the College of Business Management, the College of Economics and Social Development (CESD), College of Computer Science and Information Systems (CCSIS), and the College of Engineering & Sciences (CES), that allows us to offer diverse areas of specialization within our recognized and highly commended MBA Program, in Education Management, Health Management, Environment and Energy Management, Business Psychology, as well as Finance and Risk Management. Similar enrichments characterize our BBA (Honors) programs, BS Actuarial Sciences, Media Studies, Economics & Finance, Accounting & Finance, as well as our recently instituted MS/M.Phil and Ph.D. programs. Similarly, our BS Industrial Engineering and Management Program offered at the College of Engineering & Sciences (CES) is specifically designed to integrate engineering skills with managerial know-how, and stands out as the only program of its kind in the country. We also offer a BE Electrical Engineering degree, approved by the Pakistan Engineering Council that includes specializations in Electronics & Telecommunication.

Our agreements with international universities currently allow our students and faculty to pursue advanced study or training in institutions like the Bilkent University in Turkey, International Burch University in Bosnia, University of Florence in Italy, Vytautas Magnus University in Lithuania, Hanyang University in South Korea and Guilin University of Technology in China. More recent agreements with leading universities in China, Germany, Georgia and France will significantly enhance the exposure and experience of our students and faculty. Two exchange students from Guilin University in China spent their Fall semester at IoBM. We are collaborating with a German Foundation, Senior Expert Service (SES) that regularly sends technical experts and academicians, to set up an Environment and Energy Teaching & Research Center (EETR) at our campus soon.

We take great pride in our students who continue to show their mettle in academics, sports, and other areas by participating and winning awards in numerous local and international competitions such as the CIMA Global Business Challenge with the Global Final Round held last year in Sri Lanka, the CFA Institute Research Challenge at the regional level in Hong Kong, the Unilever Lipton Hunt, the AKU Inter University Football Tournament, and the HEC All Pakistan Inter-varsity Table Tennis championship. We also remain fully committed to not only maintain our standing as one of the top professionally run business schools in the country, but also open up new avenues of professional education that will prepare our students to face the future with confidence and élan.

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: 1994-2013

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 and Sciences (CES). Since 2006 the Institute has been ranked as one of the top universities in the private sector, both by the Higher Education Commission of the Federal Government and the Sindh Provincial Government. During end 2010, we have been honored with prestigious awards of EDUNIVERSAL Palms for meritorious evaluation and certification of educational institutions around the world. The Institute is a member of the International Association of Universities (IAU), Association to Advance Collegiate Schools of Business (AACSB) and other international and national organizations.



The Governor of Sindh is an ex-officio Patron and Mr. Illahi Buksh Soomro, former Speaker National Assembly, is the Chairman of the Board of Governors of the Institute and also its Chancellor. The other members of the Board are:

- Chairman Higher Education Commission 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, Education & Literacy Department, Government of Sindh
- Mr. Shahjehan S. Karim, President Foundation for Higher Education
- Mr. Justice G. H. Malik
- Mr. Basheer Janmohammad
- Mr. Jahangir Siddiqui
- Mr. S. M. Muneer
- Mr. Muhammad Ali Tappa
- 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, Education, Psychology and Management Information Systems. A four year Bachelor of Computer Science (Honors) followed by a two years Master of Computer Science and MBA in Finance & Risk Management is offered through the College of Computer Science & Information Systems (CCSIS).



The 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. College of Engineering and Sciences (CES) offers program in Electrical Engineering.

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

The Institute has come a long way since 1995. There are over 4000 students on our campus which is large and purpose-built at Korangi Creek on a 10 acre site, comprising the Business College building, Administration and Entrepreneurship & Management Excellence Center building, CCSIS building, a Convocation Center, Student Activity Center, a five-storeyed library building, Industrial Engineering and Management building, a mosque and CESD building.

At the Institute's fourth convocation in December, 2001, an honorary degree of Doctorate of Philosophy was conferred upon Dr. Nafees Sadik, former Executive Director, United Nations Population Program. At the fifth convocation held in December, 2002, an honorary degree was conferred on our keynote speaker, Mr. Babar Ali, Pro-Chancellor, Lahore University of Management Sciences (LUMS), and at the ninth convocation an honorary degree was conferred on Dr. Goolam Mohamedbhai, President International Association of Universities (IAU). The sixth convocation was held in December 20, 2003 with Dr. Atta-ur-Rahman, Chairman, Higher Education Commission and Minister for Science & Technology as the Chief Guest and Ms. Musharaf Hai, Chairperson, Unilever Pakistan Limited as the keynote speaker.

The seventh convocation was held on December 18, 2004 with the Governor Sindh as the Chief Guest and Mr. Hameed Haroon, Chief Executive Dawn Group of Newspapers as the keynote speaker. Over 300 students were awarded BBA (Hons), BCS (Hons), BS (Accounts), MBA and MCS degrees at this convocation. The eighth convocation was held on December 17, 2005 with the Minister for Education, Sindh, as the Chief Guest and Syed Ali Raza, President, National Bank of Pakistan, as the keynote speaker. Over 400 students were awarded degrees at this convocation. The ninth convocation of the Institute was held on December 16, 2006 with the Education Minister as the Chief Guest and Dr. Goolam Mohamedbhai President, IAU, as the keynote speaker. Over 450 students were awarded degrees at this convocation. The tenth convocation was held on December 8, 2007, where Mr. Jose Manuel Salazar-Xirinachs, Executive Director of the International Labour Organization, Geneva was the keynote speaker and over 500 students were awarded degrees. The eleventh convocation of the Institute was held on December 6, 2008 where the Governor, State Bank of Pakistan was the keynote speaker and Governor Sindh, Dr. Ishrat ul Ebad was the chief guest and over 700 degrees were awarded to students at this convocation. Syed Qaim Ali Shah, Chief Minister of Sindh and Mr. Nisar Ahmed Khuhro, Speaker Sindh Assembly attended the twelfth convocation of the Institute, held on December 05, 2009. The keynote Speaker was Mr. Shaharyar Muhammad Khan, former Foreign Secretary and former Chairman of the Pakistan Cricket Board. As many as 927 graduates were awarded degrees. The thirteenth convocation was held on December 4, 2010. The chief guests on the occasion were Dr. Abdul Hafeez Shaikh, Minister for Finance, Revenue, Economic Affairs & Statistics and the keynote speaker was Dr. Javaid R. Laghari, Federal Minister / Chairperson of the Higher Education Commission of Pakistan. The fourteenth convocation was held on December 10, 2011 over 983 degrees were awarded to students at this convocation. The chief guest on the occasion was Dr. Shams Kassim-Lakha, Founding President and Trustee of AKU and the keynote speaker was Mr. Javed Jabbar, Chairman and Chief Executive, JJ Media (Pvt.) Ltd. The fifteenth convocation was held on December 08, 2012. Over 825 degrees were awarded to students at this convocation. The keynote speaker was Mr. Shahid Aziz Siddiqi, Chairman and CEO, State Life Insurance Corporation of Pakistan.

City Center

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



Why Choose IoBM?

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 and MBA (Evening) in diverse fields, held on weekends placing special emphasis on the needs of busy executives and those who, having finished one career, wish to go for a new one. IoBM offers programs in Health and Hospital Management, Finance & Risk Management, Industrial Management, Telecommunication Management, Environment & Energy Management, Education Management, Organizational Psychology, Economics and many other disciplines.

IoBM faculty excel in their respective fields. They pass on their expertise in research and scholarship to students enabling them to have an enhanced understanding of their respective disciplines.

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

IoBM has earned its reputation through an excellent internship and graduate employment record. The rigorous academic degree courses enable graduates to acquire breadth and depth in their chosen subjects and, therefore, enter a wide range of careers. A large number of its graduates join top business schools in Europe, USA and Canada.

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

IoBM is now connected with PERN2, a high speed dedicated National Research & Education Network (NREN) for the universities/institutes and other academic sectors of Pakistan.



COLLEGE OF COMPUTER SCIENCE
&
INFORMATION SYSTEMS



Life at IoBM

Resources and Facilities

Institute of Business Management has a purpose built twenty acre campus located in the serene and secure surroundings of Korangi Creek, Karachi. The 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 Entrepreneurship & Management Excellence Center building, with a covered area of 20,000 sq.ft. was completed in 2001. Another centrally air-conditioned building with a covered area of 50,000 sq.ft., houses the College of Computer Science and Information Systems and has been operational since 2002. The Convocation Center was completed in November, 2002, and the Students Activity Center building in September, 2003 which has a second floor housing 10 faculty residential suites for visiting scholars and was completed in January, 2006. The library building has been operational since January, 2005. A separate building houses the department of Industrial Engineering & Management. The Institute provides students with subsidized transportation to and from the campus through conveniently located pick and drop points all over Karachi. Girls are provided this facility to and from their homes. The campus also has ample car parking facilities.

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) and the newly developed software Library Information and Management System (LIMS), available at the front desk. Students are provided with Internet workstations and rooms for group study. Of the many recent initiatives by IoBM are its access to a large number of e-resources through the HEC Digital library, and online journals through JSTOR e-database. The library also provides access to print and online journals through subscription to a number of business, marketing, management and HRM journals. In addition to the main library, the Learning Resource Center in the Academic block caters to the scholarly requirements of M Phil and PhD programs. The Library engages in numerous projects to expand access to its physical and digital collections. Skills development sessions are conducted for students and faculty from time to time. The library projects on the horizon include development of a portal of web links, just a click away, on the desktops of faculty and students. The library employs a dynamic and diverse staff offering innovative and flexible services to library users.

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 and fun stalls, CBMUN, Green Day, Drama festival and so much more. One can never get enough of it.

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

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

Recent Events

Dialogue Society

- A talk by Adnan Rashid on January 19, 2012 on "Youth Empowerment through Islamic Spiritualism"
- An empowering and heart touching lecture, "Who are Our Real Heroes?", by Shaykh Zahir Mahmood who had come all the way from Birmingham to conduct lectures in different universities in Karachi
- A talk by a Peace TV speaker Shaikh Hussain Yee on January 17, 2013
- A Lecture by Shujauddin Shaikh on The Sealed Nectar: The Seerah of the Prophet Muhammad (peace be upon him) on January 28, 2013

Egalitarian Society

- Egalitarians Society launched the fourth issue of "Economizer" in December, 2012

Marketing Society

- A workshop on "A Peek Inside the Black Box" in February, 2012
- A MACC Workshop on Social Media Marketing

The ARM Society

- A conference on Risk Management, i.e, Risk Frontier 2012 (Mitigating Emerging Risk) on October 3, 2012

The Strategic Human Resource Society (SHRS)

- "ZLDC: Zenith Leadership and Development Conference 2013" on January 18 – 20, 2013

Club IT

- IoBM Club-IT, in collaboration with Telenor Pakistan (Djuice), conducted a theatre activity at IoBM which was based on a social campaign "Khamoshi Ka Boycott" on December 12, 2012
- A "Workshop on Photography" for the students of IoBM

CBM Society of Health Managers

- The Eight Health Asia Conference was held in April 2012 at the Expo Center, Karachi. CSHM participated enthusiastically by attending the educational sessions on Quality in Health Care
- CBM Society of Health Managers conducted the EcoHealth on October 6, 2012
- The CSHM Health Camp – ME AND MY PARENTS-MY HEALTHY WORLD CSHM was held on January 27-28, 2013



Entertainment Plus Society (EPS)

- Eid Milad un Nabi (SAW) on February 14, 2013
- Open house on February 12, 2013

Finance Society

- The Finance Society of IoBM in collaboration with the Institute of Capital Market (ICM) organized a seminar on "Investor Awareness", this seminar was part of the 'Investor Education and Awareness Program'
- A guest speaker training session on the subject of "Motivation & psychology of success"

Sports Society

- LUMS University invited our futsal team and cricket team in LUMS Inter University Sports, Festival 2012 on January 12, 2012 to January 17, 2012
- Second AKU Inter University Lawn Tennis Championship 2012
- HEC Intervarsity Table Tennis (Boys) Championship Zone-G, 2012 organized by NED University in Islamabad on February 15 to 17, 2012. Out of sixteen Universities, IoBM Team reached the Final
- HEC All Pakistan Intervarsity Table Tennis Final round championship at Islamabad organized by the HEC at International Islamic University Islamabad on March 28 to 31, 2012
- First Greenwich University Table Tennis (Girls) tournament 2012. Six Universities participated in this tournament, IoBM Team was runner-up
- HEC (Boys and Girls) Table Tennis Tournament 2012-2013, IoBM Team reached the semi final
- Tenth AKU Inter University Football tournament 2012 organized by the Aga Khan University in April 2012. IoBM reached the final
- VANQUISHERS- Sports Society INTER SOCIETY SPORTS FESTIVAL FALL 2012 from October 22-24, 2012



Literary and Public Speaking Society (LPSS)

- A talk show on Open House and Recruitment Drive organized by LPSS, Mr. Faisal Sabzwari was the chief guest
- CBMUN 2013 was a resounding success. The participants were exposed to real world global issues and practical solutions were suggested

Media Management Society

- A dialogue on CSR: An interactive session was organized on June 30, 2012. The topic was CSR: Passion or Fashion
- A session on Financial Solutions for the Common Man: Presented before corporate guests and projected by GEO, CNBC and Express News, Express Tribune, Regional Times, Daily Times, Business Recorder, Pakistan Observer and Financial Daily
- An interactive session of students with media: "How Media can project the positive image of Pakistan?"
- IoBM's grand 'Mela' for Special Children: Special children with teachers were invited as special guests on Friday, April 20, 2012. Umeed Special Academy, Sunflower Institute and JS School for the Deaf attended the event

The Enlighterz Society

- TES arranged an Open House to serve as an orientation for the new IoBMers. Sign-ups were held as per tradition so as to welcome new people to the society
- Panorama '12 – The Ultimate Creativity Workshop, held in December 2012



Mentor Society

- SAATH BARHAINGAY HUM "we rise, we shine TOGETHER" was an event for kids who go to school organized by the Mentor Society of IoBM.

Mathematics Society

- A Mathematics Colloquium entitled "Stochastic Modeling and Data Analysis" was organized by the Society.

Social Welfare And Trust (SWAT)

- On the third day of Eid ul Azha 2012, SWAT led an annual Meat Distribution project to provide food to the underprivileged.
- SWAT spent the National Day with amongst the beaming faces of Pakistani children. 250 plus children were invited to a sports day festival from many small schools.
- In collaboration with FESF, SWAT arranged a fund raising event at Royal Rodale.
- In the charitable month of Ramadan, SWAT with the help of donations, arranged iftar for more than 2000 plus people for seven consecutive days.



Convocation

In December, 2012, IoBM held its fifteenth Convocation, awarding degrees to 268 MBA (Regular), 100 MBA (Executive), 26 MBA (Health and Hospital Management), 33 MBA (Industrial Management), 10 MBA (Media Management), 12 MBA (Advertising and Communication Management), 20 MBA (Finance and Risk Management), 13 MBA (Telecommunication Management), 04 MBA (Educational Management), 01 MS (Economics & Finance) 07 MPhil, 262 BBA (Honors), 58 BS (Joint Honors) and 01 BS (Computer Science). The keynote speaker was Mr. Shahid Aziz Siddiqi, Chairman and CEO, State Life Insurance Corporation of Pakistan.

Gold Medals were awarded to the following students:



Syeda Humaira Akhtar
BBA (Honors)
Adamjee Foundation
Gold Medal



Hina Rahman
BBA (Honors)
Syed Moazzur Rab Memorial
Gold Medal



Hassan Ahmed
BS (Join Honors)
Halima-Fatima Memorial
Gold Medal



Sana Habib Dar
MBA (Regular)
Imam Ali Kazi Memorial
Gold Medal



Javeria Rab Siddiqui
MBA (Marketing)
S. H. Hashmi Memorial
Gold Medal



Najah Saeed
MBA (Finance)
State Life Insurance
Gold Medal



Anam Nazneen
MBA (Regular)
Sanofi-Aventis
Gold Medal



Hozefa
MBA (Executive)
Janmohammad Dawood
Gold Medal



Alishba Khatri
MBA (Executive)
Bank Alfalah Ltd.
Gold Medal



Abdul Saboor Zaman
MBA (Industrial Management)
Shan Foods
Gold Medal



Talat Nur
MBA (Health & Hospital Mgmt.)
Razzak Tabba Memorial
Gold Medal

Global Linkages

International Relations Department

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

Eduniversal Ranking

Eduniversal, based in Paris, France, is a worldwide academic institutions ranking organization which ranks the 4,000 best academic institutions from around the world. In 2011, Eduniversal had adjudged IoBM's two Business Programs as best in the world and also ranked six Business Programs of IoBM as best in the region. In 2012, Eduniversal ranked 18 MBA programs of IoBM. The ranking is as follows:

- MBA - Top 200 Best Masters in MBA Full Time Global Ranking. (No. 15 in Central Asia)
- MBA Marketing - Top 200 Best Masters in Marketing Global Ranking. (No. 8 in Central Asia)
- MBA Human Resource Management - Top 200 Best Masters in Human Resources Management Global Ranking. (No. 7 in Central Asia)
- MBA Finance and Risk management - Top 200 Best Masters in Corporate Finance Global Ranking. (No. 7 in Central Asia)
- MBA Advertising and Media Management - Top 200 Best Masters in Communications Global Ranking. (No. 3 in Central Asia)
- MBA Supply Chain Management - Top 100 Best Masters in Supply Chain and Logistics Global Ranking. (World's No. 40)
- MBA Health and Hospital Management - Top 100 Best Masters in Health Management Global Ranking. (World's No. 46)
- MBA Executive - Top 200 Best Masters in Executive MBA Global Ranking. (No. 14 in Central Asia)
- MSc Economics - Top 200 Best Masters in Economics Global Ranking. (No. 7 in Central Asia)
- MBA Full Time - Top 200 Best Masters in General Management Global Ranking. (No. 18 in Central Asia)
- MBA Environment and Energy Management - Top 100 Best Masters in Sustainable Development and Environmental Management Global Ranking. (World's No. 66)
- MBA Industrial Management - Top 200 Best Masters in Engineering and Project Management Global Ranking. (No. 10 in Central Asia)
- MBA Finance and Risk Management - Top 100 Best Masters in Financial Markets Global Ranking.
- MBA Telecommunication - Top 200 Best Masters in Engineering and Project Management Global Ranking.
- MBA Finance and Accounting - Top 200 Best Masters in General Management Global Ranking.
- MBA Education Management - Top 200 Best Masters in General Management Global Ranking.
- MBA after BBA & BS Jt. (Hons) 1 Year - Top 200 Best Masters in MBA Full Time Global Ranking
- MBA Executive - Top 200 Best Masters in MBA Full Time Global Ranking

Erasmus Mundus (EM)

Erasmus Mundus is a cooperation and mobility Program of the European Union in the field of higher education. IoBM is participating in the Erasmus Mundus Project of the European Union 2012-2014 as Joint Coordinator to develop institutional cooperation by promoting linkages between leading Asian and European Universities, in the form of student, faculty and staff mobilities. This Program will also enable Undergraduate, Master's, PhD and Post Doctorate students of Asian partner countries to benefit educationally, linguistically and culturally from 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.

List of members of EM Consortium 2013-2014 is as follows:

European Union Partners:

- Spain University of Malaga (Coordinating Institution)
- France University Montpellier
- Germany Erfurt University of Applied Sciences
- Italy University of Florence
- Lithuania Vytautas Magnus University
- Portugal Institute of Politecnico de Castelo Branco
- Poland Wroclaw University of Technology
- Slovenia Technical University of Kosice

Asian Partners:

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



Bilateral Agreements

IoBM is currently managing various bilateral agreements under formally signed Memorandum of Understanding (MoU). MoUs provide an exchange of students, faculty and staff and promotes joint research and consultancy between the Universities. IoBM has signed MoUs with the following international Universities.

- Eqrem Cabej Universities, Albania
- American International University, Dhaka, Bangladesh
- University of Chittagong, Bangladesh
- Gaeddu College of Business Studies, Bhutan
- International Burch University, Bosnia
- Guangxi University of Finance and Economics, China
- Guangxi University of Technology (GXUT), China
- Guilin University of Technology, China
- University of Florence, Italy
- Hanyang University, South Korea
- National University of Mongolia
- University of Kuala Lumpur, Malaysia
- Kathmandu University, Nepal
- Pokhara University, Nepal
- Girne University, North Cyprus
- Institute of Politecnico de Castelo Branco, Portugal
- University of Malaga, Spain
- University of Kelaniya, Sri Lanka
- Michigan Technological University, USA
- Bilkent University, Turkey
- University of Peradeniya, Sri Lanka
- Mykolas Romeris University, Lithuania
- Vytautas Magnus University, Lithuania
- Siam University, Thailand
- Koc University, Istanbul, Turkey
- Istanbul Kemerburgaz University, Turkey
- Erfurt University of Applied Sciences, Germany
- University of Georgia, Tbilisi



Student and Faculty Exchange Program

Recently, IoBM's students have gone to the Universities mentioned below through Student Exchange Programs:

1. Bilkent University, Turkey
2. University of Florence, Italy
3. International Burch University, Bosnia
4. Hanyang University, South Korea
5. Guilin University of Technology, China
6. Vytautas Magnus University, Lithuania
7. Erfurt University of Applied Sciences, Germany

IoBM has entered into an understanding with these universities for exchange of students on waiver of university tuition and in some cases provision of free hostel facilities. Two students have come from Guilin University of Technology, China in Fall Semester to IoBM. More students are expected from different universities in the upcoming semesters through the student exchange program via Memorandum of Understanding from Guilin University of Technology, Vytautas Magnus University and University of Florence. A number of students from IoBM, who will be going to Erfurt University of Applied Sciences for undergraduate studies for a semester, will also be attached with leading German Companies for practical experience.

A number of foreign faculty members have been coming to IoBM for a semester and longer periods from Spain, Germany, China and Nigeria. 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

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

Memberships of Professional Bodies

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

1. International Association of Universities (IAU), UNESCO, France
2. International Association of University Presidents (IAUP)
3. The Association of Commonwealth Universities (ACU), UK
4. Association of Universities of Asia and the Pacific (AUAP), Thailand
5. AACSB International -The Association to Advance Collegiate Schools of Business, USA
6. Asian Media Information and Communication Centre (AMIC), Singapore
7. Management Association of Pakistan (MAP), (Member, Executive Committee)
8. Marketing Association of Pakistan (Honorary Secretary) for the year 2012-2013)
9. Employers Federation of Pakistan
10. Institute of Corporate Governance
11. International Finance Corporation (IFC), USA
12. Asian Pacific Quality Network (APQN), Taiwan



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

COM107	Academic 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
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Social Science

SSC101	Introduction to Psychology
SSC301	History of Ideas
SSC401	Business Ethics

Religious Studies

REL101	Islamic Studies
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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
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Management

MAN101	Principles of Management
MAN302	Organizational Behavior
MAN303	Production and Operations Mgmt.
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 Info. 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	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

Human Resource Management

HRM501	Recruitment and Selection
HRM502	Industrial Relations and Labor 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 & 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 Org. & 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

Academic English
Principles of Microeconomics
Principles of Management
Computer Concepts
College Algebra
Islamic Studies

Semester Two

Introduction to Financial Accounting
Business Communication I
Principles of Macroeconomics
Computer Applications I
Calculus for Business Decisions
Introduction 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.



It is of great pride and honor to be a graduate of IoBM. It takes genuine "effort" and "will" to acquire quality education from a quality institution flying colors. To be distinct in life, one's effort must be distinct from the rest. This institution provides you ways and opportunities to make your mark!

**Huzefa Shabbir Hussain
Gold Medal - MBA (Executive)**



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

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

Economics

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

Finance & 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
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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
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Management

MAN101	Principles of Management
MAN302	Organizational Behavior

Management Information Systems

MIS402	Computer Concepts & Applications
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Marketing

MKT301	Principles of Marketing
MKT404	Methods in Business Research

Mathematics

MTH101	College Algebra
MTH103	Calculus for Business Decisions

Political Sciences

PSC301	Pakistan Studies
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Religious Studies

REL101	Islamic Studies
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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**Semester One**

Academic 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

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

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

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

Communications

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

Economics

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

Finance and Banking

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

Human Resource Management

HRM301	Human Resource Management
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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
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Management

MAN101	Principles of Management
MAN302	Organizational Behavior
MAN403	Entrepreneurship & Small Business Mgmt.

Management Information Systems

MIS402	Computer Concepts & Applications
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Marketing

MKT301	Principles of Marketing
MKT404	Methods in Business Research

Mathematics

MTH101	College Algebra
MTH103	Calculus for Business Decisions

Political Sciences

PSC301	Pakistan Studies
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Religious Studies

REL101	Islamic Studies
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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

Semester One

Academic 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

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

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
Islamic Banking and Finance
Organizational Behavior
Methods in Business Research

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 (Honors) 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 BBA (Honors) and BS Joint (Honors) Economic & Finance 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 and BS Joint (Honors) Economic & Finance students only*

Majors in Finance and Banking

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

Majors in Human Resource Management

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

Majors in Management Information Systems

MIS503	System Analysis and Design
MIS504	Oracle/Developer 2000
MIS505	Software Engineering
MIS506	Data Communication & Networking
MIS507	Relational Database Mgmt. Systems
MIS508	Programming in C ++
MIS509	Software Project Management
MIS521	Record Management
MIS522	Business Information Systems
MIS523	Decision Systems
MIS524	Decision Support Systems
MIS525	Enterprise Systems
MIS526	Enterprise Resource Planning Systems
MIS527	Information Security
MIS528	Advanced Information Security
MIS530	Information Systems Research
MIS532	New Perspectives on Org. & 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 Mgmt.
SCM505	Storage and Warehouse Techniques
SCM506	Transportation Techniques & Mgmt.

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 and BS Joint (Honors) Economic & Finance 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

The course structure of the program is based on internationally recognized curricula and is being run with strong collaboration of German experts. The added feature of the program is training on SAP® ERP system. There are tremendous job opportunities in the field of supply chain and logistics. MBA graduates can take any four elective courses offered in areas of Supply Chain & Logistics Management.

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 Intro. to Managerial & Cost Accounting

Finance

FIN404 Financial Management

Management

MAN402 Organizational Behavior
MAN403 Entrepreneurship & Small Business Mgmt.
MAN405 Strategic Management
MAN501 Total Quality Management

Marketing

MKT402 Marketing Management
MKT404 Methods in Business Research

Business Elective Courses

Majors in Accounting

ACC501 Advanced Financial Accounting
ACC502 Advanced Managerial Accounting
ACC504 Accounting Information Systems
ACC505 Auditing

Majors in Finance and Banking

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

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 Mgmt.

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 Mgmt. 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 Org. 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 Mgmt.
SCM505	Storage and Warehouse Techniques
SCM506	Transportation Techniques and Mgmt.

The course structure of the program is based on internationally recognized curricula and is being run with strong collaboration of German experts. The added feature of the program is training on SAP® ERP system. There are tremendous job opportunities in the field of supply chain and logistics. MBA graduates can take any four elective courses offered in areas of Supply Chain & Logistics Management.

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 Mgmt.
 FRM404 Risk Financing Techniques
 FRM405 Advanced Financial Risk Management

Mathematics

MTH409 Financial Mathematics I
 MTH410 Financial Mathematics II

Social Sciences

SSC405 Business Ethics & Financial Responsibility

Elective Courses

Finance and Banking

FIN403 Islamic Banking and Finance

Finance and Risk Management

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 Mgmt.

FRM508 Financial Market Issues & Crisis
 FRM510 Energy Risk Management
 FRM512 International Risk & Financial Reporting
 FRM513 Project Risk Management
 FRM514 Takaful & Risk Mgmt. In Islamic Products
 FRM515 International Fin. Reporting & Standards

Course Structure

Semester One

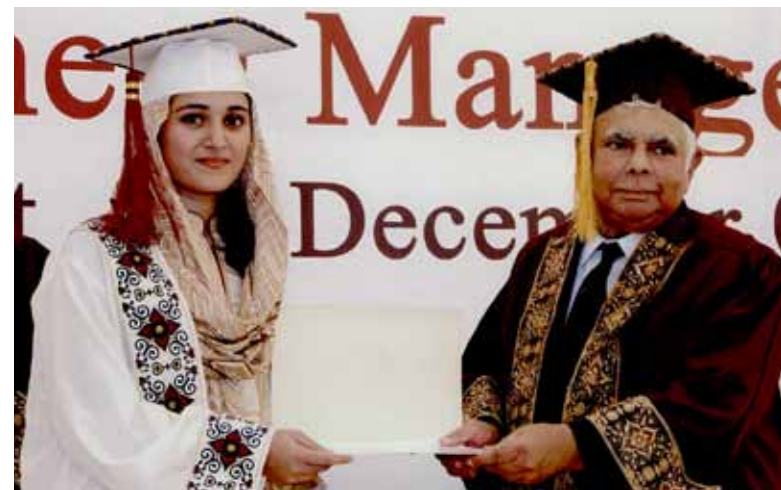
Financial Mathematics I
 Principles of Risk Management
 Computational Methods in Risk
 Business Ethics and Financial Responsibility

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 "Academic English" course to enhance their language skills.

Foundation Courses

Communication

COM107	Academic 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
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Social Sciences

SSC401	Business Ethics
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Statistics

STA403	Statistics and Mathematics
STA404	Statistical Inference

Core Business Courses

Accounting

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

Finance

FIN404	Financial Management
FIN501	Advanced Financial Management

Human Resource Management

HRM401	Human Resource Management
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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. 65.

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.



As I look back on the many amazing experiences in these past five years at the Institute of Business Management, I am so glad that I came here for my BBA and MBA. In 2010, I was among the fourteen students selected from all across Pakistan to attend a conference at National University of Singapore. This not only boosted my confidence but also inspired me to enrich my ways of thinking and helped me develop an international network. Thank you for the opportunities that you have given me and other students whose experiences at IoBM have been enriched by your sound infrastructure, generous scholarships to deserving students, numerous sponsorships to conferences both locally and internationally and various student exchange programs.

Javeria Rab Siddiqui
Management Trainee at Nestle Pakistan Limited
Gold Medal – MBA Marketing 2012



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

COM107	Academic 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
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Mathematics & Statistics

MTH400	Mathematics for Business
STA401	Introduction to Statistics
STA404	Statistical Inference

Core Business Courses

Accounting

ACC401	Intro. 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	Org. 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. 65.

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
 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.



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 programs 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

COM107	Academic 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
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Social Science

SSC401	Business Ethics
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Statistics

STA403	Statistics and Mathematics
STA404	Statistical Inference

Core Business Courses

Accounting

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

Finance

FIN404	Financial Management
FIN501	Advanced Financial Management

Human Resource Management

HRM401	Human Resource Management
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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. 65.

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.



It was a great learning experience at IoBM. It has got qualified faculty, supportive staff, exceptional IT system and state-of-the-art infrastructure. It was an amazing experience, building confidence, improving communication skills, time management and most importantly, learning about myself. Great thanks to the qualified faculty for being a brilliant support throughout my academic life at IoBM.

Najah Saeed
Gold Medal - MBA (Finance) 2012



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

COM107	Academic 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
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Mathematics

MTH400	Mathematics for Business
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Core Business Courses

Accounting

ACC401	Intro. 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 & 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 Mgmt.
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. 65.

Course Structure

Semester One

Business English*
Business Communication
Macroeconomics
Principles of Management
Mathematics for Business
**less proficient students*

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 (Evening) (Two-Year) Program

This MBA (Evening) program requires completion of 78 credit hours of course work, including 26 courses. Students must maintain a CGPA of 3.0 for the conferment of the degree.

Students can take a minimum load of six credit hours (two courses) or a maximum of twelve credit hours (four courses) in a regular semester (Fall, Spring & Summer).

The classes of this program will be held at IoBM City Center from 6:00 PM to 9:00 PM for each course.

Foundation Courses

Communication

COM107	Academic 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
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Social Science

SSC401	Business Ethics
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Statistics

STA403	Statistics and Mathematics
STA404	Statistical Inference

Core Business Courses

Accounting

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

Finance

FIN404	Financial Management
FIN501	Advanced Financial Management

Human Resource Management

HRM401	Human Resource Management
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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. 65.

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



IoBM City Center

MBA (Evening) (Three-Year) Program

This MBA (Evening) 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. 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 six credit hours (two courses) or a maximum of twelve credit hours (four courses) in a regular semester (Fall, Spring & Summer).

The classes of this program will be held at IoBM City Center from 6:00 PM to 9:00 PM for each course.

Foundation Courses

Communication

COM107	Academic 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
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Mathematics

MTH400	Mathematics for Business
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Core Business Courses

Accounting

ACC401	Intro. 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 & 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. 65.

Course Structure

Semester One

Business English*
Business Communication
Macroeconomics
Principles of Management
Mathematics for Business
**less proficient students*

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



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	Intro. to Managerial & Cost Accounting
ACC402	Introduction to Financial Accounting

Communication

COM107	Academic English*
COM402	Business Communication
COM403	Interpersonal Communication Skills

*less proficient students

Economics

ECO401	Micro and Macroeconomics
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Finance

FIN404	Financial Management
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Human Resource Management

HRM401	Human Resource Management
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Management

MAN401	Principles of Management
MAN402	Organizational Behavior

Management Information Systems

MIS401	Computer Applications
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Marketing

MKT401 Principles of Marketing

Elective Business Courses*

*Refer to Page No. 65.

Core Health Courses

MHM401 Intro. to Health Policy, Planning & Mgmt.
 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 Mgmt. of Health Services
 MHM504 Strategic Mgmt. of Health Services
 MHM505 Concepts of Primary Health Care
 MHM506 Managing Professional Health Care Org.
 MHM507 Introduction to Epidemiology
 MHM508 Pharma. Marketing & Quality Assurance
 MHM509 Marketing of Health Services
 MHM510 Introduction to Demography Methods
 MHM511 Population and Health
 MHM512 Economics & Mgmt. of Pharma. Industry
 MHM513 Managing Physicians
 MHM514 Environmental Health Assessment & Mgmt
 MHM516 Health Program Evaluation
 MHM518 Regulatory Affairs at Healthcare Industries
 MHM519 Financial Apps in Pharma. Marketing
 MHM520 Product Management
 MHM521 Pharmaceutical Sales Management
 MHM522 Project Management of Health Services
 MHM523 Health Ethics
 MHM524 Healthcare Human Resource Mgmt.
 MHM526 Healthcare Leadership
 MHM527 Supply Chain and Production
 Management in Pharma. 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 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	Intro. to Managerial & Cost Accounting
ACC402	Introduction to Financial Accounting

Communication

COM402	Business Communication
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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	Intro. to Financial Risk Management
FRM404	Risk Financing Techniques
FRM405	Advanced Financial Risk Management

Human Resource Management

HRM401	Human Resource Management
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Law

LAW403	Business and Insurance Law
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Management

MAN401	Principles of Management
MAN405	Strategic Management

Marketing

MKT401	Principles of Marketing
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Mathematics

MTH409	Financial Mathematics I
MTH410	Financial Mathematics II

Social Sciences

SSC405	Business Ethics & Financial Responsibility
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Statistics

STA402	Model and Inferences
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Elective Courses

Finance and Banking

FIN403	Islamic Banking and Finance
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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 Mgmt.
FRM508	Financial Market Issues & Crisis
FRM510	Energy Risk Management
FRM512	International Risk & Financial Reporting
FRM513	Project Risk Management
FRM514	Takaful & Risk Mgmt. in Islamic Products
FRM515	Int. 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 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 Mgmt.
EEM405 Renewable Energy & Energy Conserv.
EEM406 Coastal Environment & Management
EEM407 Green Technology and Energy Analysis
EEM408 Safety, Health & Environmental Mgmt.
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 Env. & Energy Sector
EEM510 Economics of Energy Management

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



"I found IoBM as a perfect platform for ambitious students to pursue academic, personal and leadership achievement. The well equipped faculty along with the extraordinary facilities provide an amazing student friendly environment. Receiving a gold medal was one of the biggest achievements of my life which showed me that hard work always pays off. The self-management, communication and intellectual skills I learnt have really helped in building a competent personality and I sincerely give credit to IoBM."

Sana Habib Dar
Gold Medal - MBA (Regular) 2012



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 Intro. 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 Introduction to 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 Assessment & Management
ENG407 Manufacturing Process and Systems
ENG410 Maintenance Management
ENG501 Technology Management

Finance

FIN503 Corporate Finance
FIN510 Investment Analysis
FIN513 Project Appraisal

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
Introduction to 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 specifically designed to reflect the challenges faced by traditional manufacturing organizations.

Required Courses

Accounting

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

Communication

COM402	Business Communication
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Economics

ECO401	Micro and Macroeconomics
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Engineering

ENG405	Environmental Impact Asses. & Mgmt.
ENG408	Facilities Planning

Finance

FIN404	Financial Management
FIN503	Corporate Finance

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	Introduction to Industrial Management
MAN411	Project Management
MAN501	Total Quality Management
MAN502	Business Process Re-engineering
MAN503	Supply Chain Management

Management Information System

MIS401	Computer Applications
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Marketing

MKT401	Principles of Marketing
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Statistics

STA404	Statistical Inference
STA407	Design of Experiments

Elective Courses

Engineering

ENG407	Manufacturing Process and Systems
ENG410	Maintenance Management
ENG501	Technology Management

Environmental and Energy Management

EEM404	Industrial and Municipal Waste Mgmt.
EEM408	Safety, health and Environment Mgmt.
EEM409	Risk and Disaster Management

Finance

FIN510	Investment Analysis
FIN513	Project Appraisal

Management

MAN403	Entrepreneurship & Small Business Mgmt.
MAN509	Logistic and Inventory Control

Marketing

MKT502	Services Marketing
MKT505	Industrial Marketing
MKT530	New Product Development

Supply Chain and Logistics Management

SCM502	ERP System Design & Implementation
SCM503	Strategic Supply Chain Management
SCM504	Procurement and Inventory Mgmt.



Looking back at the four years at IoBM makes this gold medal not only an honor but a token of great experiences, courage and strength. I entered the BBA (H) program with aspirations and a dream to succeed. It is human nature to strive, improve and achieve full potential. It is possible but requires persistent endeavour. IoBM enabled me to channelize my efforts and realize my aspirations. So this gold medal is a combination of zealous hard work and support from my alma mater, friends and family.

Hina Rahman
Gold Medal - BBA (Honors) 2012

Course Structure**Semester One**

Business Communication
Introduction to Financial Accounting
Statistical Inference
Principles of Management

Semester Two

Computer Applications
Micro and Macroeconomics
Environmental Impact Assessment & Management
Introduction to Industrial Management

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, 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 by thesis defense is required 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	Corporate Governance and Strategy
MPM609	Seminar in Human Resource Mgmt.
MPM611	Advanced Corporate Finance
MPM614	Advanced Marketing Strategy
MPM615	Econometrics

Thesis (06 Credit hours)

or

Additional Courses in lieu of Thesis

MPM608	Project / Research Practicum
MPM610	Independent Study



PhD in Environment and Energy Management

The doctoral program in Environment and Energy Management is a rigorous, interdisciplinary and multidisciplinary study. Students will be required to acquire substantial knowledge in primary environment and Energy related disciplines with a focus on management and conservation, and sustainable development of resources; develop breadth in specialized fields related environmental and energy; become proficient in advanced research methods and develop expertise in a chosen dissertation topic.

Students will be required to write a dissertation that evidences original research and high proficiency in the interpretation, analysis, and explanation of environment and energy related issues and phenomena. The overall objectives of the program are:

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

Eligibility

MS or MPhil in any subject with science, engineering, medicine, life sciences etc with CGPA 3.00/4.00 or B Grade and fulfilling all other conditions set by IoBM and HEC. Candidates must clear NTS (subject specific).

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

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

Semester Two

EEM703	Current Advancement and trends in Environment, and Energy Management
EEM704	Independent Study in Environment and Renewable Energy Management

Semester Three

Elective Courses (any two)

EEM705	Adv. Env. Toxicology & Epidemiology
EEM706	Advanced Pollution Control Technologies and Mitigation Options
EEM707	Advances in Green Technology Mechanism
EEM708	Disaster Risk Management and Mitigation Strategies
EEM709	Trade & Environment
EEM710	Sustainability and Conservation of Major Ecosystems

Students Seminars would be essential part of each course

Semester Four to 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.

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	Investment 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
FIN515	Foreign Trade and Banking
FRM514	Takaful & Risk Mgmt. in Islamic Products

Majors in Human Resource Management

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

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
MIS505	Software Engineering
MIS506	Data Communication & Networking
MIS507	Relational Database Mgmt. Systems
MIS508	Programming in C ++
MIS509	Software Project Management
MIS521	Record Management
MIS522	Business Information Systems
MIS523	Decision Systems
MIS524	Decision Support Systems
MIS525	Enterprise Systems
MIS526	Enterprise Resource Planning Systems
MIS527	Information Security
MIS528	Advanced Information Security
MIS530	Information Systems Research
MIS532	New Perspectives on Org. Info. Systems

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 Mgmt.
SCM505	Storage and Warehouse Techniques
SCM506	Transportation Techniques & Mgmt.

* Core courses for three-year students

**Accepted as elective under all disciplines

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

* Core courses for three-year students





College of Computer Science and Information Systems

BS Computer Science (Four-Year) Program

The program emphasizes the need for an overall development that includes exposure to an integrated series of courses in technology, methodology, social sciences, liberal arts and management. Project-based software development along with research assignments have also been emphasized. These courses seek to impart a broad and deep knowledge of theory, design and application of digital computers and information processing techniques. The curriculum has been designed to prepare students to serve the productive needs of Pakistan's software industry. It requires completion of 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.

Foundation Courses

Accounting

ACC101	Introduction to Financial Accounting
ACC201	Intermediate Financial Accounting

Communication

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

Economics

ECO104	Micro and Macroeconomics
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Engineering

ENG307	Basic Electronics
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Finance

FIN201	Introduction to Business Finance
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Human Resource Management

HRM301	Human Resource Management
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Management

MAN101	Principles of Management
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Marketing

MKT301	Principles of Marketing
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Language

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

Mathematics

MTH104	Calculus I
MTH105	Calculus II
MTH201	Discrete Mathematics
MTH204	Linear Algebra
MTH215	Differential Equations
MTH403	Numerical Computing

Political Sciences

PSC301	Pakistan Studies
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Religious Studies

REL101	Islamic Studies
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Statistics

STA203	Probability Theory and Statistics
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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
CSC213	Computer Communication and Network
CSC301	Theory of Automata
CSC303	Computer Graphics
CSC305	Systems Analysis and Design

CSC308	Operating Systems Concepts
CSC309	Microprocessor and Applications
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 Mgmt. System
CSC448	Digital Signal Processing
CSC510	Wireless Communication

Course Structure

Semester One

Academic English
 Introduction to Computer Science
 Structured 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

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

Computer Communication and Network
 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

COM107 Academic English
COM203 Methods in Business Writing

Computer Sciences

CSC103 Structured Programming Language

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
MTH204 Linear Algebra
MTH209 Financial Mathematics I
MTH210 Financial Mathematics II
MTH211 Actuarial Mathematics
MTH403 Numerical Computing

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 Mgmt.
FRM508	Financial Market Issues & Crisis
FRM510	Energy Risk Management
FRM512	International Risk & Financial Reporting
FRM513	Project Risk Management
FRM514	Takaful & Risk Mgmt. in Islamic Products
FRM515	Int. Financial Reporting & Standards

Course Structure

Semester One

Academic 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 HEC guidelines. The program comprises two year of study over at least 4 semesters. It requires completion of 30 credit hours of course work. Students are required to complete 8 courses and a thesis of 6 credit hours equivalent of 2 courses in order to fulfill their degree requirements. Students must maintain a CGPA of 3.0 for the conferment of the degree.

Eligibility

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

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

Core Courses

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

Elective Courses

CSC531	Data Warehousing
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)



MS (Mathematics & Scientific Computing) Leading to PhD (Mathematics & Scientific Computing)

MS (Statistics & Scientific Computing) Leading to PhD (Statistics & Scientific Computing)

(Two-Year) Program

The MS (leading to PhD) programs in Mathematics & Scientific Computing and in Statistics & Scientific Computing prepare students for careers in research, applications, and teaching. Students choose courses from two areas of concentration for their course work: Mathematics and Computations or Statistics and Computations. Students are required to successfully qualify eight courses (4 compulsory and 4 electives) each of 3 credit hours duration. On successful completion of MS course work students will be allowed to work on a 6 credit hour thesis on a subject of interest and on the availability of the faculty. Students will be required to qualify Final (Comprehensive) Examination, as well as write and defend a thesis. The MS Program takes usually two years to complete and students must pass GRE/NTS exam prior to the completion of the degree.

After successful completion of MS a candidate may go for a PhD in the same discipline. Candidate will be required to complete six courses (4 of selected subject concentration and 2 of computation concentration) with a minimum 3.0 GPA to proceed to the thesis writing stage. Candidates will submit and defend a comprehensive research proposal. Qualified candidates will be allowed to work on a research topic after receiving approval of the Academic Council. The candidates must pass GRE subject before submitting the PhD thesis.

Eligibility

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

Required Courses

MS (Mathematics & Scientific Computations)

Compulsory Courses (12 credit hours)

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

Elective Courses

Mathematics Concentration (6 credit hours)

MTS610	Calculus of Variation
MTS612	Numerical Methods for ODEs and PDEs
MTS620	Asymptotic Analysis
MTS622	Continuum Mechanics
MTS624	Geometric Methods in Mechanics & Phy.
MTS626	Advance Convex Analysis
MTS628	Advance Numerical Optimization
MTS630	Advance Mathematical Physics
MTS632	Advance Variational Inequalities
MTS634	Advance Numerical Linear Algebra
MTS636	Advance Hilbert Space

Computation Concentration (6 credit hours)

MTS629	Machine Learning & Pattern Recognition
MTS631	Production Quality Software
MTS633	Fundamental Algorithms
MTS635	Information Retrieval & Data Mining
MTS637	High Performance Computing
MTS639	Principles in Parallel Computing

Course Structure MS (Mathematics & Scientific Computing)

Semester One

Mathematical Statistics
Advanced Numerical Analysis
Dynamical Variable

Semester Two

Statistical Modeling & Computing
Mathematics Concentration I

Semester Three

Mathematics Concentration II
Computation Concentration I
Computation Concentration II

Semester Four

Thesis (Mathematics Oriented) 6 credit hours

MS (Statistics & Scientific Computations)

Required Courses

Compulsory Courses (12 credit hours)

MTS609	Numerical Analysis
MTS614	Mathematical Statistics
MTS615	Dynamical System
MTS618	Statistical Modeling & Computing

Elective Courses

Statistics Concentration (6 credit hours)

MTS611	Statistical Inference
MTS613	Design of Experiments
MTS617	Multivariate Statistics
MTS619	Stochastic Processes
MTS621	Time Series Analysis
MTS623	Applied Regression Models
MTS625	Theory and Practices of Forecasting
MTS627	Statistical Quality Control

Computation Concentration (6 credit hours)

MTS627	Machine Learning & Pattern Recognition
MTS629	Production Quality Software
MTS631	Fundamental Algorithms
MTS633	Information Retrieval & Data Mining
MTS635	Simulation and Modeling
MTS637	Principles in Parallel Computing

Course Structure

MS (Statistics & Scientific Computing)

Semester One

Mathematical Statistics
Numerical Analysis
Dynamic System

Semester Two

Statistical Modeling & Computing
Statistics Concentration I

Semester Three

Statistics Concentration II
Computation Concentration I
Computation Concentration II

Semester Four

Thesis (Statistics Oriented) 6 credit hours



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 systems. Students learn the structure and environment of the telecommunication industry, total quality management, strategic planning and financial management with emphasis on critical management concepts. This program can prepare students for careers in the telecommunication industry. The course has been designed by telecommunication experts with experience at the international level, keeping in view the requirements of the country.

This is a weekend program with a minimum load of 6 credit hours (2 courses) and a maximum load of 12 credit hours (4 courses) in each of the 3 sessions (Fall, Spring and Summer).

Required Courses

Accounting

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

Communication

COM402	Business Communication
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Economics

ECO401	Micro and Macroeconomics
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Finance

FIN404	Financial Management
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Human Resource Management

HRM401	Human Resource Management
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Management

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

Marketing

MKT401	Principles of Marketing
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Telecommunication

TCM401	Introduction to Technology Management
TCM402	Introduction to Teletraffic Engineering
TCM403	Global Comm: Industry & Policy
TCM404	Management of Telecommunication
TCM405	Optical Communication Network
TCM406	Network Design
TCM408	Adv. Mobile & Wireless Communication
TCM409	Customer Service & Call Center Tech.
TCM410	Management of Network Security
TCM411	Telecommunication Marketing
TCM 507	Optimization of Telecom. Systems

Elective Courses

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



Being a Gold Medalist at IloBM is the biggest achievement of my academic life. I would like to dedicate this to all my teachers and batch mates at IloBM for the confidence they had in me throughout this journey. At IloBM, I got a chance to polish not only my academic skills but also to improve my professional and social skills. Friendly students, diligent teachers, state of the art campus, cooperative administration and all those people around at IloBM have played their roles in my progress, both as a successful student and an individual. Student life at IloBM is a complete blend of innovative learning, healthy classroom discussions, seminars, literary competitions, enjoyment and many other learning avenues. This blend has helped me in emerging as a true learner. IloBM is a great place for emotional, educational and social growth and stimulation. The learning and exposure I have received at IloBM will help me to grow as a competent professional in the business world.

Anam Nazneen
Gold Medal - MBA (Regular) 2012

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 Communication Industry and Policy
Management of Telecommunication

Semester Three

Principles of Marketing
Introduction 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





College of Engineering and Sciences

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 & 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 Mgmt.

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 Diff. 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 and Telecommunication (Four-Year) Program

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

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

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

Required Courses

Communication

COM107	Academic 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 Prog. and Problem Solving
CME200	Computer Aided Engineering Design
CME201	Microprocessor Systems
CME202	Data Communication and Computer Networks

Electrical Power Engineering

EPE101	Linear Circuit Analysis
EPE102	Electrical Workshop Practices
EPE200	Network Analysis
EPE302	Electrical Machines

Engineering Management

ENG203	Engineering Economics
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General Sciences

GSC103	Applied Physics
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Management

MAN101	Principles of Management
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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
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Psychology

PSY400	Intro. to Organizational Psychology
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Religious Studies

REL101	Islamic Studies
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Social Sciences

SSC203	Ethical Behavior
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Statistics

STA203	Probability Theory and Statistics
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Course Structure

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

Semester One

Academic 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

Streamline 1: 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)

Elective Courses**Streamline 1: Electronic Engineering**

CME414	Digital Image Processing
ELE420	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**Streamline2: 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)

Elective Courses**Streamline2: Telecommunication Engineering**

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



College of Economics and Social Development

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

The College of Economics and Social Development (CESD) is a liberal arts college with graduate and undergraduate programs in the areas of accountancy, management & law, education, economics, media studies and psychology. Research is a core competence of CESD. The program is designed to help students build a solid foundation in general business principles and skills. It requires completion of 144 credit hours of course work and 2 credit hours of internship of at least six weeks in a firm approved by the College. Students graduating with a CGPA of 2.5 automatically qualify for MBA program offered by CBM in a weekday full-time program, students may take a maximum of six courses per semester with Summer as an optional semester. This program will lead to MBA or a professional accountancy qualification. Students have the option of passing the Institute of Chartered Accountants of Pakistan (ICAP) foundation and intermediate examinations simultaneously with obtaining the program.

Required Courses

Accounting

ACC102	Introduction to Financial Accounting I
ACC103	Introduction to Financial Accounting-II
ACC202	Taxation-I
ACC203	Financial Accounting-I
ACC204	Taxation-II
ACC304	Financial Accounting-II
ACC305	Cost Accounting-I
ACC405	Internal Auditing & 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 Com. & Behavioral Studies-I
COM106	Business Com. & 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
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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	Entrep. 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	Principles of Marketing
MKT404	Methods in Business Research

Social Sciences

SSC202	Environmental Studies
SSC401	Business Ethics

Religious Studies

REL101	Islamic Studies
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Statistics

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

Language

LAN 10*	Foreign Language I
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*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
 Introduction 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 provide strong grounding in, and a broad academic base for pursuing a professional career in the wider field of media. It offers a choice of two paths to the students to major in, viz. Journalism and Production. All students are required to complete a set of common foundation courses in the first four semesters before breaking out into their areas of interest.

The program, in essence, aims to provide students a deep insight into the evolution and current dynamics of media thinking and practice, the role of media in terms of its interaction with and impact on society and the social environment, and how people perceive, interpret, use, and respond to media in an increasingly interactive, technology driven world.

The program has benefited from our collaboration with several media channels, institutions, and regulatory authorities, including PEMRA (Pakistan Electronic Media Regulatory Authority), Samaa TV, Dawn News, CNBC Pakistan, Hum TV, Aag TV, ARY, GEO News & Entertainment, Aaj News & Entertainment, Herald News & Entertainment and others.

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

Required Courses

Communication

COM108	English I
COM109	English II

Economics

ECO106	Basic Economics
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Islamic Studies

REL101	Islamic Studies
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Language

LAN112	Urdu I
LAN113	Urdu II

Law

LAW405	Media Law and Business Ethics
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Management

MAN305	International Relations
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Management Information System

MIS301	Graphics I
MIS302	Graphics II
MIS402	Computer Concepts and Applications
MIS411	Graphics and Animation

Marketing

MMM328	Methods in Media Research
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Media Psychology

MPY301	Introduction to Mass Communication
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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
MMM310	News Writing and Reporting
MMM311	Introduction to Broadcast Media
MMM312	Introduction to Advertising and PR
MMM314	Online Journalism
MMM315	Feature, Article and Column Writing
MMM316	Sub Editing and Page Design
MMM317	Theories of Communication
MMM318	Economic Journalism
MMM321	Development Communication
MMM322	Current Affairs

MMM324	Media Management and Marketing
MMM325	Research Report Writing
MMM327	News Production
MMM329	Writing Workshop
MMM330	Appreciation of Vernacular Literature
MMM331	Reporting Workshop
MMM332	News Package Production
MMM333	Sports Journalism
MMM334	Book Production
MMM335	News Anchoring Workshop
MMM336	Human Rights and Gender Reporting
MMM337	Thesis
MMM338	Cinematography I
MMM339	Cinematography II
MMM340	Cinematography III
MMM341	Direction I
MMM342	Direction II
MMM343	Direction III
MMM344	Screenplay I
MMM345	Screenplay II
MMM346	Screenplay III
MMM347	Editing
MMM348	Post-Production
MMM349	Radio I
MMM350	Radio II
MMM351	Production I
MMM352	Production II

Pakistan Studies

PSC301	Pakistan Studies
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Social Sciences

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

Statistics

STA100	Basic Statistical Methods
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Course Structure

Semester One

English I
 Computer Concepts and Applications
 Introduction to Mass Communication
 Urdu I
 Introduction to Psychology
 Principles of Sociology

Semester Two

English II
 Islamic Studies
 Basic Economics
 Outline of Political Science
 Media Literacy
 Urdu II

Semester Three

Writing Workshop
 Logic and Critical Thinking
 International Relations
 Graphics I
 Mass Media in Pakistan
 Pakistan Studies

Semester Four

Appreciation of Vernacular Literature
 World Civilization and Culture
 Contemporary World Media
 Graphics II
 Important Concepts in Philosophy
 Basic Statistical Methods

Journalism Majors

Semester Five

Reporting Workshop
News Writing and Reporting
Introduction to Broadcast Media
Introduction to Advertising and PR
News Production
Online Journalism

Semester Six

Feature, Article and Column Writing
Sub-Editing and Page Design
Theories of Communication
Economic Journalism
News Package Production
Current Affairs

Semester Seven

Media Law and Ethics
Methods in Media Research
Development Communication
Sports Journalism
Book Production
Photo Journalism

Semester Eight

Videography
Media Management and Marketing
Research Report
News Anchoring Workshop
Human Rights and Gender Reporting
Thesis

Internship (2 credit hours)

Production Majors

Semester Five

News Writing and Reporting
Introduction to Broadcast Media
Introduction to Advertising & PR
News Production
Media Law and Ethics
Cinematography I

Semester Six

Direction I
Cinematography II
Screenplay I
Production I
Current Affairs
Editing

Semester Seven

Cinematography III
Direction II
Development Communication
Radio I
Screenplay II
Production II

Semester Eight

Post Production
Graphics & Animation
Direction III
Radio II
Thesis

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

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

Required Courses

Accounting

ACC402 Introduction to Financial Accounting

Educational Management

EDM406 Education Policy and Planning
 EDM412 Marketing Education Services
 EDM415 Educational Philosophy and Ethics
 EDM418 Testing in Education
 EDM419 Managing Teaching and Learning
 EDM420 Academic Writing and Seminar Skills
 EDM424 Teacher Education
 EDM425 Developing Leadership and Management Skills
 EDM426 Curriculum Mgmt. and Planned Change
 EDM427 Research Methods in Education I (Qualitative)
 EDM428 Research Methods in Education II (Quantitative)
 EDM429 ICT in Education
 EDM430 Developing Research Projects
 EDM434 Thesis Writing

Finance

FIN404 Financial Management

Human Resource Management

HRM401 Human Resource Management

Management

MAN401 Principles of Management
 MAN402 Organizational Behavior

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
EDM513	Strategic Mgmt. Issues in Education
EDM514	Early Childhood Development



My five 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. All in all, it has been an outstanding experience being part of such a great hub of knowledge and a true learning experience.

Syeda Humaira Akhtar
Gold Medal - BBA (Honors) 2012

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

Educational Philosophy and Ethics
Research Methods in Education I (Qualitative)
Human Resource Management
Principles of Marketing

Semester Four

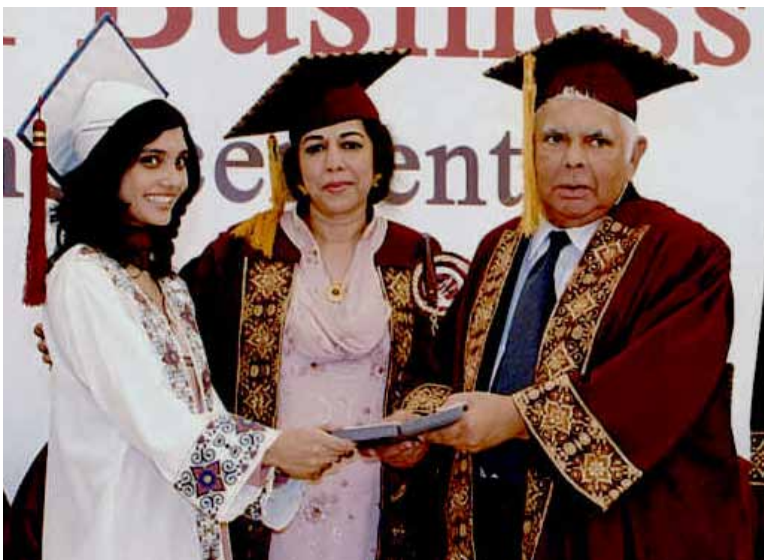
Developing Leadership and Management Skills
Testing in Education
Research Methods in Education II (Quantitative)
Financial Management

Semester Five

Marketing Education Services
Developing Research Projects
Education Policy and Planning
Elective I

Semester Six

Elective II
Elective III
ICT in Education
Thesis Writing



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 HEC requirements.

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

Required Courses

Accounting

ACC402 Introduction to Financial Accounting

Communication

COM403 Interpersonal Communication Skills
COM407 English Language Development

Educational Management

EDM406 Education Policy and Planning
EDM402 Applied Linguistics
EDM403 Critical Thinking and Reading
EDM412 Marketing Education Services
EDM414 Classroom Management
EDM415 Educational Philosophy and Ethics
EDM417 Educational Counseling
EDM418 Testing in Education
EDM419 Managing Teaching and Learning
EDM420 Academic Writing and Seminar Skills
EDM421 Sociology of Education
EDM422 Learners and Learning Styles
EDM423 Reflective Inquiry in Education
EDM424 Teacher Education
EDM425 Developing Leadership and Mgmt. Skills
EDM426 Curriculum Mgmt. and Planned Change

EDM427 Research Methods in Education I (Qualitative)
EDM428 Research Methods in Education II (Quantitative)
EDM429 ICT in Education
EDM430 Developing Research Projects
EDM434 Thesis Writing

Finance

FIN404 Financial Management

Human Resource Management

HRM401 Human Resource Management

Management

MAN401 Principles of Management
MAN402 Organizational Behavior

Management Information Systems

MIS400 Computer Applications and System

Marketing

MKT401 Principles of Marketing

Social Sciences

SSC402 Introduction to Psychology
SSC406 Psychology and Learning

Statistics

STA403 Statistics and Mathematics

Elective Courses

Educational Management

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

Course Structure

Semester One

Introduction to Psychology
 Critical Thinking and Reading
 Applied Linguistics
 English Language Development

Semester Two

Reflective Inquiry in Education
 Learners and Learning Styles
 Statistics and Mathematics
 Interpersonal Communication Skills

Semester Three

Educational Counseling
 Classroom Management
 Computer Applications and Systems
 Sociology of Education

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

Educational Philosophy and Ethics
 Research Methods in Education I (Qualitative)
 Human Resource Management
 Principles of Marketing

Semester Seven

Developing Leadership and Management Skills
 Testing in Education
 Research Methods in Education II (Quantitative)
 Financial Management)

Semester Eight

Marketing Education Services
 Developing Research Projects
 Education Policy and Planning
 Elective I

Semester Nine

Elective II
 Elective III
 ICT in Education
 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 Intro. to Organizational Psychology

Management

MAN401 Principles of Management

HRM

HRM401 Human Resource Management

Statistics

STA410 Introduction to Behavioral Statistics

Communication

COM402 Business Communication

COM405 Organizational Consulting Skills

Core Courses

Psychology

PSY402	Counseling Psychology
PSY405	Group Dynamics
PSY406	Research Methods
PSY407	Personnel Psychology
PSY408	Consumer Psychology
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 Relations & Labor Laws
HRM503	Employee Training & Development
HRM504	Negotiation Skills & Collective Bargaining
HRM530	Research Practicum in HRM

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
HRM508	Salary and Compensation
HRM509	Leadership Studies

Course Structure (Career Option I Majors Psychology)

Semester One

Principle of Management
Human Resource Management
Introduction to Organizational Psychology
Introduction to Behavioral Statistics

Semester Two

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

Semester Three

Research Methods
Consumer Psychology
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 Practicum in HRM

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 Relations & Labor Laws

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

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 Intro. 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

STA410 Introduction to Behavioral Statistics

Communication

COM402 Business Communication
 COM405 Organizational Consulting Skills
 COM403 Interpersonal Communication Skills

Social Sciences

SSC104 Principles of Sociology
 SSC401 Business Ethics

Management Information System

MIS401 Computer Applications

Core Courses

Psychology

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

Human Resource Management

HRM408 Human Resource Issues in Pakistan
 HRM501 Recruitment & Selection
 HRM502 Industrial Relations & Labor Laws
 HRM503 Employee Training & Development
 HRM504 Negotiation Skills & Collective Bargaining
 HRM530 Research Practicum in HRM
 HRM505 Organizational Change & Development
 HRM506 Strategic HRM

Elective Courses Courses

Psychology

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

Human Resource Management

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

Course Structure

Semester One

Introduction to Organizational Psychology
 Introduction to Behavioral Statistics
 Principle of Sociology
 Computer Applications

Semester Two

Principles of Management
 Principle of Marketing
 Personality Theories
 Business Ethics

Semester Three

Human Resource Management
 Organizational Behavior
 Personal Management
 Business Communication

Semester Four

Corporate Social Responsibility
 Group Dynamics
 Industrial Relations & Labor Laws
 Organizational Consulting Skills

Semester Five

Human Resource Issues in Pakistan
 Psychological Testing-I
 Organizational Change & Development
 Interpersonal Communication Skills

Semester Six

Research Methods
 Consumer Psychology
 Recruitment & Selection
 Strategic HRM

Semester Seven

Counseling Psychology
 Personnel Psychology
 Employees Training & Development
 Negotiation Skills & Collective Bargaining

Semester Eight

Psychological Testing-II
 Behavior Modification in Industry
 Leadership & Strategic Change
 Research Practicum in HRM

Semester Nine

Elective I
 Elective II
 Elective III
 Elective IV



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 a Master's Degree from IoBM or Master's degree holders in the relevant subject with 1st division/CGPA with at least 3 on a scale of 4 from an HEC recognized university are eligible for admission to the MPhil program at IoBM. Experience in research or teaching will be considered as an additional qualification.

Program Structure

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

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

Course Structure

Semester One

MPP601	Qualitative Research Methods in Psy.
MPP603	Quantitative Research Methods in Psy.
MPP605	Psychological Testing & Measurement

Semester Two

MPP607	Independent Study in Org. Psychology
MPP609	Personnel Psychology in the Work Place
MPP611	Human Factors in Work Environment

Semester Three

MPP613	Organizational Conflict & Management
MPP615	Project Practicum in Org. Psychology

Semester Four

MPP620	MPhil Thesis (6 credit hours)
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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
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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, candidates are required to produce an extended research proposal (approximately 2000-3000 words). Upon acceptance of their research proposal, candidates are guided to conduct research and are finally examined on the basis of thesis defense and written presentation of the thesis of an upper limit of 20000 - 25000 words.

Eligibility

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

Program Details

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

Course Structure

Semester One

MPE503	Education in Pakistan
MPE601	Adv. Qualitative Research Methodology
MPE602	Adv. Quantitative Research Methodology

Semester Two

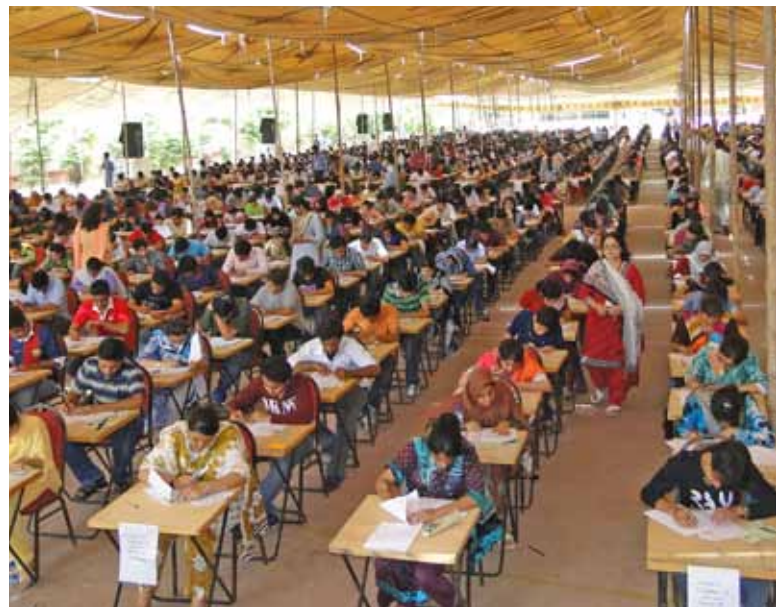
MPE604	Developing a Research Project
MPE605	Economics of Education
MPE606	Global Issues in Education

Semester Three

MPE610	Philosophical Foundations in Education
MPE611	Readings in Education

Semester Four - Six

MPE609	Research Thesis
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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
3. Educational 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 Multidisciplinary Studies (Education and Psychology)
PSS706	Independent Study

Semester Three

Elective course for Education

PSS702	Advanced Educational Philosophy
PSS704	Project Internship - Education / Elective Course

Elective course for Psychology

PSS709	Measurement & Assessment
PSS710	Psychology of Personality

Semester Four - Nine

PSS805 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.

PhD in Economics

Students who have completed 30 credit hours of post graduate course work can register for the following six courses for 3 credit hours each and pass the GRE Part II test before they start writing their thesis.

This will complete their required credit hours to 48.

Required Courses

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

Elective Courses

PDE711	Industrial Economics in a Globalized World
PDE712	Public Finance
PDE713	International Trade
PDE714	Selected Topics in Monetary Economics
PDE715	Main Issues in Islamic Economics

Course Structure

Semester One

Advanced Research Methodology
Advanced Applied Econometrics

Semester Two

Development Economics
New Dimensions in Economics and Public Policies

Semester Three

Elective I
Elective II







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

AA Packaging Industries
 AAG TV
 Abbott Pakistan
 ABUDAWOOD
 ACCA Pakistan
 Adamjee Insurance
 Adcom (Pvt) Ltd.
 ADVANS Micro Finance Bank
 Adys Sourcing
 AEG Travel Services
 Afroze Textiles
 Agility Logistics
 Agro Processors & Atmospheric Gases
 AIESEC
 Airmen Golf Course & Recreational Park
 Aisha Steel Mills
 AKD Investments
 AKD Securities
 AKD Trade
 Al Baraka Bank (Pakistan) Ltd.
 Al Karam Textiles Limited
 Al Meezan Investment Management Ltd.
 Al Zeb Industries
 Al Zohaib Textile Mills
 Alfa Engineering
 Algorithm
 Ali Gohar Pharmaceuticals
 Allied Bank Pakistan Limited
 Allied Engineering & Services
 Alpen Solutions
 Amerli Steels Ltd.
 Analytical Measuring Systems Pvt. Ltd.
 Anjum Asim Shahid Associates Ltd.
 Anzo Chemicals
 Apna TV
 Arena
 Arif Habib Investments Limited
 Arif Habib Securities Limited
 Aroha Labs
 Artistic Milliners
 ARY Digital Network
 ASCO International Pvt.
 Asia Petroleum Ltd.
 Asiatic Public Relations Network
 Askari Commercial Bank Limited
 Atlas Group of Companies
 Atlas Honda Limited
 Atlas Lease Limited
 Aurora
 Automobile Corporation of Pakistan
 Avanza Solutions
 Aexact
 Aziz Products
 Bank Al Habib Ltd.
 Bank Alfalah Limited
 Bank Islami Limited
 Bank of Punjab
 Barclays Bank Limited
 BASF Pakistan Pvt. Limited
 Bayer Pakistan Pvt. Limited
 BBCL Pvt. Ltd
 Berger Paints Pakistan Limited
 Banbhore Ceramic Industries
 Blitz Advertising Pvt. Limited
 BMA Capital Pvt. Limited
 BOC Pakistan Limited
 BP Pakistan Exploration & Production
 BR&W Pvt. Limited
 Brands Image
 Brookes Pharmaceutical Laboratories
 Bullseye 360
 Burj Bank
 Burque Corporation Pvt. Ltd
 Byco Petroleum Pakistan Ltd.
 Candyland
 Cargo Care
 Casual Mode Pvt. Ltd.
 Chevron (Formerly Caltex)
 CIM Shipping
 Circuit Advertising
 Citi FM 89
 Citibank N.A.
 Citizen Archive Pakistan
 City School
 Clariant Pakistan Limited
 Coca-Cola Beverages Pakistan Ltd.
 Commercial Union Assurance PLC.
 Concern for Children Trust
 Continental Biscuits Limited
 Cool & Cool
 Cordoba Corporation
 Corvit Technologies
 Cox & Kings (Agents) Limited
 Creative Chaos Pvt. Ltd.
 Creativedge Communications
 Credit & Commerce Consultants

Crescent Bank Limited
Cres-Soft Pvt. Limited
Cummins Sales & Service
Cupola Pakistan Limited
Cybernet
Cynamid Pakistan Limited
Dalda Foods Pvt. Limited
DAMCO
Dawlance Pvt. Limited
Dawn Group of Newspapers
Dawn News TV
Dawood Hercules Corporation
Deflog Pvt Ltd.
Delta shipping
Deutsche Bank A.G.
Dewan Mushtaq Group
DHL Global Forwarding
DHL Pakistan Limited
Diamond Impex Corporation
Dr. Sulaiman Al Habib Medical Group
Dubai Islamic Bank
Dupont Far East Inc.
EDP Services Pvt. Limited
Efro Tech Services
Efroze Chemical Industries Pvt. Ltd.
EFU Insurance
Eli Lilly Pakistan (Pvt.) Limited
Elixir Securities
Emaculate Solutions
Emirates Global Islamic Bank Ltd.
Emirates Investment & Development, Dubai
Empact
English Biscuits Manufacturers Ltd.
Engro Asahi Polymer & Chemicals Ltd.
Engro Chemicals Pakistan Ltd.
Engro Corp.
Engro Foods
Engro Powergen
Engro Vopak Terminal Ltd.
ENI Pakistan Limited
Event Architects Pvt. Ltd.
Express News
Fauji Fertilizer Company Ltd.
Fauji Foundation Securities
Faysal Asset Management Ltd.
Faysal Bank Limited
Fecto Cement Ltd.
Ferguson's Associates
First Women Bank Ltd.
Five by Five Communications
Float Securities Pvt. Ltd.
FM 107 Pvt. Limited
FM Radio 91
Fontanalia
Genesis Direct
Geo TV
Gerry's Information Technology
Gestetner Pvt. Limited
Ghandhara Nissan Diesel Ltd.
Gillette Pakistan Limited
GlaxoSmithKline Pakistan Ltd.
Global Sea Foods
Gloria Jeans
GM Fashion
Godil Cold Chain Pvt. Ltd.
Gravity Communications
Green Star Social Marketing
H&S Pvt. Ltd.
Habib Bank AG Zurich
Habib Bank Limited
Habib Metropolitan Bank Limited
Hanif Packages
Harvest Topworth International
Hawk Advertising
Helium Pvt. Ltd.
Higher Education Commission Pakistan
Hilal Confectionary Ltd.
Hilton Pharmaceutical Pvt. Ltd.
Hinopak Motors Limited
Hoechst Marion Roussel Pakistan
Home Express
HRS Global
HRSG Recruiting
HSBC Bank Middle East Ltd.
Hum TV
Hyeworth Renault Petersen Pak Pvt. Ltd.
I.Q. Knitwear
IAL Saatchi & Saatchi
IBM – Pakistan
ICI Pakistan Limited
IEC Pvt. Ltd.
IGI Financials
IGI Insurance
Intel Pakistan Corporation
Interflow Communications Pvt. Ltd.
InterGraphics C&A Pvt. Ltd.
International Advertising Pvt. Limited
International Asset Management Co. Ltd.
International Brands Limited
Invest & Finance Securities Limited
Invest Capital Pvt. Ltd.
Ismail Hamed & Sons
Ismail Industries Limited
ISMAR
ITOCHU Corporation

J & P Coats Pakistan Pvt. Ltd.
 J. Walter Thompson Asiatic Pvt. Ltd.
 Jaffer Brothers Limited
 Jaffer Business Systems (Pvt.) Ltd.
 Jahangir Siddiqui & Co. Ltd.
 Jang Group
 Javed Engineering Enterprise
 JCR-VIS Credit Rating Company
 Jofa International
 Johnson & Johnson Pakistan
 JS Bank Limited
 JS Global
 JS Investments Limited
 Kalsoft Pvt. Limited
 Karachi Electric Supply Corporation
 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
 Kolson Pakistan
 KPMG Taseer Hadi & Co.
 Lakson Business Solutions Ltd.
 Lakson Group of Companies
 Lane 12
 Li Fung (Singapore) Pte. Limited
 Liberty Books
 Lisco Pakistan
 Lowe & Rauf Pvt. Limited
 Lucky Cement Ltd.
 Maaz Pharmaceutical
 Macter Pharma
 Maersk Pakistan Pvt. Ltd.
 Maison Consulting And Solutions
 Mamora International
 Manhattan Leo Burnett
 Marina Industries
 Marksman Advertising
 Marriott Hotel
 Martin Dow Pharmaceuticals (Pak) Ltd.
 MCB Bank Limited
 MCR Pvt. Limited – Pizza Hut
 Meeco Asia Pacific
 Meezan Bank Ltd.
 Meher Associates Pvt. Limited
 Merck Pharmaceutical
 Merck Sharp & Dohme of Pakistan Limited
 Merit Packaging Ltd
 Metlife Alico
 Millennium Software Pvt. Ltd.
 Mindshare Pakistan Pvt. Ltd.
 MM Group of Companies
 Mobil Askari Lubricants
 Mobilink
 MPS Securities
 Muller & Phipps Pakistan Ltd.
 Multinet Pakistan Ltd.
 Mustaqim Dyeing & Printing Industries
 Nabi Qasim Industries
 Nanosoft Technologies
 Narejo Human Resources
 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
 Octara Pvt Ltd.
 Ogilvy & Mather
 Oman International Bank
 Opal Laboratories Pvt. Ltd
 Oratech Systems
 Orient Communications
 Orient Energy Systems
 Orix Investment Bank
 Orix Leasing Pakistan Limited
 OTSUKA
 Oxygene
 P&O Nedlloyd
 Pak Brunei Investment Company
 Pak Greaf
 Pak Gulf Leasing Company Ltd.
 Pak MediaCom Pvt. Limited
 Pak Mercantile
 Pak Oman International Bank Ltd.
 Pak Suzuki Motors Co. Ltd.
 Pakistan Beverage Ltd.
 Pakistan Credit Rating Agency
 Pakistan Currency Exchange
 Pakistan International Airlines
 Pakistan International Container Terminal Ltd.
 Pakistan Petroleum Limited
 Pakistan Refinery Limited
 Pakistan State Oil Co. Limited
 Pakistan Tobacco Company Limited

Pak-Kuwait Investment Co. Ltd.
PARCO
Park Towers – Prime Management Services
Parke Davis & Co. Limited
PEL
Pepsi Cola International Limited
Pfizer Laboratories Limited
Pharmatec
Philip Morris International
Philips Electrical Industries Limited
Pkstudent.com
Popular Fabrics
Port Qasim Authorities
Prestige Communications Pvt. Ltd.
Procter & Gamble Pakistan Limited
Qasim International. Container Terminal Ltd.
Qatar Airways
Qubee
Rajby Industries
Reckitt Benckiser Pakistan Limited
Red Cut
Regent Plaza Hotel
Relacom Pakistan
Reuters Limited
Rhone Poulenc Rorer Pakistan
Roche Pakistan Limited
Rocket Internet (Daraz.pk)
Ryan Agencies
Sandrill
Sanofi-Aventis Pakistan Ltd.
Sapphire Textile Mills Limited
Sattar & Sattar Co.
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
Silk Bank Ltd.
Sindh Bank Ltd.
Skyline
SMS Pakistan
Soneri Bank Ltd.
Spectrum Communications
Standard Chartered Bank Limited
State Bank of Pakistan
Sindh Technical Education and Vocational Training Authority
Sui Southern Gas Company Limited
Summit Bank Ltd.
Symmetry
Synergy Advertising Pvt. Limited
Syngenta
Tapal Tea Pvt. Limited
Target Resourcing
Tariq Abdul Ghani & Co. Ltd.
Taurus Securities Limited
TCS Pakistan Ltd.
TDAP
Teach For Pakistan
Telenor Pakistan Pvt. Limited
Tery World Textiles
Tetra Pak
Texpo Pakistan
Tharparker Sugar Mills
The Financial Daily
The Aga Khan University Hospital
The Citizens Foundation
The First Micro Finance Bank Ltd.
THK Associates Pvt. Ltd.
Topline Securities
Torque
Tradekey Pvt, Ltd.Total Lubricants
Tri-Emmm Textile Products
Ufone
Unicon International
Unilever Pakistan Limited
Unisys Pakistan Pvt. Limited
United Bank Limited
United Electrical Engineers Pvt. Ltd.
Universal Express
USAID
W Woodwards Pakistan Ltd.
Warid Telcom Pvt. Limited
Westminster & Eastern Financial. Services
World Wide Cargo Service
WorldCall
Wyeth Pakistan Limited
Xcess Logistics
Xenith Public Relations (Pvt.) Limited
Zafa Pharmaceutical Laboratories Ltd.
Zeppelin Communications
ZIL Limited
Zong
360 Training
3M Pakistan Pvt. Limited

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. We assist our graduates / alumni in finding their career paths. Some of the activities designed for placing students include, but are not limited to:

1. On Campus Recruitment Drives

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

2. Publishing Annual Graduate Directories

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

3. Career Counseling

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

4. Guest Lectures by Industry Experts

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

5. Workshops Related to Career Management

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

6. Career Fair

The department organizes a Career Fair, inviting organizations engaged in their recruitment cycle to make company presentations and answer questions from students. The department envisages this as an annual event not 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

Aaj TV
 Aba Ali Habib Securities
 Abacus-Global
 ABAMCO Limited
 Abu Dawood Trading Company
 AC Nielsen
 ACCA Pakistan
 Ace Insurance Limited
 ACM Gold Pvt. Ltd.
 Adam Motor Co., Limited
 Adcom Pvt. Limited
 ADVANS Micro Finance Bank
 ADM Denim
 Aftab Associates
 Aga Khan Education Services
 Agfa Gaveart Pakistan
 AIG Pakistan
 Airmen Golf Course & Recreational Park
 Aisha Steel Mills Ltd.
 AKD Securities
 Alfalah Securities
 Ali Asghar Textile Mills Ltd.
 Ali Gohar & Co. Limited
 Al-Mughal Trading Corporation
 Alstom Pakistan (Pvt.) Limited
 Alternate Research Pvt. Ltd.
 American Pacific Enterprises LLC
 Anjum Asim Shahid Associates Limited
 APL Pakistan Pvt. Ltd.
 Apna Karachi FM 107
 APTECH Computers Education
 Arif Habib Bank Limited
 Arpatech Pvt. Ltd.
 Artal Group of Companies
 ARY Communications
 ARY Digital Television Network
 ARY Shopping Channel
 AsiaCare Health & Life Insurance
 Asiatic Public Relations Network Ltd.
 Askari Bank Limited
 Atlas Honda
 Attock Cement Pvt. Limited
 Auspak
 Automobile Corporation Pakistan
 Avanza Solutions
 Aventis Pharma Pakistan Limited
 Axact
 Axis Communications
 Bank Alfalah Limited
 Bank Al-Habib Limited
 Bank Islami Limited
 Bank of Punjab
 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
 Bullseye 360
 Burj Bank Ltd.
 Business Plus
 Byco Petroleum Pakistan Ltd.
 Cadbury Pakistan Ltd.
 Candyland Industries Limited
 Capital Management (Pvt.) Limited
 Caresse Cosmetics, Santcos Limited
 Citi Security
 Citibank N.A.
 Clariant Pakistan Limited
 Classified Tribune
 Clicktrade
 Cloud BPO
 Coca-Cola Beverages Pakistan Ltd.
 Colgate Palmolive Pakistan Ltd.
 Contact Plus
 Continental Biscuits Pvt. Limited
 Contract Advertising
 Converge Technologies Pvt. Ltd.
 Creative Chaos Pvt. Ltd.
 Creative Factor
 Creek Developers
 Crescent Insurance
 Cupola Pakistan Limited
 Custom HR Solutions
 Dadabhoy Investments Pvt. Ltd.
 Dadex
 Dalda Foods Pvt. Ltd.
 DAMCO
 Dawlance (Pvt.) Limited
 DAWN Group of Newspapers
 Dealon

Descon Engineering
Deutsche Bank
Dewan Group
DHL Forwarding
DHL Global Forwarding
DHL Pakistan Limited
DMK Consultancy
Dolmen Group
Dow Jones
Drug Information Systems
Dubai Islamic Bank
Dupont Pakistan
EDGE Financials
EFU General Insurance Limited
EFU Life
Elixir Securities Pakistan Ltd.
Emirates Bank Ltd.
Emirates Global Islamic Bank Limited
Engage Consulting
English Biscuits Manufacturers Ltd.
Engro Corp.
Engro Foods Ltd.
Engro Pak Tank Terminals Limited
Engro Polymer Pakistan
ENI Pakistan Limited
EPFirms
Epoxy Industries (Pvt.) Limited
eSys Pakistan
Etilize Pvt. Ltd.
Evernew Entertainment
Evolution Advertising
Express News
Faysal Asset Management Ltd.
Faysal Bank Limited
Ferguson Associates
First Capital Equities Pvt. Limited
First Women Bank Ltd.
Folio 3
Forex Financial Products
Forte Pakistan Pvt. Ltd.
Foundation Public School
Freight Systems Co. Ltd.
Friends of Literacy & Mass Education
Gatron Industries Ltd. / Novatex Ltd.
GEMCO Pakistan Ltd.
General Tyre & Rubber Company Ltd.
Giga Group of Companies
GlaxoSmithKline Pakistan Limited
Global Seafood Marketing
Global Securities Pvt. Ltd.
Goodcore Technologies
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
Habitt
Haleeb Foods,
HANDS Pakistan
HBL Asset Management Ltd.
Herbion International Ink.
Himont Pharmaceutical Pvt. Ltd.
Hinopak Motors Limited
Hirelabs
Home Express
HRS Global
HRS International
HSBC Bank Middle East Ltd.
Hum TV
IAL Satchi & Satchi
IBL Group
IBM Pakistan
ICI Pakistan Limited
Icon Global
Icon Secutities
ICS Group of Companies
IGI Financial Services
imrooz.com
Indus Bank Limited
Indus Motors Company
Industrial Development Bank of Pakistan
Intel Pakistan
Interflow Communications Pvt. Ltd.
International Advertising Pvt. Ltd.
International Asset Management Company
INVATERRA
Invest & Finance Securities Limited
Islamic Investment Bank
IT Link Online
J&P Coats Pakistan Pvt. Ltd.
J. Walter Thompson Asiatic (Pvt.) Ltd.
Jaffer Brothers Limited
Jahangir Siddiqui & Co. Limited
Jason Group of Companies
Jeem Solutions
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
 Liberty Books
 Live Securities Pvt. Ltd.
 Lo'real
 Logicose
 Lucky Cement Ltd.
 Maersk Sealand
 Magnus Investment Advisors Ltd.
 Majsons Corporation
 Manhattan Leo Burnet
 Maple Pharmaceuticals Pvt. Ltd.
 Markematics Pvt. Ltd.
 Martin Dow Pharmaceutical
 Mass Advertising Pvt. Ltd.
 Mazars
 MCB Bank Limited
 Meat One
 Media Axis
 Media Max Pvt. Limited
 Meezan Bank Ltd.
 Mehran Enterprises
 Merck Marker Pvt. Ltd.
 Metlife Alico
 Metro Cash & Carry Pakistan
 Metropolitan Bank Limited
 MGH Group
 Microsoft Corporation
 Mindshare Pakistan Pvt. Limited
 Mitsubishi Corporation
 Mobil Askari Lubricants
 Mobilink
 Mobitel, KSA
 Monsieur
 MS Associates
 Muller & Phipps Pakistan Pvt. Ltd.
 Multinet Pakistan Pvt. Ltd.
 Mustafa & Co. Pvt. Limited
 Nabiqasim Industries
 Narejo Human Resources
 National Bank of Pakistan
 National Clearing Company of Pakistan Ltd.
 National Commodity Exchange
 National Foods Limited
 National Fullerton Asset Management Ltd.
 National Industrial Parks Ltd. (NIP)
 National Insurance Company
 National Investment Trust
 Naveena Export Pvt. Limited
 Nestle' Milkpak Limited
 Net Space Systems
 New Era Industries
 New Jubilee Insurance Co. Limited
 Next Generation Innovations
 NIB Bank Ltd.
 Nike Pakistan Limited
 Novartis Pharma Pakistan Limited
 Oman National Electronics, Dubai
 OMV Pakistan Exploration
 Oratech Systems Pvt. Limited
 Orient Public Relations
 Orix Investment Bank Pakistan Ltd.
 Orix Leasing Pakistan Limited
 Oxford University Press
 Oxygene
 P & O Nedlloyd
 Packages Limited
 Pakistan Petroleum Ltd.
 Pakistan Refinery Ltd.
 Pakistan Services Limited
 Pakistan State Oil Company Ltd.
 Pakistan Telecommunication Co. Ltd.
 Pakistan Television Corporation
 Pak-Kuwait Investment Co. Ltd.
 Pak-Kuwait Investment Co. Ltd.
 Pak-Suzuki Motors Co. Limited
 Pak-Suzuki Motors Co. Limited
 Parke Davis & Co. Limited
 Pak Mediacom Pvt. Limited
 Pastel Communications
 Path Group of Companies
 Pegasus Consultancy (Pvt.) Ltd.
 Pfizer Laboratories Limited
 Pharmatec
 Philip Morris International
 Philips Electrical Co. of Pakistan
 Pizza Next - MFC Pvt. Ltd.
 Plastech Products (Pvt.) Ltd.
 Premier Systems Pvt. Ltd.
 Prestige Communications Ltd.
 Prestige Grey
 Prime HR
 Procter & Gamble
 Qubee
 Reckitt Benckiser Pakistan Ltd.
 Reveal Executive Development Center
 Rhone Poulenc Rorer Pakistan Ltd.

Rising Technologies
 Robotics Labs
 Roche Pharmaceuticals Limited
 Rocket Internet (daraz.com)
 Rohi International Pvt. Ltd.
 Roshan Media
 S13 - Systems Innovations Pvt. Ltd.
 Salsoft Technologies Pvt. Ltd
 Samba Bank Ltd.
 Sanofi Aventis Pakistan Ltd.
 Sapphire Textile Mills Limited
 SBT Japan
 Schneider Electric
 Searle Pharmaceuticals
 Shabbir Tiles & Ceramics Ltd.
 Shafi-Reso Chemicals
 Shaheen Airlines
 Shangrila Pvt. Ltd.
 Sharaf Shipping Agency
 Shell Pakistan Limited
 Sidat Hyder
 Siemens Pakistan Limited
 Signium International
 Sindh Education Foundation
 Singer Pakistan Limited
 SKF Pakistan Pvt. Ltd
 Snack Bites Company
 So Safe Pakistan
 Socially Global
 Solutionicks
 Stancos Pvt. Limited
 Standard Chartered Bank Limited
 Starcom Pakistan
 Starcrest Communications
 State Bank of Pakistan
 STEP Consultants
 Stitchers International
 Streebo
 Sun Consultants
 Sun Systems
 Super Trading Inc.
 Synapse Consulting
 Sysnet Pakistan Pvt. Ltd.
 Tameer Micro Finance Bank Ltd.
 Target Resourcing
 Taurus Securities Ltd.
 TBH Employment and Consulting Services
 TCS (Pvt.) Limited
 Teach for Pakistan
 TeleCard Ltd.
 Telenor Pakistan Limited
 TenPearls
 The Aga Khan University & Hospital
 The Bank of Khyber
 The Express Tribune
 The First Micro Finance Bank Ltd.
 The Learning Organisation
 The Leatger Grandeur
 Thinkline
 Third Eye Managed Services
 Time & Vision Advertising
 TIPU Associates
 TNI - Worldwide Partners Inc.
 Total Lubricants
 TPS
 Travel Mate
 Travelport
 Triple E Pvt. Limited
 TV One - Airwaves Media Pvt. Ltd.
 UBL Insurers
 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
 USAID Pakistan
 Versa Canada Inc.
 Visa International (Asia Pacific) Ltd.
 Vision Express
 Warid Telecommunication
 Waterlink Group of Companies
 Wavetec Pvt. Ltd.
 Weekend World Marketing Limited
 Westminster & Eastern Financial Services Ltd.
 World Tel
 World Wildlife Fund for Nature Pak
 WorldCall Broadband Limited
 WWF Pakistan
 Xenith Public Relations (Pvt.) Ltd.
 Yunus Textile Mills Ltd.
 ZAP Infotech Inc.
 Zeppelin Communications
 ZH Technologies Inc.
 ZIL Limited
 Zishan Engineers Pvt. Ltd
 Zong
 14th Street Pizza
 360 Training



Entrepreneurship & Management Excellence Center

Entrepreneurship & Management Excellence Center (EMEC)

The Entrepreneurship & Management Excellence Center (EMEC), the executive Education Wing of IoBM, is a prized product of its successful evolution as a top-rated business and management school. EMEC 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 EMEC

Customized Training & Need Assessment Services

EMEC provides a better understanding of the actual and perceived training and support needs of the organization by employing a need assessment 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. This will help the EMEC team to develop customised trainings for the concerned organization and its employees using the extensive resource pool available to EMEC.

Open Enrolment Training

Driven by the passion for enhancing professional capabilities and skills of the corporate sector in Pakistan, EMEC 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 EMEC

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



Training of Not for Profit Organizations

The Citizen's Voice Project (CVP) is a three-year \$ 45 million Contract awarded by United States Agency for International Development (USAID) for grant-making and is being undertaken by a consortium that consists of the Trust for Democratic Education and Accountability (TDEA), The Asia Foundation (TAF) and Grant Thornton - Anjum Asim Shahid Rehman (GT-AASR). The overall goal of the CVP is to improve engagement between citizens and government in order to promote good governance.

In this regard, NPO (Not for Profit Organization) Management Course has been scheduled for 14 different groups over a period of fifteen months at EMEC. The participants of NPOs across the country will be trained in each course.

The training sessions of NPOs conducted at the Institute of Business Management (IoBM) are in the areas of Strategic Planning, Compliance, Leadership, Proposal Writing, Project Management, Financial Management, Monitoring and Evaluation and Public Outreach.

Collaboration with Harvard University

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

The seminar titled; "Troublemakers: Entrepreneurial Approaches against Corruption" was held on February 27, 2013. This seminar was aired simultaneously across Pakistan, Bangladesh and Sri Lanka and engaged thought leaders, policy makers, and public and private agencies involved in the areas of development. Another seminar titled; "Innovation in Education: Lessons for Entrepreneurship in Pakistan" was held on March 6, 2013. Yet another webinar, "Education in the Marketplace" was held on April 1, 2013.



Activities at EMEC

- Certificate in English Language Proficiency - January-April, 2012
- Sustainable Development of Coastal Areas- January 2012
- Maths Colloquium 2012
- Workshop on Blue Ocean Strategy- January 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
- Seminar on MARCON - March, 2012
- Application of Corporate Laws in Financial Transaction & Decision Making- March 2012
- Uplifting Service by Ron Kaufman - Live & in Person - April 2012
- Building Strong Pharma Brands- May 2012
- UN World Environment Day-June 2012
- Certification in Senior/ Professional in Human Resources- June 2012
- Corporate Governance Leadership Skills- Part 1, July 2012
- HR Diploma - Compensation & Benefits - August, 2012
- Innovation in Global Supply Chain Design - September 2012
- 3rd International Sindh Conference - September 2012
- Corporate Governance Leadership Skills Part 2 - October 2012
- TOPsim General Management Game - October 2012
- Corporate Governance Leadership Skills Part 3-5 - October 2012
- Conference on EcoHealth – October 2012
- NPO Management Course 1ST round– USAID Citizen's Voice Project –October 2012
- 3rd Annual Conference on Industrial and Organizational Psychology: Better Organizations through collaboration in Education, Research and Practice - December 2012
- Economics Conference Stabilizing South Asia - December 2012
- NPO Management Course 2nd round– USAID Citizen's Voice Project –December 2012
- HR Diploma- Talent Management & Employer Branding – January 2013
- Mobile Education Unit conducted a session on "Road Safety Awareness"- January 2013
- HR Diploma – Learning Organization - February, 2013
- Video-Conferencing from Harvard University titled: "Troublemakers: Entrepreneurial Approaches Against Corruption"-February 2013
- NPO Management Course 3rd round– USAID Citizen's Voice Project –February 2012
- Workshop on Experiential Learning – February 2013
- Workshop on Android Development - February 2013
- HR Diploma – Leadership Development - March, 2013
- 7th National Mathematics Colloquium STOCHASTIC MODELING & DATA ANALYSIS- March 2013
- Session on Consumer Multimedia Index by Managing Director, Ipsos Pakistan – March 2013
- Mark Templer, U.S. Mission Speaker conducted a session on "Entrepreneurship & U.S/Pak Trade Relations"- March 2013
- NPO Management Course 4th round– USAID Citizen's Voice Project –March 2013
- Workshop on Risk Management - March 2013
- Workshop on Innovation and Supply Chain Management - March 2013
- Workshop on Android Development - April 2013

Contract Research/Consultancy

- Economics Department: Comparative Study on Non Tariff Barriers in Pakistan, India and China, Trade Development Authority of Pakistan (TDAP), September 2012.
- Economics Department and EMEC in collaboration with Delloitte, Pakistan, Comparative Development strategy for Baluchistan, for the Government of Baluchistan, sponsored by UNDP.
- A consultancy "CUSTOMER PERCEPTIONS AND BEHAVIOUR: A STUDY OF TOYOTA, HONDA AND SUZUKI CAR OWNERS" for Indus Motors was conducted by IoBM from April 12 to June 13.

Research at IoBM and EMEC

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

Pakistan Business Review

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

National Conferences Attended and Papers Presented by IoBM Faculty in 2012-2013

- "Impact of Media Advertisements upon Subliminal Persuasion of Pakistani youth audience" by Dr. Linah Askari in Social Intervention International Conference at University of Karachi
- "Inflection of Media Advertisement Subliminally Persuades Pakistani Youth towards Carefree Attitudes of Life" by Dr. Linah Askari in International Conference on The Emerging Issues of Social Sciences in Pakistan at Quaid-i-Azam University, Islamabad

- "Impact of Performance Appraisal's Characteristics on Sales Persons' Job Satisfaction: A Comparative Study of Multinational Companies in Pakistan" by Aijaz Rasheed and A.Q Molvi in International Research and Contemporary Management Practices at LUMS
- "Alleviation Poverty through Skill Development Income Generation through Household Activities" by Dr. Shahida Wizarat in Aik Hunar Aik Nagar (AHAN) at South Asian Convention & Exhibition on Handicrafts
- Pay Satisfaction and Organizational Commitment in Private Business University Faculty by Shagufta Ghauri in Emerging issues of Social Sciences in Pakistan at HEC
- "Metaphysical and Epistemological Presumptions of Business Ethics Discourses and the Postmodernist Challenges" by Asad Shehzad in International Research Conference on Contemporary Management Practices at LUMS

International Conferences Attended and Papers Presented by IoBM Faculty in 2012-2013

- "Learning Styles of Students and Teaching Styles of Teachers in Business Education: A Case Study of Pakistan" by Dr. Nasreen Hussain and Dr. Nadia Ayub in International Conference on Education and Educational Psychology in Turkey
- "The Relationship between Personal Growth Initiatives and Psychological Well-being among Adolescents" by Dr. Nadia Ayub in the Second International Journal of Arts & Science Conference in USA
- "Testing the Validity of CAPM and APT in the Oil, Gas and Fertilizer Companies Listed on the Karachi Stock Exchange" by H. Jamal Zubairi in the third Conference on Financial Markets and Corporate Governance in Australia
- "An Investigation of the Factors Influencing the Capital Structure of Listed Companies in Pakistan" by H. Jamal Zubairi in International Conference on Business Management & Information Systems (ICBMIS2012) in Singapore
- "Transverse Product Effect on CSEM with Double Hydrocarbon Reservoir in Seabed Logging " by Seema Ansari in 3rd Global Conference for Academic Research on Scientific and Emerging Technologies (GCARSET) in Malaysia
- "Problems Faced by Parents of Young Children with Mental Retardation" by Shelina Bhamani in the third International Conference on "Global Trends in Emotional Intelligence (EI) and Peace Education" in Nepal
- "Trends of Emotional Intelligence in University Students" by Shelina Bhamani in the third International Conference on "Global Trends in Emotional Intelligence (EI) and Peace Education" in Nepal
- "Are Schools Disabled Friendly for Young Children? A Case Study from Pakistan" by Shelina Bhamani in International Conference on Inclusive Education in Bangladesh
- "Profitability Determinants of Commercial Banks" by Samina Riaz in International Business and Social Sciences Research Conference in Dubai
- "Promoting Intercultural Communication: An Empirical Study" by Fareeda Ibad in International Symposium on Languages and Communication in Turkey

- "Institutionalizing Health Management in Pakistan" by Dr. Asima Faisal in Healthcare Executive Management Development Program in India
- "Trypanophobia (Needle Phobia) in Young Adults - A Cross Sectional Study in Karachi, Pakistan" by Dr. Asima Faisal in International Symposium on Business and Social Sciences in Japan
- "Impact of Modern Agricultural Policies on Women Working in Agriculture in Pakistan" by Urfi Khalid in 6th Annual International Conference on Business and Society in a Global Economy in Greece
- "Trade-led Growth Hypothesis: An Empirical Analysis of South Asian Countries" by Dr. Shahida Wizarat in a conference on "Applied Financial Economics" in Greece

Faculty Publications

Impact Factor Publications 14

Other publications 8

Textbooks Publications 2012-2013

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

1. "Teacher PD and Distance Education: A case from South Asia". Saarbrucken, Germany: LAP LAMBERT Academic Publishing by Nasreen Hussain in 2012
2. "Marital Satisfaction", Publisher: LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany, by Dr. Nadia Ayub in 2012
3. "Mother's Dysfunctional Attitude - Is She Responsible for My Emotional State in Adulthood", Published by LAMBERT Academic Publishing, Saarbrucken, Germany, by Dr. Linah Askari in 2013
4. Case Study by Javaid Ahmed on "Organizational Transformation Challenges at the State Bank of Pakistan" in Asian Journal of Management Cases

External Research

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

Online Accessibility

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

PERN2

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

Quality Enhancement Cell (QEC)

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

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

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

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



Administrative and Academic Requirements

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.



Procedure for Submitting MS, MPhil & PhD Thesis

MS / MPhil Thesis

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

PhD Thesis

- Candidates must pass NTS (50% or more marks in subject exam)
- Candidates must pass 06 courses (18 credit hours) with a minimum CGPA of 3.0. D grades will not be considered
- Qualified candidates will inform PhD program coordinator/HoD to decide on a specialized area for research
- Candidate to suggest supervisor as per relevant area of interest
- BASR decision to be shared with the candidate and supervisor in writing
- Candidates to submit thesis on a CD for plagiarism (19% acceptable) check to the BASR Office (Reference section to be excluded)
- After Plagiarism check, candidates submit four copies of final thesis to the BASR Office
- BASR will approve the examiners' names: Two international thesis evaluators and one national evaluator (equal number of alternative names will also be shared with the BASR committee members) which will be provided by the supervisor
- Reports from the examiners will be directed to the respective deans
- Dean to submit the report to BASR for recommendations (if any)
- Final copy of the thesis to be submitted to BASR for thesis defense.
- Supervisor, coordinator, respective dean, external examiners, relevant department faculty will form the thesis defense committee.
- Candidates will defend the thesis through powerpoint presentation
- Examiners report to be submitted to the respective dean
- Dean to forward the examiner's report to BASR for final approval of degree
- The Rector will confirm the award of the degree.

Teaching and Learning at IoBM

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

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

Performance Evaluation and Standards

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

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:

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

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

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

Appeal / Review of the decision:

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

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 traditionally is 15 marks for each hourly and 40 marks for the final exam. 30 marks are assigned for quizzes and assignments. In some cases, there might be a slight variation if the concerned faculty so desires.

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

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

Mid-Term Policy

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

Policy for Course Repetition

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

Academic Dishonesty

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

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

Definition of Plagiarism

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

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

Cheating is unacceptable. Examples of cheating are:

- Any written or oral communication among students during an examination
- Providing information about the content of an examination
- Impersonation by another student during an examination

IoBM is a no smoking campus. Any violation of this rule can lead to serious consequences. The penalty for this can amount to the extent of cancellation of registration.

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

In addition:

- At least 5C's in O-Level exam or minimum 50% marks in SSC or equivalent
- Success in aptitude test and interview conducted by IoBM
*Subject to revision by the IoBM Management

Eligibility for entrance to two year Master's Programs:

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

- A four year Bachelor's degree in Arts, Science, Law, Commerce, Engineering, Medicine, Pharmacy or any other degree with high second division or equivalent from HEC/Provincial Government approved Institutes/Colleges/Universities in Pakistan
- A final qualification examination of a professional body recognized by the Higher Education Commissions of Pakistan, for example, ACMA, CA, ACCA
- Four years overseas Bachelor's degree or equivalent recognized by HEC
- Students with 2/3-year Bachelor's degree are eligible for MBA (3-year) program

In addition:

- Minimum 50 % marks in overall Academic career or 5C's in O-Level and 2C's in A-level exam excluding General Paper and Urdu or equivalent
- Success in aptitude test and interview conducted by IoBM
*Eligibility criteria is subject to revision by the IoBM Management

Eligibility for entrance to two year MBA (Executive) Programs:

The admission for MBA (Executive) Program would be based on any one of the following:

- A four year Bachelor's degree in Arts, Science, Law, Commerce, Engineering, Medicine, Pharmacy or any other degree with high second division or equivalent from HEC/Provincial Government approved Institutes/Colleges/Universities in Pakistan
- A final qualification examination of a professional body recognized by the Higher Education Commissions of Pakistan, for example, ACMA, CA, ACCA
- Four years overseas Bachelor's degree or equivalent recognized by HEC
- Students with 2/3-year Bachelor's degree are eligible for MBA (3-year) program.

In addition:

- One-year work experience (for MBA Executive)
- Success in aptitude test and interview conducted by IoBM

Eligibility for entrance to MS/Mphil Program:

It is based on any one of the following:

- Sixteen years/ Master's degree in relevant field with high second division or equivalent from HEC recognized Institutes/Universities in Pakistan OR
- Four years overseas Bachelor's degree or equivalent recognized by HEC

In addition:

- Minimum 50 % marks in overall Academic career or 5C's in O-Level and 2C's in A-level exam excluding General Paper and Urdu or equivalent
- Success in aptitude test and interview conducted by IoBM
- Minimum 50% cumulative Score in GAT General test as required by HEC

Eligibility for entrance to PhD Program:

Candidate having 18 years of education / MS/MPhil degree 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 MPhil/MS/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.

Readmission Policy

Students who stop attending classes at the Institute, for any reason, without informing the concerned authorities about their absence for more than one semester, their admission shall be struck off and candidates would be required to go through the admission process afresh in case they want to register for courses in future.

The procedure for rejoining:

- Admissions can be deferred for maximum of two semesters with justification and approval of Executive Director Admissions. Any relaxation not beyond two years is subject to approval of Executive Director Admissions.
- Students who complete their Bachelors from IoBM are eligible to register for MBA. However, if Security Deposit has been withdrawn, candidates may reapply for admission.
- Students dropped due to below good standing (i.e Masters below 2.5 CGPA and Bachelors' below 2 CGPA) may also apply for readmission.

Scholarships and Financial Assistance Programs

Internal

IoBM has established a financial assistance fund for students who are unable to afford the financial costs associated with an academic program. Assistantships and financial assistance are provided to students on merit and need basis. Currently about 25% of the students are receiving some form of financial aid.

HEC - Japanese Scholarships

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

HEC - French Scholarships

French need based scholarships are available for graduate programs.

Endowment Fund - Education Department, GOS

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

IoBM Endowment Fund

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

Shahjehan Karim & Family Endowment Fund

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

Janmohammad Dawood Trust

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

Tabba Foundation

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

Endowment Fund – Shan Foods

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

Sui Southern Gas Company Ltd. Scholarships

SSGC need based scholarships are awarded by SSGC. for students enrolled in undergraduate programs from Sindh and Balochistan provinces.

Scholarships are also available on reciprocal basis to:

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

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
MS / MPhil and PhD Programs	7,000.00	11,500.00	34,500.00	41,500.00

* Subject to change

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

Summer session fee is charged on the basis of courses taken. Convocation fee of Rs. 10,000 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.

Rs. 10,000.00 will be charged as supervisor fee for MS/Phil and PhD thesis.

Fee Refund Policy

Caution Money

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

Tuition Fees

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

External students

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

Registration Fee

Registration fee is refundable/adjustable in the following cases:

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

Fresh Entrants

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

%age of Tuition Fee	Timeline for Semester System
Full (100%) Fee Refund	Up to 7th day of convene of classes
Half (50%) Fee Refund	From 8th – 15th day of convene of classes
No Fee (%) Refund	From 16th day of convene of classes

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



Organization

Board of Governors

The Board of Governors exercises the powers to hold, control and administer the property, funds and the resources of the Institute. It also approves the Annual Report, Plan of Work, Statements of Accounts and the Annual Budget Estimates as recommended by the Executive Council. It is also responsible for ensuring effectiveness of the Institute's operations and continuity and preservation of its autonomy.

Members of the Board of Governors (listed on Page 8)

Executive Council

The Executive Council is responsible for formulating and approving the principles, policies and plans governing the activities and operations of the Institute so as to facilitate teaching and other academic work. It can appoint faculty, researchers and officers on the recommendation of the Selection Board. It can also create new components of the Institute such as faculties/departments/college, and constitute standing committees, subcommittees, councils, and other administrative or academic advisory bodies, if necessary. It can undertake initiatives to ensure efficient and effective management and functioning of the Institute. It proposes plans of work for the approval of the Board of Governors.

Members of the Executive Council

- Mr. Basheer Janmohammad, Chairman
- Mr. Shahjehan S. Karim
- One Judge of the Sindh High Court, nominated by the Chief Justice
- Chairman Higher Education Commission or his nominee
- Education Secretary, Education & Literacy Department GoS, or his nominee not below the rank of an Additional Secretary
- 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

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)

Electronics & Telecommunication and

HoDs report to the Dean and the academic work of each department is governed by a departmental board of studies consisting of both internal and external members.

Foundation for Higher Education

Foundation for Higher Education was established in 1994 under the Societies Registration Act, 1860 as a non-profit institution committed to the provision of quality education in Pakistan. IoBM is the first educational institution established by the Foundation. Following are the members of the Foundation:

- | | |
|-------------------------------------|--|
| • Mr. Shahjehan S. Karim, President | • Dr. Mrs. Afroze Imam Ali Kazi |
| • Mr. Z. A. Nizami | • Mr. Sani Ahmed |
| • Dr. Mehtab Karim | • Ms. Sabina Mohsin |
| • Dr. Ahmer S. Karim | • Mr. Talib S. Karim |
| • Mr. Mohsin Furqan | • Mr. Shoaib Nabi Ahmed |
| • Dr. Musarrat Hasan | • Mr. M. W. Jahangir, Secretary Board of Governors |





Faculty

Rector & Executive Director, Corporate Affairs & EMEC



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

College of Business Management (CBM)

The Dean



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

Advisors



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



Dr. Muhammad Arshad Malik, Advisor Health, Hospital and Pharmaceutical Management, is a retired Federal Secretary to the Government of Pakistan. He joined Civil Service of Pakistan (CSP) in 1957 and studied Public Administration at Oxford University (England). He holds an MBBS degree and has held senior positions, including Secretary Health, in various Ministries/Departments and Organizations from 1959-1995. He had been Professor of Government and Management Sciences at a reputable University. He had also been elected a Senior Associate Member at St. Anthony's College, Oxford University, England.

Dr. Ahmer S. Karim, Advisor, College of Computer Science and Information Systems (CCSIS), has a PhD and a Master's degree from Arizona State University, USA, preceded by Bachelor of Science in Finance and MIS from the University of Arizona, USA. He has over nine years of teaching experience at the University of San Diego, USA. He has published in Decision Sciences, Information and Management and also other academic conference proceedings. Dr. Karim has also published several academic books on Information Systems.



Accounting and Finance

H. Jamal Zubairi, Senior Fellow and Head of Department of Accounting and Finance, holds a BE degree from Dawood College of Engineering & Technology and MBA from IBA, Karachi. He also holds a banking diploma (DAIBP) from the Institute of Bankers of Pakistan. He possesses over 30 years of professional experience, mainly as a development banker with the National Development Finance Corporation and has also worked for other leading financial institutions such as ORIX Leasing. He has taught core as well as elective courses in Accounting and Finance for over 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.



Dr. Muhammad Mahmud, Senior Fellow Accounting & Finance, has previously served as Dean. He was with Institute of Business Administration (IBA), Karachi for twenty-four years in various capabilities (teaching, research and administrative). He has an MBA degree from the IBA Karachi and PhD degree in Business Administration from the University of Malaya, Kuala Lumpur, Malaysia. His main area of interest is finance. He has published more than 24 articles in reputed local and International Journals. Serving at KASBIT he organized many seminars and workshops for students and faculty members. The Institute of Bankers of Pakistan awarded him the third prize in 2002 and fourth prize in 2003 for participating in research essay competition.



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 in Finance & Accounting. He is an MBA in Finance, CA intermediate and holds Diploma in Banking. He has also completed his course work of M.Phil program leading to PHD in Finance from IoBM and is in process of writing thesis on SME financing. He has more than 20 years of diversified banking and training experience in international reputed banks. He was also associated with USAID program for capacity building of bankers as Master trainer and program coordinator. He trained bankers in Pakistan and Saudi Arabia.



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

Samina Riaz, Senior Lecturer in Accounting & Finance holds MBA and M Phil with specialization in Finance. Her research interest is in the areas of Banking and Accounting and intends to pursue PhD in the same. She has also presented various research papers in the national and international conferences.



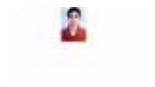
Misbah Iqbal, Senior Lecturer Accounting and Finance, holds a BBA (Hons.) and MBA degree from the Institute of Business Management and is currently pursuing her M.Phil in Business Management to be followed by a PhD in Finance. She has been teaching Finance and Accounting courses for 11 years, with around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



Sarwat Ahson, Senior Lecturer, holds an MBA degree from Institute of Business Administration, Karachi. She brings with her 8 years of corporate banking experience, 2 years of consulting and 4 years of teaching experience in various institutes of repute including IBA, SZABIST and IoBM.



Samreen Mohsin, Lecturer Finance and Accounting, holds BBA (Honors) and MBA with majors in Finance from IoBM Karachi. She has been associated with IoBM since 2007 (as visiting faculty) and has recently joined in as permanent faculty.



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 year.



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



Communication



Prof. Dr. Nasreen Hussain, heads the Communication, Education Department and the PhD program. 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.



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. Currently she is pursuing her MPhil in Education.



Muhammad Asif Khan, Assistant Professor, Communication, is an MA in English Literature and Linguistics from the University of Karachi, MBA from IoBM and MPhil in Education. 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.



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



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



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





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

Environment and Energy Management



Dr. Shahid Amjad, is a Professor and Head of the Department, Environment & Energy Management. He has a PhD from School of Ocean Sciences, University of Wales, UK. His MS is from the University of Oslo Norway in Benthic Ecology. He has completed courses in Management of R&D Institutes from University of New South Wales, Australia. He has been associated with the National Institute of Oceanography as Director General and with various top universities of Pakistan as Acting Vice Chancellor and Professor. He has also been associated as a visiting faculty with NED and the University of Karachi since 2005.



Dr. Abdulrauf Farooqi, Professor with 30 years post-doctorate experience in teaching, research & development, and humanitarian assistance. He has held the positions of Professor and Chairman of the Department of Environmental Science at Allama Iqbal Open University and International Islamic University (IIU) Islamabad. He provided seasoned leadership and academic expertise to direct and advance academic research, training, and quality educational programs in Environmental Sciences, Agricultural Sciences, and Youth Studies. He holds 22 years of extensive field experience with the World Bank and the United Nations High Commissioner for Refugees (UNHCR) in leading through a collaborative international effort to protect and assist refugees.



Dr. Muhammad Masoom Pahore, is PhD in Environmental Engineering from Japan's top 4th ranked University, Hokkaido University. His research area is treatment and reuse of water and wastewater using an Onsite Wastewater Differentiable Treatment System (OWDTS). He has published 12 papers in various international conferences held in Australia, Finland, Spain, France, Japan, China, Vietnam, Canada, Burkina Faso (West Africa) and also got published his three papers in ISI indexed International Journals. He has also worked for 11 years as Executive Officer in the Environmental Protection Agency, Sindh. He is a known scientist in his field of specialization world over and have strong links with Graduate School of Engineering, Hokkaido University, Japan, TAMK University Finland, CENTA Spain, IWA, JICA Japan and Center of Sustainability Science (CENSUS), Hokkaido University Japan.

Health, Hospital and Pharmaceutical Management

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



Dr. Humeira Jawed, Lecturer, 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 and GlaxoSmithKline, Pakistan in the area of Product Management. Dr. Humeira is a Certified Master Trainer for Faculty Professional Development Program from the Higher Education Commission, Pakistan. At present she is enrolled in PhD program specializing Organizational Psychology from IoBM.



Management and HRM

Dr. Khalid Amin, Senior Fellow and Head of Departments of Management, Human Resource Management and International Relations, holds an MBA and a PhD in Business Administration. He is also a Fellow, Institute of Corporate Secretaries and a Fellow, Institute of Bankers. He has been Chief Executive, Dubai 9 Group, Dubai; Secretary General (Chief Executive), Federation of Pakistan Chambers of Commerce & Industry; Secretary General & Chief Executive, All Pakistan Textiles Mills Association; Chief Executive, Telecard Ltd.; Chief Operating Officer of two Financial Institutions in the Prudential Group; General Manager in Pakistan Automobile Corporation, State Petroleum & Board of Industrial Management. He has been actively involved in Business Research and has over 50 reports, papers and articles to his credit. He has been advising the Ministries of Finance, Commerce and SECP & FBR on business facilitation and regulation. He has been a visiting Professor in MBA Programs in business schools in Pakistan, USA and Europe.



Abdul Qadir Molvi, Associate Professor of Management, has specialized in sales management training, marketing and strategy for corporate clients. He has earned a professional diploma in International Trade and Commerce from UC Berkeley, (USA), MBA (IBA), and BSc from the University of Karachi. He has over 33 years marketing experience of pharmaceutical and consumer products with leading MNCs. He was elected to the Council of the Marketing Association of Pakistan (1996-98) and served as its Vice President in 1998. He has also been invited to lecture on international marketing to the classes of Brand Management 1999 at Fullerton College, California, USA.





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



Dr. Fazal Anwer Khalidi, Assistant Professor of Management, has 24 years of consultancy and senior management experience with multinational pharmaceutical companies. He has also been associated with leading business schools of Karachi as adjunct faculty. His qualifications include MSc Marketing from Salford University, UK; MBA from IBA; and MBBS from Dow Medical College. He was awarded a Chevening Scholarship by the British Council to pursue a Master's program at Salford University. He has also attended an executive development program at the Thunderbird School of Global Management, Arizona, USA.



Shagufta Raff 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 visiting 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.

Juveria Baig, Lecturer, Human Resource Management holds BSc (Honors) from Textile Institute of Pakistan, MBA from Hamdard University and Masters of Commerce in Human Resource Management from the University of New South Wales, Sydney, Australia. Her experience includes working with SGS, Pakistan, USAID Funded Program and teaching at the University of New South Wales, Sydney, Australia. Her research focus is in the areas of Knowledge Management and Workforce Development.



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 and is a Fellow 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 Eng (London). He brings over 28 years of a successful top management career with the multinational health care industry including over a decade in Switzerland, Malaysia and the Philippines. He is on the Jury of the EFP Prime Ministers' Corporate Award of Excellence. He is case research active in corporate and market strategy and has supervised CBM's MPhil Marketing program. He has written two research based dissertations, published fifteen papers and articles and delivered sixteen 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 in Marketing. She has a diversified experience of corporate, academic, entrepreneurial and developmental sector. Currently she is enrolled as a Phd student in the area of Management Sciences. She has served in various organizations at different positions including Aga Khan Foundation, Interflow Communications and Gtz. She is an experienced academic, researcher and consultant in the field marketing and management.





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.



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.



Mohammad Ekhlague Ahmed, Assistant Professor, Marketing is an MBA from Institute of Business Administration, University of Karachi and has over 30 years of corporate experience. Ekhlague has worked as General Manager Marketing and Sales in Philips Electrical Industries of Pakistan, Osram Pakistan, Dadabhoy Cement. He served as Director Operations in Rajby Industries, one of leading manufacturers and exporters of Textiles products based in Karachi. Ekhlague is also a Corporate Trainer in the field of Strategy, Marketing and Distribution and Channel Management and has conducted a number of in house and public workshops. He is also co-author of a book 'Marketing Management: Case Studies Pakistani Market' published by IoBM.



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.



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.

College of Computer Science and Information Systems (CCSIS)

The Dean

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



Computer Science and MIS

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



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.



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



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





Engr. Muhammad Asghar Khan, Senior Lecturer in Computer Science, has a Master's degree in Network and e-business centered computing from University of Reading (UK), MS in Computer Software Engineering from NUST and BS Computer Engineering from Sir Syed University of Engineering and Technology. He has four years of industrial experience of various national and international organizations. His areas of interest are Network Security, Semi structured Databases and System Virtualization.



Khalid Bin Muhammad, Senior Lecturer Computer Science, has a degree of Bachelor of Engineering from NED University of Engineering & Technology and is a member of Pakistan Engineering Council. He also possesses a Master'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.



Ather Akhlaq, Lecturer, Computer Science has done his MPhil 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 has a couple of international publications. His research is mainly focused on information communication technologies.



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



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

Asim Iffikhar, 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.



Rabab Naqvi, Junior Lecturer, holds a Master's degree in Computer Science from University of Karachi. She has one year of teaching experience in computer related courses. Her areas of interest include Data Base Management System, Digital Computing & Artificial Intelligence.



Mathematics and Statistics

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



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



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





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.



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



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.

Logistics & Supply Chain Management

Muhammad Moin Uddin Ali Khan, Senior Fellow, Head of Quality Enhancement and Logistics & Supply Chain Management, has BSc and BE degrees from University of Karachi and MS in Engineering from University of Missouri, Rolla 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 interest are in the areas of Quality Management Systems, advanced materials, New Product development, Green Logistics & ERP. He is an expert member of the Sindh Environmental Protection Agency & HEC reviewer of Institutional Performance Evaluation.



Actuarial Science and Risk Management

Dr. Amjad Hussain, Assistant Professor and Head of the Department Actuarial Sciences and Risk Management at the Institute of Business Management, has done his PhD in computational mathematics (numerical analysis) from Leeds University UK. He has more than 15 years of teaching and research experiences in various prestigious universities of Pakistan. He has more than 50 research papers in international impact factor journals. He has supervised five PhD students and more than twenty M.Phil. students for their researches. He is also a reviewer of many research journals at national and international level. His area of interest are Numerical Analysis, Algorithm, and Computation Theory.



Fakhir Musharaf, Assistant Professor, Actuarial Sciences and Risk Management, holds a Master's in Business Administration in Finance from the University of Leicester, UK. He is pursuing PhD in Risk Management from Edinburgh Napier University UK. 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 Worch 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.



College of Engineering and Sciences (CES)

Electrical Engineering & Telecommunication Management



Seema Ansari, Head of Electrical Engineering Department has done MS/CS-Telecomm. from University of Missouri, KC, USA and B.E. Electronic Engineering from NED University of Engineering & Technology, Karachi, Pakistan. She is currently enrolled in PhD, Telecommunication engineering at Hamdard University, Karachi. During her academic career, she has been involved in teaching, research, management & administration and has held various positions. Starting as a Lecturer and Assistant Professor at Dawood College of Engg & Tech. She served as the Dean of Student Affairs and later Director at Asia Pacific Institute of Information Technology, Karachi, (a joint venture of APIIT Malaysia and affiliated with Staffordshire University U.K), and then Associate Professor / Head of Curriculum review and New Programs, Head of Department, Graduate Studies, College of Computer Science & Engineering, and Thesis / Research Supervisor of MS/MPhil students at PAFKIET Karachi. She is an author and co-author of 50 plus research papers published in both national and International Journals and magazines also presented papers in conferences. She participated in national and International conferences. She has also contributed as an author of a chapter in a book titled: "Wireless Sensor Networks and Energy Efficiency: Protocols, Routing and Management" published by IGI GLOBAL, USA in Jan. 2011, This book is available on Amazon.Com.



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).



Maria Andleeb Siddiqui, Assistant Lecturer, in the Electrical Engineering department. She holds a B.E degree in Telecommunications from the N.E.D University of Engineering and Technology. She is enrolled in M.E Computer networks and performance evaluation in N.E.D. She has done the project work on G.S.M network monitoring and management. Her area of research interest is Information Theory and Cryptography.

Quratulain Sohail, Teaching Associate in the Electrical Engineering department. She holds a B.E degree in Telecommunications from the N.E.D University of Engineering and Technology. She is currently enrolled in M.E Computer networks and performance evaluation in NED University.



Industrial Engineering

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



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



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



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



College of Economics and Social Development (CESD)

The Dean



Dr. Mohammad Ali Shamim, Acting Dean of College of Economics & Social Development, has a PhD in Civil Engineering from the University of Paris, France and an MBA from INSEAD, Fontainebleau, France. He has over 45 years experience of working in different organizations, to name a few, the Islamic Development Bank, Jeddah, the IFC and the World Bank. His geographical work exposure spans North America, Europe, Africa and Asia. In addition, he has taught in a Business School. His last assignment was working as the Managing Director & Chief Executive of a cement plant project.

Commercial and Professional Studies



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



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



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

Ghulam Murtaza Korai, Lecturer, Commercial and Professional Studies holds an MBA degree in Finance from IBA University of Sindh, Jamshoro, 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 degree in Economics from Islamia University, Bahawalpur. He has 38 publications to his credit out of 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.



Sadia Mansoor, Lecturer in Economics, holds MAS Economics from the Applied Economics Research Center (AERC) and M.Sc Economics from the Quaid e Azam University (QAU), Islamabad. She has been working with IOBM for last one and a half year. Also has experience of two years working as lecturer and Economist in different Private academic Institutions. Sadia Mansoor is currently doing her M.S Economics from IOBM and her area of interest and research is Financial Economics. She did her M.Sc thesis on "Determinants of Suicide in Pakistan" under the supervision of Dr. Eatnaz Ahmad (Professor, QAU) which had been ever first empirical study in Pakistan on the finding determinants of Suicide in Pakistan.



Ifan Lal, Research Fellow in Economics is currently enrolled in MPhil Program at IOBM. He has done MAS from Applied Economics Research Centre, University of Karachi and Master's in Economics from University of Karachi.

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



[Alamgir Khan Kakar](#), Research Associate is MPhil from IoBM and Master in Applied Science (MAS) in Economics from Applied Economics Research Center (AERC), University of Karachi.



[Zia Ullah](#), Research Associates holds Masters in Applied Sciences (MAS Economics) from the Applied Economics Research Center University of Karachi. MSc in Economics from Quaid-i-Azam University Islamabad. His research areas include International Economics and Macroeconomics.



Education

[Prof. Dr. Nasreen Hussain](#), (see profile on page No. 148)

[Samra Javed](#), Assistant Professor and Manager, Entrepreneurship & Management Excellence Center (EMEC), holds a Master's degree in English Language and Literature from Government College, Lahore and an MPhil in Social Sciences. She has also completed In-service Certificate in English Language Teaching, which is an advanced English language teaching certification awarded by Cambridge, ESOL. In addition, she has worked as the Academic Coordinator of the Society of Pakistan English Language Teachers. She has been involved in research on various aspects of teaching and learning. She is currently pursuing her PhD in Social Sciences with specialization in Education.





Shelina Bhamani, Coordinator, Associate Degree in Education (ADE) and Lecturer in Education and Social Sciences, holds a Master's degree in Education. She has recently received certification in Science of Early Childhood Development from Red River University, Canada. She has also completed her Advanced Diploma in Human Development and Child Development. In addition to In-service Certificate in English Language Teaching, an advanced English language teaching certification, awarded by Cambridge University and an International Graduate Certificate of Education, Australian Catholic University. Moreover, she is a recipient of gold medals and international travel/study grant scholarships. She has worked as project consultant on many national and international projects. She has been involved in research on various aspects of teacher education and early childhood development. She is currently pursuing her Research Degree 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 Robotka, 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, Assistant Professor and Head of Business Psychology, earned a Doctor of Philosophy in Psychology from the University of Karachi, Pakistan. She has taught both at college and university level before joining IoBM. Her research focuses on social problems, adolescents, organizational issues, personality, family and marriages, and Psychometrics. She has worked on a research project on Community Health Sciences at the Aga Khan University and Hospital. She has published ten research papers in national and international reputed journals. She presented her research papers at various national and international conferences. She has been selected as a member of Group Study Exchange Program, 2011, for Pennsylvania, USA, hosted by the Rotary Foundation International.



Dr. Moses Chukwugi Ossai, Associate Professor of Psychology, Department of Business Psychology, holds a PhD in Counselling Psychology from Delta State University, Abraka, Nigeria. He is a recipient of the 2010 Business Reports International Zik of Africa Award for Educational Leadership. He has over 25 years of administrative, teaching and research experience. He has published 20 research articles in reputable national and international journals in addition to 2 books titled: "Psychology of Education" and "Theory and Practice of Guidance & Counselling" besides numerous papers presented at academic conferences. He has served as Counsellor, Personnel Manager, Principal, Tutor, Senior Lecturer, Acting Dean of Education and Acting Provost at reputable Organizations and Institutions of Higher Learning such as International School, University of Lagos, Netarcomms Nigeria Limited, Delta State University Secondary School and Delta State College of Physical Education, Mosogar, Nigeria. His area of research interest is Personality Type, Study Habits, Examination Anxiety, Attitude towards Cheating and Examination Behaviour. He is currently leading 3 other researchers to develop an "Examination Behavior Inventory" with research grant from Tertiary Education Trust Fund (TETFUND) of Nigeria. Presently, he is on Sabbatical Leave at IoBM.



Dr. Linah Askari, Assistant Professor Psychology, Department of Business Psychology is a psychologist with vast academic and professional experience of behavioral, organizational, clinical and business psychology spanning over 18 years. She holds a PhD in Psychology from the University of Karachi and was awarded gold medals both in MSc Psychology and Post Magistral Diploma in Clinical Psychology from the University of Karachi. She is a recipient of 'Star Laureate Award' in 2006 from 'Who's Who in Pakistan'. She has introduced the latest 'Attitudinize Psychotherapy' recognized internationally through paper presentations at conferences and research publications. She is also the co-editor of "Handbook of Counseling and Psychotherapy in an International Context".





Dr. **Sehar Hassan**, Assistant Professor, Business Psychology, holds a PhD in Psychology from the University of Karachi. She has published 12 research papers out of which 2 were published in International Journals, like Indian Journal of Social Sciences and Official Journal of the World Psychiatric Association. She has also written a few chapters for two books "Pakistan Earthquake 2005 – The Day, the Mountains Moved" and 'Wars, Insurgencies and Terrorism – A psycho-social perspective published by Oxford University Press. She holds full time teaching experience of approximately 1 year initially as Lecturer and then as Assistant Professor at Jinnah Women University, Rawalpindi. She has a part time clinical experience of 9 years and as visiting faculty for two years at PECH College and at Jinnah Post-graduate Medical College, Karachi. She has a special interest and training in the field of Trauma Psychology and has also designed and introduced Disaster and Emergency Management training courses.



Sadia Aziz Ansari, Senior Lecturer in Psychology earned her Master's degree from the University of Karachi. She also holds a Post- Magistral Diploma in Clinical Psychology from Bahria University, Karachi. Her academic and research potential brings her to IoBM, where she continues to engage in research projects. Her research proposal entitled "Glass Ceiling at Call Centers in Pakistan" was funded by ILO. She has presented research papers at national and international conferences. In addition to that, she has more than two years of clinical experience at various reputable organizations. Her research primarily focuses on psychological assessment and development, employee attitude, positive psychology and emerging issues in applied psychology. Her current research projects focus on reward and compensation in the telecom industry, Karachi, and cross- cultural validation of Ryff's Scale of Psychological Well-being.

Islamic Studies / Philosophy Unit



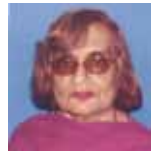
Asad Shahzad, Assistant Professor in Philosophy Unit, holds an M. Phil. degree in philosophy (philosophy of globalization) from IoBM. He earned his MA in English Literature from the University of Karachi. He received intensive training from SPELT under Cambridge University. He has taught at several educational institutions before joining IoBM. He writes for different newspapers on religious, political and social issues. He has presented papers at national and international conferences. His paper "Iqbal's Idealist Critique of Hawking's Materialist Concept of Time" was published in Iqbal Review, April 2008 issue. He was awarded the best paper award (including all categories) in General Management in International Research Conference on Contemporary Management Practices 2013 held by Lahore University of Management Sciences. Currently, he is involved in research in the area of the philosophy of globalization.

Media Studies

Ejaz Wasay, Senior Fellow, and Head of Media Studies, holds an MBA in 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.



Shahida Kazi, Senior Fellow of Media Studies and Media Management /Advertising. She 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 Newline for three years now. She was associated with a private university as a faculty before joining IoBM in September 2011.



Visiting Faculty at Institute of Business Management (IoBM)

Aamir Abbasi

MBA Finance, MSc Nuclear Physics

Abdul Hamid Khan

MBA, (IBA)

Abdul Rahim Khan

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Zulfiqar Jafer
Chartered Accountant

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.



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Executive Director

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MS, US International University, Nairobi, Kenya



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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.

Actuarial Science

ARM501 Stochastic Process/Modeling

The aim of the course is to acquaint students with the use of probability theory to study models of phenomena with a degree of unpredictability about them, such as queues and population growth. Discrete and continuous time Markov chains, Poisson processes, random walks, branching processes, first passage Probability generating functions. Limiting probabilities, Branching processes, Exponential distribution: definition and properties, memory less property. Continuous-time Markov chains: definition. Birth and death processes. Chapman-Kolmogorov and Kolmogorov equations. Limiting probabilities. Balance equations.

Pre-requisite: STA205

ARM601/602 Models of Financial Economics I & II

This course aims to provide the complete understanding of pricing of various types of options, Modelling of stock prices, Binomial Tree distribution, Risk neutral Pricing, Brownian Motion, Interest rate Modelling. MFE is the compulsory exam (paper-III) for the Associate Actuaries exam conducting by Society of Actuaries (SOA)USA. After completing the course students are fully prepared for the SOA (USA) examination.

Pre-requisite: ARM601/FIN509

Communication

COM102 Business Communication I

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.

COM107 Academic English

This course has been designed to enhance the students' understanding and use of writing and critical reading skills thereby inculcating a maturity of thought appropriate to the students needs in their freshman year.

COM108/109 English I & II

This two-tier English language course is designed to create a solid foundation among students through interactive lessons and exercises. English I will include reading of authentic texts from newspapers and magazines, writing practice, listening, grammar, and vocabulary topics. English II will involve reading of selected "classics" as well as contemporary literature, as well as polish writing and develop speaking skills – the objective being to improve the students' command over the English language and give them more confidence.

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.

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.

CME414 Digital Image Processing

This course emphasizes general principles of image processing, rather than specific applications. The topics covered are as image sampling and quantization, color, point operations, segmentation, morphological image processing, linear image filtering and correlation, image transforms, Eigenimages, multiresolution image processing, wavelets, noise reduction and restoration, feature extraction and recognition tasks, and image registration.

Pre-requisite: TCE404

CME420 Multimedia Communication

To develop familiarity with the science and technology of multimedia communication.

Pre-requisite: TCE200

Computer Science

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.

Pre-requisite: CSC105

CSC202 Digital Computer Logic

The course covers an introduction to switching logic and combination circuits, minimization techniques, Karnaugh Map and Quine McClusky methods, Half Adders & Full Adders, Combination Circuits using MSI AND LSI Components and an introduction to Micro Programming.

Pre-requisite: 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.

Pre-requisite: 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 & Network**

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: CSC201, CSC202

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.

Pre-requisite: 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.

Pre-requisite: CSC102, CSC109

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

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 overview, 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 space 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

CSC413 **Introduction to Software Development**

This course intends to develop skills to move from personal software development methodologies to professional standards and practices. This course will help students to create programs that interact with their environment and human users according to standard professional norms. The course also intends to develop effective software testing skills, write code conforming to the API standards, to identify and evaluate trade-offs in design and implementation decisions for systems of an intermediate size. The course also will help students to read and write programs in Java using advanced features and to extend model of computation.

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.

CSC548 **Advanced Analysis of Algorithm**

Introduction to advanced techniques for designing and analyzing algorithms, including asymptotic notations, divide-and-conquer algorithms and recurrences, greedy algorithms, data structures, dynamic programming, graph algorithms and randomized algorithms.

CSC561 **Advanced Software Engineering**

System development using formal techniques, algebraic specification, abstract model specification, verification: proof systems, proof techniques, proof obligations, design: data refinement, operation refinement, design decomposition, software reliability and metrics, macro models: productivity, effort, defect reliability modeling, simple model, markov modeling, parameter estimation, comparison of models.

CSC562 **Object Oriented Software Engineering**

This short course with UML, Java, and Eclipse will expose students to the basics of object-oriented software engineering, including object-oriented analysis and design using UML (Unified Modeling Language), object-oriented programming using Java, all within the Eclipse environment. Laboratory sessions will equip participants with practical experience in object-oriented design, programming, and testing.

CSC563 **Software Quality Assurance**

This course provides an intermediate QA and Test. Students will acquire a thorough skill set for their respective roles in a QA or test team environment. They will also learn both the theoretical concepts of this matured discipline and the unique experiences and innovative practices from Microsoft.

CSC564 **Software Requirement Engineering**

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-through'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 examines 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 equilibria, 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 ergogeneity; 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.

EDM414 **Classroom Management**

This course will provide participants with the conceptual and practical background understanding of various components of classroom management like time, student and resource management and strategies pertinent to it. Furthermore, the participants will be given hands on exercises and case studies to analyze the solutions for the problems faced in the classroom. The course will introduce the concept of classroom management log book for the record of plans and relevant resources.

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.

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 Academic 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.

EDM421 **Sociology of Education**

The course takes an expanded view of education and focuses on learners within both community and educational institution settings and how it attends to the complex interrelations between schooling and the social, cultural, historical, political, and economic contexts within which learning institutions operate. It also includes the inter relationship between education, family, community and the society at large.

EDM422 **Learners and Learning Styles**

This course will orient participants with learners' psychology and styles. The course will provide in depth understanding of various learner centered approaches. In addition, detail discussions will be held to explore the concept of multiple intelligence, developmentally appropriate curriculum, and individual oriented lesson planning. Particular attention will be given to the recent contemporary concepts of diversity, pluralism and globalization. For better understanding, participants will be given an opportunity to reflect on their teaching styles and its impact on learning styles.

EDM423 **Reflective Inquiry in Education**

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.

EDM429 **ICT in Education**

This course will provide the participants with hands on practice of understanding the appropriate use of technology in the milieu of education. Moreover, it will help participants to plan, design, integrate and evaluate the technology for educational program development. Use of webinars, moodles, blogs etc will be introduced to the participants.

EDM430 **Developing Research Projects**

This course will make the participants 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 participants identify their own areas of interest in the field of Education. The course will be mainly practical with classroom activities as well as evaluation will contribute to overall aim of the course.

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.

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.

EDM514 **Early Childhood Development**

This course will orient participants with the basic concepts of early childhood education and development. It will help the participants to explore and analyze various models in place. Furthermore, the course will enhance the participants' concepts and analysis pertinent to childhood studies in Pakistani and global contexts.

Electrical Power System Engineering

EPE101 Linear Circuit Analysis

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

EPE102 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, earthing 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.

EPE302 Electrical Machines

To understand the magnetic field and the reluctance of magnetic materials and air. Voltage-current characteristics and voltage regulation of generator. Torque speed characteristics and speed regulation of DC motors. To introduce the fundamentals of ac machine. Detailed operating principles of ac machines including induction motor, synchronous motors, alternators and Transformers have been included to develop thorough understanding of construction, characteristics, operation and proper application of ac machines being used in industries.

Pre-requisite: EPE200

Electronic Engineering

ELE102 Basic Electronics Engineering

The course focuses on theory of electrical conductivity, metals and semiconductors, the physics of semiconductors, principles of, diodes, diode applications, and type of diodes, bipolar transistors, and transistor biasing.

Pre-requisite: GSC103, EPE102

ELE200 Electronic Devices and Circuits

Transistors Modeling Techniques, Hybrid Equivalent Model, BJT Small Signal Analysis, AC Equivalent Circuits, FETs and MOSFETs construction and operation, FET Small Signal Analysis, AC Equivalent Circuits, Cascaded Systems and Compound Configurations, Differential pair of BJTs and MOSFET, Definition and amplifier types Class A, B, C and D amplifiers their operations and circuits Distortion and power considerations

Pre-requisite: ELE102

ELE201 Digital Logic Design

Introduce the concepts and tools for the design of digital electronic 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, Planar 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, Hall 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; high frequency welding. 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

ELE422 **VLSI Design**

Teach VLSI system design including system specification, verification, and fabrication.

Pre-requisite: ELE302

ELE428 **Digital Electronics**

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, A/D and D/A converters, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

Pre-requisite: ELE419

ELE429 **Introduction to Nanotechnology**

Introduction, Nano scale phenomena, nanoparticles, carbon nanostructures, nanowires, nanostructured materials, self-assembly, surface probe microscopy, other Nano scale characterization, nanolithography, Nano scale devices and systems, applications of nanotechnology.

Pre-requisite: GSC103

ELE450 **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.

ENG102 **Engineering Mechanics**

The course discusses static of particles, kinematics of particles, kinetics of particles, rigid bodies, equilibrium of rigid bodies, kinematics of rigid bodies, plan motion of rigid bodies, friction and analysis of structures.

Pre-requisite: MTH 202

ENG103 **Engineering Drawing**

This course extensively covers the drawing equipment and the use of instruments, basic drafting techniques and standards, freehand sketching of machine and engine components, concepts of working drawings of component parts of machines and engines, etc.

ENG105 **Basic Industrial Engineering**

This course is designed to introduce the fundamental concepts of industrial engineering and give answers to the very first questions that are usually asked by the prospective industrial engineering students. The course surveys both the traditional and modern topics of industrial engineering, providing a historical as well as an academic perspective of the whole profession.

ENG108 **Introduction to Thermo-Fluids**

To introduce basics of thermodynamic properties, laws of thermodynamics and their application to power and refrigeration cycles. Introduction of basic modes of heat transfer. Formulation of basic equations for Fluid Engineering problems. To determine the friction energy loss for various pipes/ducts geometries and fluid engineering applications. Introduction of hydraulic machinery.

ENG109 **Industrial Chemistry**

The course aims to introduce student to the general concepts of chemical engineering by laying the foundation to establish material and energy balances of chemical processes. Fundamental knowledge of stoichiometry and chemical equilibrium is applied to simple combustion and separation processes.

ENG201 **Design of Machine Elements**

The course content includes the choice of material, component design, shaft design and shafting, gear design, introduction to design of simple machine elements, governors and gyroscopes, design of springs and design/selection components.

Pre-requisite: ENG 101/102

ENG202 Production System Design

The course focuses on the structure and operation of production planning, scheduling and control systems; emphasis on system structure, capacity planning, master production scheduling, shop loading and supply chain; investigation of current trends, cellular manufacturing, group tech, flexible manufacturing systems and introduction to robot anatomy.

Pre-requisite: ENG 201

ENG203 Engineering Economics

The course includes the economic environment, cost concepts and analysis, time value of money, depreciation and depletion, comparing alternatives; production concepts and mathematical models and capital financing and budgeting.

Pre-requisite: ECO 104

ENG204 Plant Engineering

The course content comprises thermal power plants, steam generators and turbines, air-conditioning and ventilation, pumps and compressors, etc.

ENG 206 Manufacturing Process

The course is designed to focus on analytical study and design of manufacturing engineering with emphasis on manufacturing and processes; the interaction of design, materials, and processing, laboratory instruction and hands-on experience in metrology, machining, process planning, economic justification, current manufacturing methodologies and expendable and non-expendable casting processes.

ENG209 CAD/CAM Application

The course focuses on modular software development for interactive CAD. The topics include human interface for interactive design, programming structure for modular entity creation, storing and retrieving object data, utilizing peripheral input and output devices, attribute regulation and control, and software transfer and documentation specifications.

Pre-requisite: MIS 001/104

ENG216 Reliability Analysis

The course introduces the system reliability, focuses on analysis of deterministic, probabilistic and stochastic reliability models. The topics covered include coherent structures, minimum path representations, computing system reliability, systems with associated components, bounds on system reliability, classes of life distributions, optimal management of systems by replacement and preventive maintenance.

Pre-requisite: STA204

ENG217 Materials Engineering

To familiarize the students with various industrial materials, their applications, properties and structural changes during manufacturing processes.

Pre-requisite: GSC101 / ENG101

ENG218 Metrology & Statistical Quality Control

The course exposes the students to the principles of measurement, gauges and modern quality concepts and their practical use, the basic statistical & probability techniques and their usages in quality applications.

Pre-requisite: STA204

ENG219 Industrial Maintenance and Safety

To up keep the plant and machines by removing every type of trouble and providing safe atmosphere in the organization to improve productivity and to enhance the efficiency and economy of the organization. Importance of plant maintenance, factors influencing the maintenance. Considerations in designing plant maintenance, economic aspects of maintenance, care and maintenance of common industrial equipment, maintenance linkage to safety, different systems/types of maintenance, laws of accident proneness, accidents preventions. Legal, humanitarian & economic reasons to prevent accidents, safety measures, analysis & procedures, safety equipment.

Pre-requisite: ENG206

ENG220 **Mechanics of Materials**

Simple tension, compression and shear, biaxial tension and compression, torsion, stress of beams, analysis of plane stress and strain. Deflection of beams, mechanical properties of materials.

Pre-requisite: *ENG217*

ENG300 **Electrical Technology and Instrumentation**

The course focuses on an index study of electrical technology and instrumentation. The course content includes electricity fundamentals and basic laws, A.C. fundamentals, electric machines fundamentals and measuring instruments.

ENG302 **Industrial Maintenance**

This course is designed to develop an understanding about Industrial maintenance. It includes basic considerations for industrial maintenance, maintenance management and replacement analysis.

Pre-requisite: *ENG 301*

ENG303 **Production Planning and Control**

The course is designed to provide the basics of production planning and control with the need of modern manufacturing organizations in mind. The topics covered in the first course are: production and operations strategy, subjective and objective forecasting -such as Delphi method, trend-based methods, and methods for seasonal series, deterministic inventory planning and control, etc.

Pre-requisite: *MAN 304*

ENG304 **Automation and Robotics**

The course focuses on the general principles of operation and programming of automated systems, automated assembly, automated manufacturing, and inspection systems. Control of automated manufacturing, industrial logic systems and programmable logic controllers, etc. are also a part of the course.

Pre-requisite: *MIS 001/104*

ENG305 **Work Study and Methods Engineering**

This course is designed to teach the fundamentals of Work Study and Methods Engineering, which are both used for the examination of human and human work in all their contexts. Work Study topics 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 its 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 plants.

EEM404 Industrial and Municipal Waste Management

The course will cover waste classification, sources, characteristics, generation, onsite handling and storage, collection, transfer, recycling and disposal techniques of solid and hazardous waste. It also covers history of waste disposal, dumping, and burning, land filling, composting and incinerating techniques. Various methods for the treatment of liquid effluents from municipalities and industries.

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 manage solid and hazardous waste properly and efficiently. The course covers different modern methods of waste disposal, composting and incinerating etc.

EEM505 Energy Audit

This course covers the need for energy consumption, monitoring, designing and starting energy consumption control program, energy accounting, targeting and reporting, energy audit process, preparations, facility inspections, audit procedure and action plan, audit report, recommendations, implementation and follow ups of energy conservation schemes, understanding energy bills, electric rate structure, natural gas rate schedule, steam and chilled water rate, cost of water and waste water, monthly energy bill analysis, actions to reduce electricity utility costs.

EEM506 **Energy Conservation**

The course will cover areas of energy consumption and conservation, conservation scheme, and implementation, major areas of energy conservation, lighting, components of lighting system, lamp types, luminaries and types, maintenance of the lighting system and schedule, luminaries dirt depreciation factor, re-lamping strategies, spot replacement and group re-lamping strategies and costs, lighting survey, measuring light levels, regulatory/safety issues, lighting safety issues, energy policy Act 1992, lamp substitution, lighting control technologies, selection of lights for new facility, EPA green lights program, electrical motors and transformers-factor involving selection and installation, maintenance and overhaul scheduling, performance tests, depreciation factors, energy system maintenance, transmission and distribution networks, HVAC systems, boilers, steam distribution systems.

EEM507 **Energy Planning**

The course will cover energy economics and planning, energy economics, the nature and cause of the energy problems, demand side and supply side issues, commercial and traditional energy determinants externalities, policy issues, pricing and distribution policies, energy balances formulation and execution, natural energy statistics, definitions, of primary, secondary, delivered and useful energy, problems of interpolation and comparison of energy statistics, rural energy planning, pattern of energy demand and supply, socio-economic aspects of energy utilization, survey methods, identifying potential solutions, project planning, monitoring and execution, financial evaluation projects, project analysis and financial appraisal, discounted cash flow, time preference discount rates inflation and interested rates, project evaluation in term of present values and internal.

EEM508 **Environmental Ethics**

The course focuses on the understanding of the natural environment and human relationship to it. The course provides strong coverage of major ethical theories such as moral, relativism, ethical egoism and discussion about the tragedy of the commons, etc.

EEM509 **Public Awareness for Environment and Energy Sector**

This course will focus on the importance, scope and application of the public relation and public information as regard to environment and energy in the private and public sectors, the local, regional, national and international levels.

EEM510 **Economics of Energy Management**

This course examines the economics of markets for various energy sources (such as oil, coal, natural gas, and electricity), and their interactions with each other and with the rest of the economy. We will look at how energy markets have historically developed and why they have been subject to extensive government intervention. We will analyze the effects of traditional policy measures such as price controls and regulation; and we will examine current policy issues arising from the relationships among energy use, economic growth, and the environment (carbon storage and the policy measures). The course will also look at energy demand and supply analysis, efficiency measures as well as current issues both local and international. The course is designed both for students interested in energy economics specifically, and for those interested in applied economics as well as oil and gas sector in general.

EEM701 **Methods and Issues in Advanced Qualitative Research**

The course focuses on developing a working knowledge of a range of qualitative methods, methodological approaches, and theoretical framework of research to enable the participants to conduct qualitative research within the social sciences. Through lectures and seminars, current methodological issues are analyzed and discussed. The participants will conduct an empirical investigation designed to evaluate the usefulness of a research method that they select. The research method itself should thus be the focus of inquiry. Academic writing skills will be developed to enable participants to write effective academic papers.

EEM702 **Methods and Issues in Advanced Quantitative Research**

The primary goal of the course is to help participants to develop a conceptual background and practical skills needed to critically evaluate statistics and to conduct statistical analyses of empirical data independently (e.g., independent study projects, etc.). This course will also introduce computer applications for data analysis, including construction of data files, SPSS for data analysis, and development of an analysis plan. In addition, participants are expected to learn how to document and communicate the results of the analysis efficiently. APA writing style will be introduced to enable participants to write their thesis.

EEM703 **Current Advancement and trends in Environment, and Energy Management**

The student will be required to undertake course work that fulfills the requirement of current advancement and trends in environmental science and policy. The breadth requirement may be fulfilled by using a wide spectrum of environmentally related courses, including areas such as economics, law, and management, Environmental management and sustainable development of resources, linking green economy with social development. The course evaluates social well being, and economic prosperity. Economic evaluation of environmental impacts, and environmental and social assessments, concepts and methodologies are introduced. Topics include sustainability and management of resources. Socioeconomic developments and Sustainable Management of ecologically sensitive areas, Communities etc.

EEM704 **Independent Study in Environment and Renewable Energy Management**

This course will provide space to the participants coming from different scientific disciplines to propose a research topic in their field of interest. The research work should be completed within one semester for publication preferably in an impact factor journal. For independent study, the participants will be provided a suitable adjunct faculty member of the university, who is able to facilitate in completing the process of research and publication. This independent study course will be different from the main Ph.D. research study and will be beneficial for the candidate in providing them with experience to pursue their major work of investigations, providing an exposure to plan, conduct and publish a small scale research project in their area of interest.

EEM705 **Advance Environmental Toxicology and Epidemiology and its Management**

The course will help develop concepts of adverse toxic effects of environmental chemicals and biological solid/liquid effluents from natural and anthropological sources present in air, water and soil on human and other living organisms. It will examine the overall toxicological and epidemiological management approaches and learn to maintain a balanced approach and balanced public expenditure on environmental health (preventive health) and curative health. The course will expand understanding of percepts that the environmental diseases do not necessarily occur at random and without reason and require taking proactive preventive approaches.

EEM706 **Advanced Pollution Control Technologies and Mitigation Options**

Advanced pollution control technologies are of concern from two overlapping but distinct point of view of human health and the health of aquatic ecosystems. The course is designed to develop understanding of environmental quality and its control technologies vis-a viz advanced pollution control technologies and mitigation options in environmental profession. It will entail understanding about different types of pollution, including properties, industrial production, uses, environmental releases, fate, health impacts and mitigation options. Pollution categorization into air, water and soil pollution, organic/inorganic pollutants, pesticides and other toxicants. The students will also learn about the concerns of pollution including effects of pollution on daily life and bio-solutions to cleanup problems. Case studies on pollution entailing understanding and implementation of pollution control technologies especially the green technologies in harmony with natural world and mitigation options for attaining a sustainable world will be part of the study.

EEM707 **Advances in Green Technology Mechanism**

Green technology being relatively new field is mushrooming its growth in length and breadth exponentially. The course is designed to understand the conceptual development of greening technical strategy, branding/communicating strategy and overall management systems. The course will provide in-depth understanding of what is unfolding green agenda means to all aspect of technologies. This would mean taking or maintaining a reactive stance of simply staying compliant with the legislation and or do little or nothing approach as opposed to shifting to proactive and creative green technologies. The green initiatives benefit from the newer green economic landscape and reap advantage of being a trend setter in the development of continuously improved environmental friendly concepts and technologies and consequently help in introducing of new/improved national/international legislation of improved productivity and profitability.

EEM708 **Disaster Risk Management and Mitigation Strategies**

There is growing national and international concern at the rising frequency and severity of natural hazards and disasters, in part due to factors related to climate change, there is increased impetus in many countries to put in place policy, legal, technical, financial and institutional measures that will reduce the destructive effects on the lives and livelihoods of individuals and communities. The course examines the nature and consequences of natural and man-caused hazards on natural, built and human environment. The course also examines strategies that may be taken at the individual, organizational, community or regional levels to reduce the adverse consequences of disasters and foster sustainability.

EEM709 Trade & Environment

The objective of Trade & Environment course is to raise awareness on the linkages between trade, the environment and sustainable development, to promote greater dialogue between trade and environment policy makers. WTO, Introduction to environmental economics. Impact of trade on the environment, Impact of environmental regulation on trade, CBD and the Biosafety Protocol, CITES. Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal.

EEM710 Sustainability and Conservation of Major Ecosystems

Sustainability includes consideration of environmental stewardship; the course explores the use of management systems and performance frameworks to make sustainability part of what every person in any organization does every day. The course introduces the concept and practice of sustainable development (SD). It examines the environmental, economic, and social dimensions of SD by focusing on changing patterns of consumption, production, and distribution of resources. Evaluation of resources. Tropical, Temperate and Polar Ecoregions. Forest, Mountains, deserts, riverine, rangeland areas. Understanding world's oceans and their environments. This course has an international focus and examines the impact of globalization, the role of the private sector, and NGOs. Specifically, this course focuses on development that helps to eliminate economic disparities and reduce poverty. Prerequisites: introductory courses in environmental science, economics, and social science Case Studies will be used to reinforce the concepts and develop the skills to enable students to use the knowledge imparted in the course.

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 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

FIN404 Financial Management

The course explains the basic concepts of time value of money, Management of current assets, financial forecasting and planning, ratio analysis and common size statements, and capital budgeting techniques.

FIN405 Banking Laws and Regulatory Environment

The course discusses the role and significance of laws related to banks/ financial institutions, including laws applicable to international trade and banking. The role/functions of important regulatory institutions such as State Bank of Pakistan, Securities and Exchange Commission of Pakistan, Ministry of Finance, etc. are also covered. The purpose and critical evaluation of important regulations will also be a part of the course.

Pre-requisite: ECO 401, FIN 404

FIN406 Financial Econometrics

This course provides an intensive introduction of basic principles of econometric analysis that may help students understand finance theories and their empirical applications. In addition, it also equips students with appropriate statistical techniques for doing applied financial research. The emphasis will be on developing and applying regression-based techniques in both cross-sectional and time-series contexts. Their usefulness will also be examined in the light of financial studies. 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 performed 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, ijihad, 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 hedge, 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 and 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), Kirchoff 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. Teaching methodologies apply experiential learning techniques.

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. Teaching methodologies apply experiential learning techniques.

Pre-requisite: MIS103 / MHM402 / 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. Teaching methodologies apply experiential learning techniques.

Pre-requisite: MHM402

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. Teaching methodologies apply experiential learning techniques. 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. Teaching methodologies apply experiential learning techniques.

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. Teaching methodologies apply experiential learning techniques enhancing androgogical skills. 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. Teaching methodologies apply experiential learning techniques. 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 16 completed courses with required CGPA*

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. Teaching methodologies apply experiential learning techniques.

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, 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 assurance activities, and closing project contracts keeping in view ethics, professional knowledge, stakeholder's interests and cultural diversities. By the end of the course, students will be proficient in organizing and executing complex healthcare projects using techniques of project management software tools.

Pre-requisites: MAN 401, MIS 401

MHM523 **Health Ethics**

In this course, students will be able to learn the principles and theories of ethics related to health care delivery/administration and legal issues surrounding the relationships of patient, provider, and health care institution. This course also focuses on principles of autonomy and informed consent, confidentiality, truthfulness, professional standards and institutional ethics, corporate liability, medical malpractice, medical staff bylaws, patients' rights, medical records and governmental regulation of personnel and health facilities. 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 care industry. The course is especially tailor made to suit the complexity and diversity management of policies and strategies of the human resource working in health care.

Pre-requisites: MAN401 / HRM401 / MHM401

MHM526 **Healthcare Leadership**

This course introduces the basic principles of leadership and direction for those who are interested in supervision and management of health programs. The course content explores different 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 Practicum in HRM

The practicum prepares students to practice industrial/organizational psychology with the understanding of organizational cultures critical to effective professional practice in the workplace. Independent work under the direction of faculty advisor topics includes assessing, analyzing, or appraising performance, aptitudes, skills, preferences, needs, or personality factors required for job/task analysis, personnel recruitment, selection and placement, or performance evaluation.

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.

LAN112/113 Urdu I & II

This two-level language course in Urdu is meant to provide students with basic grounding in the language and inculcate in them the desire to explore further by reading newspapers, magazines, and fiction. Urdu II seeks to take students to the next level by introducing contemporary literature, encouraging creative writing and developing speaking skills – the objective being to improve the students' command over the Urdu language.

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.

Pre-requisite: ACC102

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.

Pre-requisite: ACC101 / 402

LAW301 Intellectual Property, Patents, Copyrights

This course emphasizes on patents and copyrights and a briefer look at trade secrets and trademarks. Current issues relating to information technologies and business methods will be highlighted. The seminar has no prerequisites, and is designed for both graduate students and undergraduates.

LAW400 Company Secretarial Practices

This course introduces participants to the duties and responsibilities of the corporate secretary in organizations. Students will explore the role and functions of the corporate secretary and the application of best practice in the conduct of meetings and in ensuring compliance with legal and regulatory requirements.

LAW401 Business Law

The course provides an in-depth study of law relating to commercial associations/ entities with a particular focus on companies. The topics include 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/ discharge 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 include linear programming, transportation and assignment models, network models, queuing models, simulation, replacement models, etc.

Pre-requisite: MKT 303, MAN 303

MAN405 Strategic Management

The course is intended to be a challenging and exciting capstone course for a graduate business school curriculum. It is the first course about strategy and its implementation. Students will be exposed to the state of the art of strategy analysis, formulation, implementation and control. 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 Introduction to Industrial Management

The course introduces industrial management operation system & includes objectives; entrepreneurship, project identification, evaluation, project & operation cost, productivity, breakeven analysis, process management, operations strategy, competitive strategy framework for competitor analysis, structural analysis of industry, total quality management, capacity planning & facility location, inventory management, supply chain management, project management, project control and technology management..

MAN411 Project Management

The course covers project initiation, discovery and analysis, time and cost estimates, project planning, network diagram, critical path, recourse management plan, project execution, monitoring and managing, project control, project closure plan, managing operation transfer plan.

MAN413 Corporate Social Responsibility

CSR is the commitment of businesses to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve their lives in ways that are good for business and for development. 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 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

MIS301/302 **Graphics I / II**

Graphics I and II will concentrate on providing students a level of expertise to be able to effectively use Adobe Photoshop and Illustrator, two of the most popular and widely used software. Photoshop works with bitmap image manipulation and processing program that is widely used for creating or modifying digital photographic images. Illustrator, on the other hand, is a vector-based drawing program, that generates individual vector objects known as Bezier curves. Although both programs come from Adobe they both also offer numerous unique capabilities as well.

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

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, applets, 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**

The course is an introduction to the language and issues of marketing. The course focuses on basic marketing concepts, the role of marketing in the organization, and the role of marketing in society. Topics include market segmentation, product development, promotion, distribution, and pricing. Students have seen and experienced marketing from a consumer view point. In this course, we will take the perspective of the marketing decision maker. Students will learn that there is much more to marketing than they might have expected. From the textbook, participation assignments/homework, and class discussions, they will learn about the decisions that marketers must make and tools/frameworks that will assist them in making those decisions effectively. By the end of the course, students should understand the complexity and challenges associated with making marketing decisions as well as ways to design effective marketing strategies. On the practical side, this new understanding of marketing should make each of them a more knowledgeable consumer.

MKT302/402 **Marketing Management**

This is an intermediate level marketing course that incorporates a mix of lecture and case study approaches, rounding it off with a term- project aimed at understanding the practice of marketing management in the real business world. The course focuses on formulating and implementing marketing management practices - a task undertaken in most companies at the business unit level. In an academic sense, this course builds on the learning of Principles of Marketing (MKT 301/401) through an enhanced application of pedagogy specifically through the use of case studies and more tutorial emphasis. Through a semester-long project, students will be provided the opportunity to study the application of the principles and concepts discussed, in the corporate environment.

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 will provide a general understanding of the strategic marketing process, its relationship to the corporate strategy and the particular role of market driven strategies. It will provide understanding of the concept of market orientation and role of distinctive capabilities to deliver value to different product-markets. The course will provide an understanding of the strategic aspects of segmentation & positioning for the brands and their relations to target markets, the strategic dimensions of branding, pricing, channel decisions, promotion and innovation that help achieve corporate goals through effective marketing strategy. This advance course in strategic marketing introduces students to the strategic role of marketing in an organization after they have developed knowledge of concepts and application of marketing in the courses of "Principles of Marketing" and "Marketing Management" respectively.

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**

Advertising is a creative, and at times, controversial communicative genre that plays a central role in consumer culture. This course will challenge students to consider not only the creative dimensions of advertising but also to consider a sustainable social role for advertising. Students will be challenged to develop an understanding of the relationship between advertising and creativity and focus on how to develop innovative solutions to contemporary and social communication problems. The course will have a significant applied component: students will focus on developing the creative dimensions for an advertising campaign related to a contemporary social issue and engage imaginatively with agency briefs, examine how ideas are creatively expressed using words and images and develop advertising concepts, prepare a creative pitch, and explore the story-telling and copy-writing dimensions of advertising.

Pre-requisite: *MKT 302/402*

MKT505 **Industrial Marketing**

The course includes the nature of the industrial market, analysis of customer procurement strategy, product policy, pricing, distribution strategy, sales force management and key account selling strategy.

Pre-requisite: *MKT 302/402*

MKT506 **International Marketing**

This course analyses opportunities, distinctive characteristics, and emerging trends in foreign markets; explores alternative methods and strategies for entering foreign markets; organizational planning and control; and impact of social, cultural and economic.

Pre-requisite: *MKT 302/402*

MKT507 **Services Marketing**

This course provides an in-depth appreciation and understanding of the unique challenges inherent in managing and delivering quality services. Students will have the opportunity to work with tools and strategies that address these challenges.

Pre-requisite: MKT 302/402

MKT508 **Personal Selling**

In this course students are taught the art of oral communication with potential buyers of a product with the intention of making a sale. Among marketing jobs, more people are employed in selling than any other field, hence this course gives good textbook knowledge to equip the student for such a position in the practical field.

Pre-requisite: MKT 302/402

MKT509 **Consumer Behavior**

This is a core marketing course. The principles of the course form the basis to all marketing elective courses. The course begins with providing an orientation on the concept of consumer behavior and its evolution with changing times with a focus on emerging segmentation and targeting. The course progresses on analyzing the consumer as an individual and discusses theories and marketing applications based on motivation, personality, learning, attitude and communication. After the student has acquired a comprehensive view on the individual psychology the course advances in understanding how the social and cultural settings have an effect on consumer decision making and dynamics of group dynamics. The course concludes by intensively analyzing consumer decision making and the ethical and social responsibility of marketers.

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 through 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 associated 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 is offered as a marketing elective and is opted for by student in the advanced semesters of their degree programs. The growth and diversification of the financial services market has led to increasing competition for customers and the constant creation of new products. Significant regulatory developments, impact of technology and new entrants from the global arena and the challenge of retaining an ever so mobile consumer have a profound impact of competition in the sector hence the role of marketing is of creating and sustaining a competitive advantage. This course is logically structured around core marketing principles and their application to the Financial sector. This course also incorporates technology developments in delivery systems, including telephone and internet banking.

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, Cramer'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 R^3 , 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.

MTH204 Linear Algebra

Algebra of matrices; inverse of a matrix; Gauss-Jordan method for the solution of a system of linear algebraic equations; vectors in the plane and in three dimensions; vector spaces; subspaces; span and linear independence; basis and dimension; homogeneous systems; coordinates and isomorphism; rank of a matrix; determinant; inverse of a matrix; applications of determinants; determinants from a computational point of view; properties of determinants; eigenvalues and eigenvectors; systems of linear differential equations; diagonalization; Hermitian matrices; singular value decomposition; quadratic forms; positive definite matrices; non-negative matrices; floating-point numbers; Gaussian elimination; pivoting strategies; matrix norms and condition numbers; orthogonal transformations; eigen value problem; least square problems.

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 derivatives 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

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

MTH215 **Differential Equations**

The subject of differential equations can be described as the study of equations involving derivatives. It can also be described as the study of anything that changes. This course has fundamental importance in engineering mathematics because many physical laws and relations appear mathematically in the form of such equations. The course gives an understanding of how to transform the given physical situation to its corresponding mathematical model.

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**

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, Galerkin approximation; partial differential equations, initial value problems and numerical integration.

Pre-requisite: MTH 202

Maths & States (Scientific Computing)

MTS610 **Calculus of Variations**

Calculus of variations concerns problems in which one wishes to find the extrema (usually the minima) of some quantity over a system that has functional degrees of freedom. Many important problems arise in this way across pure and applied mathematics and physics. In this course it is shown that such variational problems give rise to a system of differential equations, the Euler-Lagrange equations. These equations, which have far reaching applications, and the techniques for their solution, will be studied in detail.

MTS611 **Statistical Inference**

The theory of statistical inference underpins statistical design, estimation and hypothesis testing. As such it has fundamental applications to all fields in which statistical investigations are planned or data are analyzed. Important areas include engineering, physical sciences and industry, medicine and biology, economics and finance, psychology and the social sciences. Topics covered in this course include, Frequentist and Bayesian approaches, sampling distributions. Sufficiency, likelihood, and information. Asymptotic properties of estimators. Bayesian inference. Hypothesis testing. Likelihood ratio tests, application to linear models.

MTS612 **Numerical Methods for ODEs and PDEs**

This course will cover numerical solution of partial differential equations (PDEs) and ordinary differential equations (ODEs) arising in various physical fields of application; finite difference, finite element, and spectral methods; elementary finite volume methods for conservation laws; time stepping, method of lines, and simultaneous space-time discretization; direct and iterative methods for boundary-value problems; and applied numerical analysis of PDE or ODEs, including sources of numerical error and notions of convergence and stability, to an extent necessary for successful numerical modeling of physical phenomena. Applications will include the Poisson equation, heat equation, wave equation, and nonlinear equations of fluid, solid, and gas dynamics.

MTS613 **Design of Experiments**

This course explores basic principles of statistical experimental design including randomization, replication, blocking, confounding, nested versus crossed factors, split-plot designs, fixed, random and mixed models, and the contrast between designed experiments and observational studies. It investigates factorial and fractional factorial designs with an emphasis on 2k factorial designs and 2k-p fractional factorial designs. Other potential topics include robust parameter design, 3k-p fractional factorial designs, balanced incomplete block designs, mixture experiments and response surface methodology. There may be a requirement for statistical communication (written reports and presentations) and group work.

MTS614 **Mathematical Statistics**

Probability theory: special univariate distributions; multivariate, marginal and conditional distributions. Introduction to stochastic processes, Markov chain, expectation and generating functions, functions of random variables and derived distributions, random sums, convergence of random sequence, sampling distributions, basic methods of estimation; maximum likelihood estimation (MLE) and multiple model estimation (MME), unbiased, and consistency. Introduction to decision theory, Minimax and Bayes approach, structure of Bayes and Minimax rules, complete class of rules, point and interval estimations as a decision problem, and hypothesis testing as a decision problem.

MTS615 **Dynamical Systems**

This component aims to give an overview of the main aspects of nonlinear systems and to provide definitions and theoretical background. This course will address issues under Continuous Dynamical Systems, Discrete Dynamical systems, and Non-linear waves.

MTS616 **Advanced Numerical Analysis**

Direct and indirect methods for solving simultaneous linear equations and matrix inversion, conditioning, and round-off errors. Computation of eigenvalues and eigenvectors. Numerical methods based upon functional approximation: polynomial interpolation and approximation; and numerical differentiation and integration. Solution methods for ordinary differential equations. The student is also introduced to the important packages of scientific software algorithms.

MTS617 **Multivariate Statistics**

Topics include matrix algebra, random sampling, multivariate normal distributions, multivariate regression, MANOVA, principal components, factor analysis, Discriminant analysis. Statistical software, such as SAS or R, will be utilized.

MTS618 **Statistical Modeling and Computing**

The generic programming skills acquired in this course are applicable across a wide variety of scientific disciplines as well as in the IT sector. Topics covered include, Using R: expressions, assignments, objects, vectors, arrays and matrices, lists and data frames, functions, control structures, graphics. Efficiency considerations. Statistical modeling in R: linear and generalized linear modeling, analysis of variance, residual plots, non-linear modeling. Computational techniques: function minimization (in particular for maximum likelihood estimators and in non-linear modeling), quadrature, simulation (general methods, Monte Carlo).

MTS619 **Stochastic Processes**

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 times, recurrence and transience, stationary distributions. Probability generating functions. Limiting probabilities. Branching processes. Exponential distribution: definition and properties, memoryless property. Continuous-time Markov chains: definition. Birth and death processes. Chapman-Kolmogorov and Kolmogorov equations. Limiting probabilities. Balance equations.

MTS620 **Asymptotic Analysis**

Mathematical models of many physical systems have a naturally occurring small parameter which may be exploited using asymptotic analysis techniques. In this course, we will study a variety of physical systems which illustrate many of the common approaches used in asymptotic analysis. Topics covered may include Asymptotic expansions, (non)convergence, algebraic equations with small parameters, eigen value problems, Asymptotic evaluation of integrals: Laplace's method, method of stationary phase, Boundary layers, principle of dominant balance, matched asymptotics with applications to physical problems, Boundary layers in PDE's, Method of multiple scales, WKB theory, and Exponentially ill conditioning.

MTS621 **Time Series Analysis**

Studies the basic time series models in both the time domain (ARMA models) and the frequency domain (spectral models), emphasizing application to real data sets.

MTS622 **Continuum Mechanics**

This course unit gives an introduction to the theory of continuum mechanics from a mathematical viewpoint. In continuum mechanics, matter is represented by average quantities defined in a continuous region of space, rather than as discrete particles. The field is enormous and encompasses the study of fluids, solids, powders, plasmas and almost everything in between. The subject is developed from first principles, but you will be expected to have a certain level of mathematical maturity. The main goal of this course is to present a unified, mathematically rigorous approach to two classical branches of mechanics: the mechanics of fluids and the mechanics of solids. Topics will include kinematics, stress analysis, balance laws (mass, momentum, and energy), the entropy inequality, and constitutive equations in the framework of Cartesian vectors and tensors. Emphasis will be placed on mechanical principles that apply to all materials by using the unifying mathematical framework of Cartesian vectors and tensors. Illustrative examples from materials, biology and physiology will be used to describe basic concepts in continuum mechanics. The course will end at the point from which specialized courses devoted to problems in fluid mechanics (e.g. bio-transport) and solid mechanics (e.g. cellular biomechanics) could logically proceed.

MTS623 **Applied Regression Analysis**

Linear, non-linear and multiple regression and correlation; analysis of residuals; other statistical techniques including response surfaces and covariance analysis; prediction and time-series analysis. The computer lab involves interactive data analysis and investigation of the methodology using SAS and/or R. Regression Analysis is the most widely-used and probably the most useful technique in statistics. It is used to study the relationship between two or more variables and to investigate causal hypotheses. There are various types of regression analyses (linear, non-linear, logistic, Poisson, etc.). The objectives of this course are to learn which regression technique is appropriate for a given hypothesis and a given data set, fit regression models using statistical software, interpret results, communicate results in non-technical language, and study the underlying theory.

MTS624 **Geometric Methods in Mechanics and Physics**

This is the foundation course for work in geometric mechanics and geometric control theory. In addition, students wanting to work in applied fields like fluid mechanics, elasticity, computational mechanics, computational geometry, and variational integrators will find this course useful. Topics include smooth manifolds and mappings, tangent and normal bundles. Vector fields and flows, Distributions and Frobenius' theorem. Matrix Lie groups and Lie algebras. Exterior differential forms, Stokes theorem, Hodge Theory and Finite Element Method.

MTS625 **Theory and Practices of Forecasting**

Time series data take the form of observations of one or more processes over time, where the structure of the temporal dependence between observations is the object of interest. Such data arise in many application areas including economics, engineering and the natural and social sciences. Topics covered are: Forecasting as the discovery and extrapolation of patterns in time ordered data. Descriptive techniques for time series. Box-Jenkins models: identification, estimation, verification. Forecasting using ARIMA and structural models. Forecast assessment. State space models and Kalman Filter. Comparison of procedures. Practical aspects of forecasting and Case studies.

MTS626 **Advance Convex Analysis**

The elegant framework of convex analysis is a powerful integration of key mathematical concepts tied to optimization. It provides a delicate blend of techniques from analysis, topology, and geometry that yields properties of minima and maxima of functions. It also develops more elaborate concepts such as duality, subgradients, and conjugacy that are extremely relevant in the design of modern optimization algorithms. In this course we shall cover the elements at the heart of convex analysis: subgradients, optimality conditions, the Fenchel conjugate, and duality. Our focus will be on the core concepts but we will frequently use specific models (linear and semi-definite programming, eigenvalue optimization, optimization of polynomials, interior-point methods) to illustrate the most important results.

MTS627 **Statistical Quality Control**

Statistical quality control courses introduce students to the product design and control process. Course assignments may include creating sample quality control plans. Students examine a company's production and processing capacity, along with the product quality loss when production exceeds that capacity. Students also analyze the products' performance.

MTS628 **Advance Numerical Optimization**

This course provides an introduction to the fundamental theory of optimization in finite dimensions. It is aimed at audiences who have a sound mathematical background and are interested in deepening their understanding of basic mathematical principles involved in solving optimization problems. The role of convexity will be discussed as well as basics of non smooth and variational analysis. Topics may include, Karush-Kuhn-Tucker optimality conditions; Convergence, Newton and quasi-Newton methods; Nonlinear conjugate gradient methods; Levenberg-Marquardt methods; quadratic programming and nonlinear programming; penalty- and barrier-function methods; Line search and trust region methods; sequential quadratic programming, (SQP) methods; Sub gradient methods.

MTS629 **Machine Learning & Pattern Recognition**

This course is a foundational course for anyone pursuing machine learning, or interested in the intelligent utilization of machine learning methods. The primary aim of the course is enable the student to think coherently and confidently about machine learning problems, and present the student with a set of practical tools that can be applied to solve real-world problems in machine learning, coupled with an appropriate, principled approach to formulating a solution. Topics included are, Data and Models: Introducing Data, Probability and Bayesian Presumptions, Simple Distributions, Maximum Likelihood and Bayesian Estimation, Bayesian Sets Example, The Exponential Family, Multivariate Gaussians, PCA and PPCA. Bayesian Gaussian, Linear Parameter Models, Bayesian Regression, Logistic Regression and Neural Networks, Optimization, Approximate Methods: Laplace, Variational Methods, Sampling. Naïve Bayes, Class Conditional Gaussians, Gaussian Mixtures and EM, Gaussian Processes and Kernel Methods and Bayesian Decision Theory.

MTS631 **Production Quality Software**

The course will cover the techniques used by most successful software engineers to address problems of quality and complexity. Goal is to learn how to write software that is robust, reusable, and maintainable by practicing the craft thoughtfully and critically through assignments and code reviews. Topics covered include, The Java Language - Overview, features, and best-practices., Concurrency - The Java Memory Model and thread-safety. Object-Oriented Design - Guidelines for good designs. Design Patterns - Solutions for common software design problems. Refactoring - When to modify existing code and how to do so safely. Test-Driven Development - Ensure your code works the way you expect and doesn't break when you change it. Product growth - Engineering challenges from software prototypes to production systems with millions of users. Building a development workplace - IDEs, revision control, continuous builds, bug and issue management.

MTS632 **Advance Variational Inequalities**

The theory of variational inequalities treats optimization problems over convex sets. In this course we study the existence, uniqueness and regularity of the solution of a variational inequality. Applications and numerical methods will also be discussed.

MTS633 **Fundamental Algorithms**

This is an introductory course in algorithms. We will cover standard topics such as sorting, divide-and-conquer, various data structures, graph algorithms, dynamic programming, greedy algorithms, and - time permitting - NP-completeness and basic approximation algorithms. The emphasis will be given to arguing the correctness of algorithms and performing the analysis of their running time.

MTS634 **Advance Numerical Linear Algebra**

Matrix computations lie at the heart of most scientific computer codes. In this course, we will study how to perform such computations efficiently and accurately. Topics will include Gaussian elimination, singular value decomposition, eigenvalue solvers and iterative methods for linear systems.

MTS635 **Information Retrieval & Data Mining**

The course is aimed at an entry level study of information retrieval and data mining techniques. It is about how to find relevant information and subsequently extract meaningful patterns out of it. While the basic theories and mathematical models of information retrieval and data mining are covered, the course is primarily focused on practical algorithms of textual document indexing, relevance ranking, web usage mining, text analytics, as well as their performance evaluations. Practical retrieval and data mining applications such as web search engines, personalization and recommender systems, business intelligence, and fraud detection will also be covered.

MTS636 **Advance Hilbert Space**

Inner product spaces, geometric and metric properties of Hilbert spaces, orthogonal expansions and projections in Hilbert spaces. Bounded linear functionals and operators, compact operators on Hilbert spaces. The spectral theorem for self adjoint compact operators.

MTS637 **Simulation and Modeling**

The course will cover both analytical methods (Markov Models and Queuing Networks) and simulation techniques (Monte Carlo Techniques and Event Driven Simulation) applied in performance modeling of communication systems and networks. Topics included are, the Essentials of Probability, Monte Carlo Techniques, Discrete Event Stochastic Models, Markov Models with Applications to Data Networks, and Queuing Models.

MTS639 **Principles in Parallel Computing**

This course is designed for both academic and industrial scientists interested in parallel computing and its applications to large-scale scientific and engineering problems. It focuses on the three main issues in parallel computing: analysis of parallel hardware and software systems, design and implementation of parallel algorithms, and applications of parallel computing to selected problems in physical science and engineering. The course emphasizes hands-on practice and understanding of algorithmic concepts of parallel computing.

Media Management / Studies

MMM301 Photo Journalism

The purpose of this course is to train students in the use of photography for the more specific practice of journalism. The students' practical experience with digital photography will be a prerequisite for this course. The versatility of cameras and the speed at which images can be produced and printed or aired make it the standard for today's photojournalist.

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 messages that are being disseminated by the media. It is aimed at making students aware of content, and critically analyzing them to comprehend the basic purpose and meaning of what they have read or viewed.

MMM305 Videography

This is an introductory course in video photography that is intended to teach students how to use a video camera under different conditions of lighting, in different situations and for different purposes. The students will learn how to operate the camera manually and use various features such as zoom, focus, aperture, white balance etc. This is a practical course.

MMM306 Mass Media in Pakistan

This course will cover the history and development of media in Pakistan over the years, since the country became independent. It will also discuss the role played by media today, as well as "government- media relations", and issues concerning or attributed to the media.

MMM307 World Civilization and Culture

This course seeks to apprise students of the world's common heritage. The achievements of great civilizations of the past, such as the Egyptian, Babylonian, Greek, and Roman civilizations and their contribution to world culture will be highlighted. Discussion will also include the contributions of the West and of Islam towards the development of 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.

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 specifically designed to apprise the students of the structure and working of electronic media organizations i.e. radio and television. It will teach the basics of radio and TV programs in terms of production, direction and scripting of different types.

MMM312 Introduction to Advertising and Public Relations

This course is meant 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.

MMM314 **Online Journalism**

This course is designed to familiarize students with the immense potential of the Internet 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 papers and magazines.

MMM315 **Feature, Article and Column Writing**

This course seeks to develop specialized writing skills of students for advanced journalistic use, including features, articles, editorial reviews, columns and newspaper editorials. It is an applicative course that would prepare students for professional writing for newspapers and magazines.

MMM316 **Sub Editing and Page Design**

The purpose of this practical 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 using specific software such as InDesign.

MMM317 **Theories of Communication**

This course aims to apprise students with the evolution of media theories over the years. It will help create a better appreciation of the role of media, and the effects of media on the individual and society. It will focus on the more contemporary theories of media reflective of the Internet era.

MMM318 **Economic Journalism**

The purpose of this course is to enable students to understand the dynamics of the economic and financial world, drawing on their knowledge of basic economic principles, and building on it. It will train them in terms of writing financial news reports and articles on economic issues, analyze the financial reports of companies, understand the operation of stock exchanges and relate to matters dealing with business and finance.

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, and social development.

MMM322 **Current Affairs**

This is a course based primarily on newspaper reading, watching television news and related programs, and using the internet, and will seek to discuss different problems and issues prevalent in Pakistan as well as the world. Students will be trained to give their perspective on different issues.

MMM324 **Media Management and Marketing**

This course will deal with the application of management techniques within the context of media organizations. It will include planning, organizing, personnel handling and crisis management.

MMM325 **Research Report Writing**

Students will learn the tools and techniques of writing a Research Report for use in the preparation on a thesis on some aspect of the media and/or communication.

MMM327 **News Production**

This course is dedicated to the craft of writing, editing and producing the TV News Magazine, broadcast journalism's long-form storytelling vehicle, by managing the anchors, director, and studio crew during the production of "the show". The course will involve non-linear editing of raw elements from a story previously broadcast to edit their version, dissecting video story telling styles in the news magazine and long-form genre, and applying these and other learned editing techniques, to produce the final product.

MMM328 **Methods in Media Research**

This course focuses on researching media content, communication processes, and the media "prosumer"- a term coined by combining producer and consumer of media, within the context of the interactive Web 2.0 world. It familiarizes students with qualitative and quantitative methods used in media research, including content analysis, surveys, in-depth interviews, secondary data analysis, and experimental methods. It also provides students with hands-on training in SPSS for quantitative data analysis.

MMM329 **Writing Workshop**

This is a mid-level writing course which focuses on improving the basic writing skills of students. Through a simple process students learn how to write paragraphs, narratives, dialogues and descriptions using grammatically correct English language, and for specific target audiences. By the end of the course students can produce material that is accepted for publication by magazines or newspapers.

MMM330 **Appreciation of Vernacular Literature**

This course is designed specifically to develop a deeper understanding of the cultural and historical evolution of languages in South Asia, and its impact on Urdu, as well as other major regional languages spoken across Pakistan. The course will use a variety of genres, including poetry, personal correspondence, essays, short stories, autobiographies, novels and "expert presentations" to create a better understanding of these developments as well as future prospects and likely challenges faced by vernacular language and literature.

MMM331 **Reporting Workshop**

This course is intended to sharpen the students' reporting and production skills. It will involve researching and pitching of compelling stories and production of short and long-form video segments. These segments will be produced for online and network distribution. Students will be expected to master traditional news production techniques, as well as develop their capability to operate as "backpack journalists" to shoot and edit without assistance.

MMM332 **News Package Production**

This course is designed to prepare Journalism majors for shooting, interviewing, logging, and editing news package material for television. This practical-cum-lecture-based course would provide students, as future reporters and video journalists, hands-on knowledge of production of news stories for television. Stand -ups, interviews, voice-overs, sound bites, cutaways, writing to video, and using the television medium to tell the journalistic story constitute the major features of this course.

MMM333 **Sports Journalism**

This course is designed to enable students to view the role of sports journalism in a broader media context, linking it with the evolving media landscape. It will require students to review and examine selected sports journalism pieces both in terms of writing mechanics as well as effective communication. Students will also be required to keep blogs, as well as read and comment on classmates' blogs to foster exchange of ideas.

MMM334 **Book Production**

This specialized course will provide students about the publishing industry in Pakistan, within the context of the far-reaching changes brought about by technology. It will highlight the emerging role of the publishers, literary agents, project editors, desk editors, design and production teams, as well as marketing and sales teams. It will also cover the production process, examine future industry trends, and identify strategies and tools for success in future.

MMM336 **Gender and Human Rights Reporting**

This specialized course is designed to familiarize students with the nuances of reporting on a subject of global import. Gender equality and human rights issues have taken center-stage around the world as well as in Pakistan in recent years. Students taking the course will discuss a wide range of such issues related to women, children and minority communities, as well as the legislation aimed at providing necessary protection to them. Emphasis will be on reviewing current work done in the area and identifying new means of popularizing them.

MMM338/339/340 Cinematography I/II/III

This three-level course is designed to progressively introduce students to the art of cinematography, also known as "the art of storytelling on film". Students will develop their skills in digitally shooting short films on high-definition video, using semi-professional cameras such as Sony NX 70s, under interior and exterior lighting conditions, and explore the limits of the high-definition format. They will learn the "screen grammar" necessary for Cinematographer, be able to analyze screenplays, learn to use post-production process, and work in close collaboration with the Director.

MMM341/342/343 Directing I/II/III

Over three semesters students taking this course will learn the basic principles of film directing, starting with the breaking down of a script and its analysis from a director's point of view. Students will progressively learn the skills of a Director in terms of directing actors, staging, camera blocking, and editing to make film scripts come alive. Short assignments throughout the duration of the course will be produced and critiqued in class.

MMM344/345/346 Screenplay I/II/III

This three-semester course will introduce students to the discipline of effective screenwriting, and direct their writing talent towards the world of films. The thrust of the course will be on practicing the skill of writing from a visual point of view. The students will practice different styles of screenwriting, learn from the works of experienced screenwriters and explore different genres of films. They will thus become more polished in the art of versatile, visual storytelling.

MMM347 Editing

This course in Editing will train the students in the craft of a film editor. It will introduce them to non-linear editing techniques through regular, hands-on exercises primarily using Final Cut Pro editing software on Apple MacPro desktop computers, equipped with more processing power, and high performance graphics capability. Students will learn how editing is done for television as well as in the larger film-making environment.

MMM348 Post Production

This course on post-production aims to develop the students' in digital video editing using Final Cut Pro software, integrated with others such as Photoshop, After Effects, Soundtrack Pro etc. It exposes students to different methods for editing, color correction, animation, compositing, capturing, mastering and publishing. Students would be assigned one or more projects to complete by the end of the course.

MMM349/350 Radio I/II

This two-tier course is specifically designed to provide students some theoretical and some practical knowledge about contemporary radio broadcasting. They will learn about radio journalism, broadcasting qualities and responsibilities, radio drama, magazine programs and infotainment, digital storytelling, radio news style, story format and copy layouts, as well as interviewing for radio.

MMM351/352 Production I/II

This two-semester course focuses on the key role of a Producer in film-making. Besides being the driving creative force, Producers are involved in a wide range of managerial activities. These include arranging for cast and crew, organizing studio and equipment, communicating ideas for production to the Director, as well as taking care of promoting the film or show - in case of television programs. Class lectures would focus on the major creative areas of filmmaking related to production as well as the key management responsibilities involved.

MMM423 Specialized Communication Skills

The course is designed to train and equip students with specialized verbal and written communication acumen required in efficient and effective information and entertainment dissemination through print and electronic media and advertising and public relations.

MMM427 **Citizen Journalism**

Students are familiarized with such aspects of Citizen Journalism as civic and social issues or problems pertaining to education, health planning, vehicular traffic, public utilities, etc. This course does not only identify issues and problem as regards social and civil life but also enables students to devise and apply practical models to address them through media efficiently and effectively.

Pre-requisite: MMM435/438

MMM428 **Script Writing**

The art of script writing is best learnt through professionals in various fields of print and electronic media in terms of conceiving an idea, developing a plan, devising convincing headlines, scripting the idea and concluding with an exclamation, if not a consensus.

Pre-requisite: MMM435/438

MMM429 **Digital Media**

Digital Media includes interactive multimedia, digital video and film production, web design, image creation, digital animation, 3D modeling, digital sound technology, graphic designing, basically pertaining to digital technology as a part and parcel of electronic media.

Pre-requisite: MIS401

MMM430 **Time, Priorities and Conflict Management**

This course aims at providing fresh ideas and insights for media personnel to manage time and priorities in tough and tedious routine and special conditions by delegating work responsibilities or by skillful multiple tasks adjustments. Time and priorities management are intensively addressed in all media forms relating to radio, TV, newspapers and magazines as well as in advertising, public relations and event management, of course, according to local and indigenous conditions.

Pre-requisite: MAN401

MMM434 **Media Planning**

The course prepares the student for the changing media scenario by enabling them to specialize in the handling and effective selection of media. The course elaborates how the advertising budget can be used optimally across various media.

Pre-requisite: MAN401, MKT401

MMM435 **Print Media**

The objective of the course is to provide specific study of print media for those students who aspire for a career in newspapers, magazines, periodicals and other publications. The course teaches students about process and production of print media, printing technologies, production strategies, thus equipping the students with knowledge and skills to enter the print media industry.

Pre-requisite: MMM438

MMM436 **Electronic Media**

This course prepares students to acquire a full understanding of the function of radio and television in all its modern manifestations, including cable TV. Students will learn how to formulate advertising plans & monitor results taking cognizance of problems, opportunities and regulatory matters.

Pre-requisite: MMM438

MMM437 **Role of Media in World Affairs**

This course teaches students the importance of media as a vehicle for creating an atmosphere conducive to international relations. It teaches the students how the media has undergone significant changes over the years and the power it has on the formation of public opinion and affecting the external environment for marketers and others.

Pre-requisite: MMM438

MMM438 Introduction to Media in Pakistan

This course comprehensively covers contents like print, electronic, out-of-home media in Pakistan. The course also discusses the Pakistani environment in the context of media laws & ethics, the role it plays in world affairs, and marketing, planning and research processes prevalent in the country.

MMM439 Media Research and Public Opinion

Mass media research introduces graduate students to applied audience research for electronic media. The emphasis will be on Pakistan's media market and students will gain hands on experience with syndicated and custom audience research for print and electronic media. Students will be exposed to various aspects of media audience research including Gallup ratings for 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

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 Corporate Governance and Strategy

The course brings together a coherent research based set of concepts, tools and practices for training integrators (general managers / directors) to handle cross-functional and cross-product sets of decisions. For advanced management researchers, this course aims to develop a useful set of examples and a rich source of research questions.

MPM608 Project / Research Practicum

The practicum course aims to provide students with real experience in a workplace environment, working on a challenging project. The practicum provides opportunities for students from all disciplines, including management, human resource management, finance, and marketing research. 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.

MPM614 Advanced Marketing Strategy

Advance Marketing Strategy is a course designed for pre doctoral students to develop a polished acumen for strategy making on a senior management level positions. This will entail examining shift of paradigm in marketing concepts . Finding techniques to get into the heads of competition to chalk out strategies more profitable to the company. Together with customer value creation, Marketing aims to create 'social value' and connects the same to consumer value proposition. This course focuses on a relative connectivity of changing concepts and philosophy of marketing with application examples created by corporations to handle their complex marketing tasks to achieve intended results.

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 Independent Study in Organizational Psychology

This course is designed to propose a research topic in the field of Organizational Psychology in unpublished major work and to complete the research and publish it in HEC recognized journal. For independent study, the participants will be provided a suitable adjunct faculty member of the university, who is able to facilitate in completing the process of research and publication.

MPP609 Personnel Psychology in the Work Place

This course explores the application of psychological theory and practice to human resources activities in organizations. Topics include job analysis and design, employee selection and placement, performance management and appraisal, and legal and ethical considerations in human resources management.

MPP611 Human Factors in Work Environment

This course includes evaluation of human factors in man-machine relationships, with an emphasis on automation, systems analysis, displays, and adaptive problems to stress. It is designed to provide the principles of human factors in work environment; provide guidance into the means of optimizing the design of the workplace and the work system in order to maximize individual outputs.

MPP613 Organizational Conflict & Management

This course is based on the foundation that conflict is both "inevitable and beneficial" in successful organizations. We will examine interpersonal conflict, the role of organizational culture in conflict resolution and the impact of diversity on conflict. Skill development in conflict management and resolution will be based on a collaborative approach involving team- work, case analysis, and role-play.

MPP615 Project Practicum in Organizational Psychology

This course introduces students to work settings such as businesses corporations, banks, governmental and non-governmental organizations in which they will have an opportunity to apply the theories and subject matter of industrial/organizational psychology in the "real world".

MS/MPhil in Education Leading to PhD

MPE503 Education in Pakistan

The topics in the course include empirical and legal research on educational issues of Pakistan at the local and state 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. In addition to it, it will allow the participants to explore and develop a critical appraisal of Pakistani policies.

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.

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.

MPE610 Philosophical Foundations in Education

This course introduces the fundamental conceptual and ethical questions that global change is bringing about in contemporary education. Participants will learn the global dimensions of several crucial contemporary issues, including international security and human rights, the problems of global conflict, the hopes of global cooperation, and the complexity of educational accountability, authority, and professionalism. The course will understand the commonalities, differences, and connections between global and comparative education, and the meaning and significance of globalization for both fields. One distinctive characteristic of the course is the service learning element, i.e., practical experience in educational institutions with focus on issues of change juxtaposing nationalism and globalism. This will enable the participants to apply the philosophical knowledge they gain in a practical context.

MPE611 Readings in Education

This course will introduce the participants to 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, Ahadiiths, 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.

PSS702 [Advanced Educational Philosophy](#)

This course will bring in the discussion and reflection of ideologies, metaphysics and theological foundation of philosophy and its significance in educational context. This course will primarily focus on philosophical thinking and its implication on educational institution, programs and learners. Furthermore, this will encourage students to develop a thorough critique on premodern, modern and postmodern philosophical foundations and their contribution in human development

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.

PSS704 [Project Internship - Education](#)

The practicum course aims to provide participants with real experience in a workplace environment by working on a challenging project. The practicum provides opportunities for participants to affiliate themselves with an educational institute and carry out a project over one semester. The project will enable participants to experience and excel in the arena of their concentration.

PSS705 [Seminar in Multidisciplinary 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.

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 be 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.

PhD in Economics

PDE701 **Advanced Research Methodology**

The importance of research, goals of research, topic selection, literature review, qualitative and quantitative studies, study design and sampling, sampling methods, data preparation and analysis, descriptive statistics, hypothesis testing, errors, correlation, inferential statistics, statistical significance.

PDE702 **Advanced Applied Econometrics**

Econometric methods for cross-section and panel data. generalized method of moments, empirical likelihood, instrumental variables, bootstrapping, clustering, treatment effects, selection bias, difference-in-differences, qualitative choice, quartile regression, nonparametric methods, and semi parametric methods, recently developed econometric techniques used in advanced applied work, simulation techniques, estimation subject to inequality restrictions, as well as semi parametric and nonparametric tools.

PDE703 **Development Economics**

The objective of the course is to familiarize the students with the theory and problems of development; Modernization Theory vs. Dependency Theory; imperialism; Structuralism vs neo-liberalism; trade and development; structural adjustment policies; debt problems; development and democracy; conflict, growth and development; globalization and related issues.

PDE704 **New Dimensions in Economic and Public Policies**

Fiscal Policy: Optimal design of tax and social insurance policies, combining theoretical models with empirical evidence. Efficiency costs and incidence of taxation, income taxation, transfer and welfare programs, public goods and externalities, fiscal federalism and welfare analysis. Monetary policy and financial markets: Advanced theoretical and empirical analysis of contemporary international macroeconomic policy issues in both industrialized and developing economies. Development of monetary policy and coordination, exchange rates, balance of payment analysis, international capital flows, debt crises, growth, and policy coordination. Structural and stabilization policies; conditionalities and cross conditionalities, conflict with national interest, impact on growth, income distribution, poverty. Industrial policy: Industrial policies (i) to promote growth and industrialization, (ii) effect on organizational structure of industries, (iii) promotion of R& D, (iv) achievement of strategic objectives; competition and anti-trust policies.

PDE711 **Industrial Economics in a Globalized World**

The course aims to acquaint the students with the theory and current issues in industrial economics. It deals with core industrial organization issues, industrial economic issues at the national level and policy related issues. Market structure and innovation, market structure and advertising, vertical integration and mergers, foreclosures, upstream competition, privatization and regulation, industrial policy, structural adjustment and stabilization policies, reforming State Owned Enterprises (SOEs) in China.

PDE712 **Public Finance**

The course on Public Finance focuses on public sector interventions arising out of equity and market failure considerations; resource mobilization through direct and indirect taxation, the economics of taxation, taxation of income, wealth and consumption, tax incentives, tax compliance and enforcement, and tax reform, user charges and fees. Public expenditure policy, evaluation of government social protection programs such as Benazir Income Support Program (BISP); balanced budgets, deficit financing, debt management, fiscal consolidation and fiscal sustainability. The ongoing fiscal stimulus vs. fiscal austerity debates; and fiscal decentralization and intergovernmental fiscal relations. The impact of alternative resource mobilization and expenditure policies on allocative efficiency, social equity and macroeconomic stability will be highlighted.

PDE713 **International Trade**

The course will focus on the law of comparative advantage, gains from trade, Ricardian and the Heckscher-Ohlin models, alternative trade theories, tariff and non-tariff barriers (NTBs), customs unions, international factor movements, fixed and flexible exchange rates, the internationalization of financial markets, international capital mobility, International Financial Institutions (IFIs), balance of payments and adjustment policies, international macroeconomic policy.

PDE714 **Selected Topics in Monetary Economics**

Monetary policy under uncertainty, market based monetary policy, economic and monetary union, monitoring inflation, empirical models of exchange rate dynamics, financial globalization, Rational Expectations, exchange rates and monetary policy in the New Synthesis.

PDE715 **Main Issues in Islamic Economics**

Theological basis to the practical implications of economic philosophy of Islam; basic economic theory of Islam and economic rules and outlook of the individual, businesses and the state in the Islamic context discussed in contrast to conventional economic theories. The course would entail a detailed analysis of the economic and spiritual well being of individuals and states as proposed under the Islamic system based on equity and justice.

Psychology

PSY400 **Introduction to Organizational Psychology**

This course examines the psychological aspects of organizational behavior and individual psychological processes and behavior. The topics will include social norms, group and team processes, leadership and power, motivation, job attitudes and satisfaction and organizational change.

PSY402 **Counseling Psychology**

This course focuses on the basic approaches, principles, and procedures of counseling. Students will be engaged in some directed role playing of counseling techniques as well as prepare a class demonstration based on their personal integration of readings and practice. Research related to counseling as well as issues regarding the nature of the counseling relationship will also be focused.

Pre-requisite: PSY400

PSY405 **Group Dynamics**

This course presents theories of group dynamics and illustrative application to understand personal, marital, political, industrial and professional life. Personal participation by the student in a group interactive process will be emphasized. The course is designed especially to help group leaders understand the complex underlying dynamic forces that influence our behavior in groups.

PSY406 **Research Methods**

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 Psychology**

This course focuses on the type and behavior of consumer, effects of psycho - social factors in decision making, satisfaction, loyalty, attitude, and changing attitude of consumer, ethics and principles of psychology in advertising, media selection, and methods in developing a research study in the area of consumer and advertising psychology.

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 **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*

STA203 **Probability Theory and Statistics**

The course includes the basic concepts of statistics, sample space, events, classical and axiomatic definition of probability, conditional probability and Bayes' theorem, binomial, Poisson and normal distribution, moment generating functions, etc.

Pre-requisite: *MTH104, MTH103*

STA204 **Industrial Applications of Statistics**

The course teaches an applied approach to statistical quality control utilizing theoretical tools acquired in other mathematics-statistics courses. It emphasizes on understanding and applying statistical analysis methods in real-world situations in engineering.

STA205 **Probability Theory & Statistics II**

Probability Theory, a rigorous treatment of probability and Statistical Theory, a treatment of Distribution Theory and Inference will develop your knowledge of probability and statistics beyond the first year course. It will also provide the probability and statistics basis for all advanced courses. Further Mathematical Methods covers the mathematics needed for statistics and actuarial courses.

Pre-requisite: *STA203*

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 **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, 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, 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.

TCM402 **Introduction to Teletraffic Engineering**

Review of Probability distributions, PDF and CDF development and applications for Telecommunication systems. Traffic characterization, Loss and delay traffic scenarios. Traffic tables and Traffic provisioning and planning case studies for both private and Public based Telecommunication Networks.

TCM403 **Global Communications: Industry and Policy**

Focuses on understanding how the changing structures of telecommunications in North America, South America, Europe, Asia/Pacific and Japan, and how global decisions affect local actions. The course explores current and merging issues in global telecommunications including deregulation, transition to new business models and affordable access to technology. The students will learn how some of the most powerful global regulatory bodies create and establish legal and regulatory policy, and how their actions affect business and consumers.

TCM404 **Management of Telecommunications**

To study principle of telecom planning and management, Telecom strategic planning, system planning process, Business planning process, the Business planning and revision, feasibility analysis, financial evaluation techniques.

TCM405 Optical Communication Network

Introduces basic fiber optical technologies. The major components of a fiber communications link, including splices, connectors, optical sources, detectors, optical amplifiers, splitters and modulators are covered. Optical switching systems and technologies will be studied in detail as well as some fiber based standards and networks such as FDDI, SONET.

TCM406 Network Design

To impart knowledge to students, about designing of Telecommunications Networks. This course provides basic concepts of telecommunication networks and how it is designed and what factors play prime role in designing of any telecommunication network. This course also compares various networks such as Satellite, Optical fiber and Microwave/DRS. This comparison provides advantages and disadvantages of different networks in different scenarios and how and why a particular one is selected.

TCM407 Broadband Communications

Review of basic digital hardware and the structure of digital computer and the digital switching networks. Topics include voice digitization, line coding, time division multiplexing, basic digital modulation formats, network control and synchronization, digital technologies and switching systems for high-speed data and voice networks in examples of T1/T3, ATM, SONET/SDH, B-ISDN, PBX, ACD and LANs. Different types of media such as fiber optics, cable and wire, cellular as well as local and long distance switching systems are also covered.

TCM408 Advanced Mobile and Wireless Communications

Focuses on key technologies used in mobile and wireless communications, including cellular NGSM, TDMA, CDMA paging, PCS and infrared. It emphasizes on key service providers, design of wireless data and voice communications systems, security, and advances in mobile and wireless technology; addresses growth of PDAs and other mobile devices, and their impact on enterprise networks and features a case study approach on the application of these technologies.

TCM409 Customer Service and Call Center Technologies

Focuses on customer service and call centers as the contact point between a customer and a company's products and services; 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.

TCM511 **IP Multimedia Technologies**

The objective of course is to impart knowledge about Next Generation Converged Networks and Services based on IP Core Network, i.e. IP Telephony, IPTV, Multimedia and Interactive Games, Internet Radio, and Media Streaming. The students will learn technological as well as managerial aspects of multimedia networks and applications.

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, additivity of information and cascaded channels; construction of compact source codes—Kraft inequality, compact codes, Huffman and LZW compression codes; and analysis and design of error-control channel codes—Hamming distance, binary linear codes and the parity-check matrix, Hamming codes, checksum codes, cyclic codes and the generator polynomial and CRC codes.

TCM523 **Wireless Adhoc Networks**

Introduction, foundations of wireless communication, wireless channels, modulations, WPANs, WLANs, and MAC Layers, wireless protocols, mobile IP, wireless routing, wireless TCP, source coding, QoS, introduction to wireless sensors networks, data dissemination and network security are covered in this course.

TCM524 **Broadband Communication**

This course covers various systems that transmit data including, multimedia data at high speed networks and networks, ATM, T1/E1 circuits, multiplexing of T1/E1 standards, optical channels, cable systems, satellite transmission and broadband issues, ISDN, and its variants. High speed multimedia communications systems.

TCM525 **Mobile and Pervasive Computing**

This course will cover the topics such as introduction to wireless communication systems, evolution of mobile radio communications, infra-red systems, paging systems, cordless telephone systems, cellular telephone systems and wireless LANs. In addition it includes, analog and digital transmission, channel capacity, transmission and multiplexing, communication networks, antenna and wave propagation, spread spectrum, satellite communication, cellular wireless networks, mobile radio propagation model, wireless systems and standards, cordless systems and wireless local loop and wireless LAN technologies are also covered.

TCM526 **Next Generation Networks**

This course provides students to get the opportunity to research and report on near term "Next Generation Networks". The course consists of discussions on one type of Next Generation Network followed by each student researching two additional Next Generation Network types. A case study approach will be utilized.

TCM527 **Satellite Communication**

Students will be exposed to historical background of satellite communication, uplink and downlink frequencies, synchronous satellite, international regulations and frequency coordination, frequency allocation and band spectrum, general and technical characteristics of satellite communication signals, advantage and disadvantages of satellite communication, active and passive satellites. In addition to this, the course covers orbits and launching methods, radio wave propagation, atmospheric losses, rain attenuation, the space segment, altitude control, station keeping, thermal control, transponders and antenna, earth segments and the space link, inter connect and technical regulation and compliance approval of CPE and convergence are also features of the course.

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 2013-2014:

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

COLLEGE
OF
BUSINESS MANAGEMENT



Academic Calendar

Fall 2013

Registration and Fee Payment

- On board students
- New students

Thursday, August 15, 2013 to Thursday, August 29, 2013
 Saturday, July 27, 2013 to Thursday, August 15, 2013

Last day to drop courses without penalty
 Orientation

Sunday, September 15, 2013
 Saturday, September 07, 2013

Commencement of Regular Classes

Monday September, 09, 2013

Commencement of Executive Classes

Saturday, September 14, 2013

Last day to drop courses with penalty

Sunday, October 20, 2013

Eid-ul-Azha*

Wednesday, October 16, 2013 and Thursday, October 17, 2013

Iqbal Day

Saturday, November 09, 2013

Muharram*

Wednesday, November 13, 2013 and Thursday, November 14, 2013

Classes End

Sunday, December 15, 2013

Break

Monday, December 16, 2013 to Sunday, December 22, 2013

Quaid-e-Azam's Birthday

Wednesday, December 25, 2013

Final Exam

Monday, December 23, 2013 to Monday, January 06, 2014

Exam Schedule for Regular and Executive Students

Week	Exams	Regular	Executive
6th	1st Hourly	10/14 - 10/17	10/19 - 10-20
11th	2nd Hourly	11/18 - 11/21	11/23 - 11/24
16th	Final	12/23/2013 to 01/06/2014	

* Subject to the appearance of moon

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

Spring 2014

Registration and Fee Payment

- On board students

Last day to drop courses without penalty

Commencement of Regular Classes

Commencement of Executive Classes

Eid-e-Milad-un-Nabi*

Last day to drop courses with penalty

Classes End

Break

Final Exam

Labour Day

Thursday, December 19, 2013 to Thursday, January 02, 2014

Sunday, January 19, 2014

Monday, January 13, 2014

Saturday, January 18, 2014

Tuesday, January 14, 2014

Sunday, March 02, 2014

Sunday, April 20, 2014

Monday, April 21, 2014 to Sunday, April 27, 2014

Monday, April 28, 2014 to Monday May 12, 2014

Thursday, May 01, 2014

Exam Schedule for Regular and Executive Students

Week	Exams	Regular	Executive
6th	1st Hourly	2/17 - 2/20	2/22 - 2/23
11th	2nd Hourly	3/24 - 3/27	3/29 - 3/30
16th	Final	4/28/2014 to 5/12/2014	

* Subject to the appearance of moon

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

Summer 2014

Registration and Fee Payment

- On board students
- New students

Last day to drop courses without penalty

Orientation

Commencement of Executive Classes

Last day to drop courses with penalty

Independence Day

Classes End

Eid-ul-Fitr*

Final Exam

Thursday, April 17, 2014 to Saturday, May 03, 2014

Saturday, March 22, 2014 to Sunday, March 30, 2014

Sunday, May 18, 2014

Saturday, May 17, 2014

Saturday, May 17, 2014

Sunday, July 06, 2014

Thursday, August 14, 2014

Sunday, August 17, 2014

Tuesday, July 29, 2014 to Wednesday, July 30, 2014

Saturday, August 23, 2014 and Saturday, August 30, 2014

Sunday, August 24, 2014 and Sunday, August 31, 2014

Exam Schedule

Week	Exams	Executive
6th	1st Hourly	6/21 to 6/22
11th	2nd Hourly	7/26 to 7/27
15th	Final	8/23 & 8/24 to 8/30 & 8/31

Summer Crash 2014

Registration and Fee Payment

- On board students
- New students

Last day to drop courses without penalty

Commencement of Regular Classes

Last day to drop courses with penalty

Eid-ul-Fitr*

Classes End

Independence Day

Break

Final Exam

Thursday, April 17, 2014 to Saturday, May 03, 2014

Saturday, March 22, 2014 to Sunday, March 30, 2014

Friday, June 13, 2014

Monday, June 09, 2014

Saturday, July 12, 2014

Tuesday, July 29, 2014 to Wednesday, July 30, 2014

Thursday, August 07, 2014

Thursday, August 14, 2014

Friday, August 08, 2014 to Sunday, August 17, 2014

Monday, August 18, 2014 to Thursday, August 21, 2014

Exam Schedule

Week	Exams	Executive
5th	Mid-Term	7/7 - 7/10
11th	Final	8/18/2014 to 8/21/2014

* Subject to the appearance of moon

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