## Program Announcement

2016 - 17



Institute of

Business Administration

Karachi

Leadership and Ideas for Tomorrow

Since 1955













### **Our Core Values**

#### Truth

Being truthful involves speaking and acting consistently in accordance with the highest ethical values. When working in a team, truth requires you to be reliable.

### Discipline

You should have the will to work according to rules, with precision and honesty. Discipline involves self-control and selfregulation that builds character and should be an integral core value of an IBA student.

#### **Creativity**

The ability to be innovative is an asset for any individual. As a student of the IBA, you are at par with others having skills either equal to you or better than yours. Therefore, you need to enable the generation of new thoughts, ideas and means of attaining your goals.

#### Tolerance

The capacity to acknowledge, understand and tolerate ideas and opinions different from your own, means that you should be able to treat people from different backgrounds and schools of thought equitably.

### Integrity

Possessing integrity goes hand in hand with being reliable. Integrity is crucial to the reputation of any institution. Students are required to maintain honesty in the acquisition and sharing of knowledge throughout their academic life at the IBA.

#### Merit

Students are admitted to the IBA strictly on the basis of merit. Success will be yours as you surpass yourself time and again by working in accordance with this principle.

### Humility

Being courteous, respectful of others and recognizing that no matter how good you are, there is always someone out there who is better than you.



**Team Work** 

Acknowledging the competencies of co-workers and harmonizing their individual strengths to achieve a common goal.

## **C**ontents

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### Programs

Undergraduate Programs		Graduate Programs		PhD Programs	
BBA	92	MBA	140	PhD (Computer Science)	172
BBA (Entrepreneurship)	100	MS (Computer Science)	154	PhD (Economics)	174
BS (Accounting & Finance)	110	MS (Economics)	157	PhD (Mathematics)	176
BS (Computer Science)	118	MS (Mathematics)	160	PhD (Statistics)	177
BS (Economics & Mathematics)	124	Executive MBA	164		
BS (Social Sciences & Liberal Arts)	130				

Course

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## **Profile**

#### Vision

To be among the best learning institutions in Pakistan - recognized for developing potential leaders, nurturing a vibrant community of scholars and practitioners, generating innovative ideas, and promoting creative solutions that address the needs of Pakistan, the region, and the global community.

#### **Mission**

- To impart quality education in business and allied fields to students selected on merit irrespective of ethnicity, gender, religion, or financial means;
- To provide a teaching and learning environment that encourages critical thinking, ethical conduct, and effective decision making;
- To undertake original research that enriches teaching and benefits business, government, and civil society.

For the Institute of Business Administration, 2016 marks both the end of one era and the start of another. After completing a successful inning spanning over eight years, Dr. Ishrat handed over the baton of IBA's leadership to the next Dean and Director. To date, the IBA has been led by ten visionary individuals, and each has made his own significant contribution to the development of the Institute. Their contribution in making IBA the institution that it is today can never be discounted. But history will record Dr. Ishrat Husain's outstanding performance as a pivotal moment, one that carried the institution firmly but surely into the 21st century. The IBA today sets a standard that other institutions emulate, and serves as a beacon of hope and success for students across the nation.

The Institute has gone through major changes over these six decades in order to embrace a wider set of disciplines in its curricula. These changes have been made in order to respond to the requirements of the society, the market and the economy. They are also an outcome of associations forged with credible institutions both local and international, and various stakeholders' most prominent being the IBA Alumni.

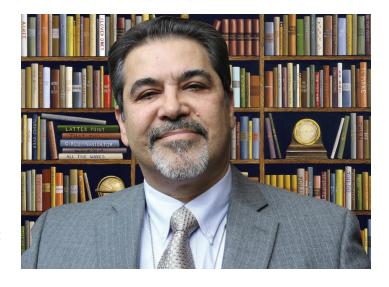
During the last eight years, the institute has witnessed massive developments in all areas ranging from infrastructure, accreditations, increase in programs, faculty and students to linkages; thus changing IBA's physical and academic landscape. Prominent among Dr. Ishrat's contributions is overseeing the inception and development of Centres of Excellence such as: Centre for Excellence in Journalism (CEJ), Centre for Business and Economics Research (CBER), Centre for Executive Education, Centre for Entrepreneurship Development (CED) and the Ardeshir Cowasjee Centre for Writing. The establishment of Centres of Excellence fulfills a crucial need by servicing both professional communities outside the institution and student, faculty, and staff within. They complement the mission of the institution and serve as crucial avenues through which the IBA gives back to the society.



## Message of the Dean & Director

I am honored to have this opportunity to address you as the new Dean and Director of the IBA. The Institute has undergone a transformative period under the leadership of Dr. Ishrat Husain and I begin my tenure with the hope that we can build upon the foundation that has been laid over the past eight years.

In recent years, the Institute has seen the launch of new academic programs, the hiring of many more full-time PhD faculty, and the establishment of new centers and partnerships. We must now ensure that these initiatives continue to be implemented in a way that generates sustained benefits for students, faculty and other members of the IBA community. We must monitor the new academic programs to see how they have been received among students. We must integrate new faculty more fully into the flow of teaching and research. We must see how best to market the offerings of the new centers. And we must manage both new and old partnerships to ensure that they continue to bear fruit.



The further strengthening of the faculty will be among my priorities. I hope to see our

faculty recognized inside and beyond the Institute for excellence in both research and teaching. The mission of the Institute can best be served by creating an environment where both scholarship and practice are given adequate weight. Academic rigor is important. So we must aim for high quality research output. But we must also learn from the actual practice of business and public policy. Thus continuing to engage with local industry and public sector organizations and distilling the lessons of experience into case studies and other learning tools will also remain very important.

With the transformations of the past eight years, the Institute is now much more than a business school. With an expanded portfolio of programs including Accounting and Finance, Economics and Mathematics, Computer Science, Social Sciences and Liberal Arts, and with the newly established centers for Journalism and Islamic Finance, the Institute is well placed to fulfil its mission of "developing potential leaders, generating innovative ideas, and promoting creative solutions that address the needs of Pakistan, the region and the global community."

#### Dr. Farrukh Iqbal

Dean & Director Bachelor's from Harvard University Ph. D. in Economics from Yale University

#### The Policy Makers

#### **Patron**

**Dr. Ishrat ul Ebad Khan** Governor of Sindh

#### **Board of Governors**

#### Chairman

**Dr. Farrukh Iqbal**Dean & Director
Institute of Business Administration, Karachi.

#### Members

Mr. Justice Munib Akhtar Judge High Court of Sindh, Karachi

Prof. Dr. Mohammad Qaiser Vice Chancellor University of Karachi, Karachi

Vice Chancellor University of Sindh Jamshoro

**Dr. Fazlullah Pechuho**Additional Chief Secretary
Education & Literacy Department
Government of Sindh Karachi

Prof. Dr. A.Q. Mughal HEC Nominee

Mr. Younus Muhammad Bashir President Karachi Chamber of Commerce & Industry, Karachi

Mr. Abdul Rauf Alam President Federation of Pakistan Chambers of Commerce & Industry, Karachi

Mr. Waqar Hassan Siddique Partner The Abraaj Group Dubai, United Arab Emirates.

**Appellate Committee** 

Mr. Justice Munib Akhtar

Chairman

Members

Mr. Shuaib Ahmed Vice Chairman Pakistan Gum and Chemicals Ltd., Karachi

Mr. Wazir Ali Khoja Ex-M.D. National Investment Trust, Karachi.

Senator Saleem H. Mandviwalla National Finance Commission Karachi.

Mr. Zahid Bashir Chairman The Premier Insurance Co. Pakistan Ltd. Karachi.

Mr. Justice (R) Hamid Ali Mirza Former Chief Election Commissioner of Pakistan & Ex-Judge Supreme Court of Pakistan Karachi.

Mr. Shahid Shafiq Director Shahid Shafiq (Pvt.) Ltd. Karachi.

Member Provincial Assembly of

#### **Audit & Finance Committee**

#### Chairman

Mr. Zahid Bashir Chairman The Premier Insurance Co. Pakistan Ltd. Karachi.

#### Members

Dr. Farrukh Iqbal Dean & Director IBA, Karachi.

Mr. Wazir Ali Khoja Ex-M.D. National Investment Trust, Karachi.

Mr. Younus Muhammad Bashir President Karachi Chamber of Commerce & Industry, Karachi.

Mr. Shahid Shafiq Director Shahid Shafiq (Pvt.) Ltd., Karachi.

#### **Selection Board**

#### Chairman

**Dr. Farrukh Iqbal**Dean 8 Director
Institute of Business Administration, Karachi.

#### Members

Mr. Muhammad Saleem Bhounr Chairman Sindh Public Service Commission, Hyderabad.

Mr. Najmus Saquib Hameed Chairman The Layton Rahmatullah Benevolent Trust, Karachi.

Mr. Shahid Shafiq Director Shahid Shafiq (Pvt.) Ltd., Karachi.

Mr. Fazlullah Qureshi Member, Board of Directors National Rural Support Programme, Islamabad.

Mr. Tariq Kirmani Ex-MD, Pakistan International Airline

Eminent Businessman - Vacant

#### **Academic Board**

#### Chairman

**Dr. Farrukh Iqbal**Dean & Director
Institute of Business Administration, Karachi.

#### Members

**Dr. Ishrat Husain** Professor Emeritus

**Dr. Zeenat Ismail** Professor - IBA, Karachi.

**Dr. Mohammad Nishat** Professor - IBA, Karachi.

**Dr. Mahnaz Fatima** Professor - IBA, Karachi.

**Dr. Nasir Touheed** Professor - IBA, Karachi.

**Dr. Qazi Masood Ahmed** Professor - IBA, Karachi.

**Dr. Shakeel A. Khoja** Professor - IBA, Karachi.

**Dr. Syed Noman-ul-Haq** Professor - IBA, Karachi.

Dr. Javed Iqbal

**Dr. Sajjad Haider** Associate Professor - IBA, Karachi.

Associate Professor - IBA, Karachi.

Dr. Shahid R. Mir

Assistant Professor - IBA, Karachi.

Mr. Jawwad Ahmed Farid CEO - Alchemy Technologies (Pvt.) Ltd., Khi.

Mr. Mir Muhammad Ali Ex-CEO UBL Fund Managers Ltd, Khi.

Mr. Justice (R) Hamid Ali Mirza
Former Chief Election Vice
Commissioner of Pakistan & Paki
Ex-Judge Supreme Court of Pakistan Karachi.

Judge High Court of Sindh, Karachi.

Mr. Shuaib Ahmed Vice Chairman Pakistan Gum and Chemicals Ltd., Karachi

### Excerpts of Academic Calendar 2016-2017

### Summer Semester 2016

June 13, 2016 to August 2, 2016

#### Fall Semester 2016

August 19, 2016 to December 29, 2016

### **Convocation 2016**

December 3, 2016

### Orientation Days

August 18, 2016 (Fall 2016) January 14, 2017 (Spring 2017)

### Spring Semester 2017

January 16, 2017 to May 23, 2017

#### Summer Semester 2017

June 12, 2017 to August 2, 2017

### Fall Semester 2017

August 21, 2017

Eid ul Fitr\* July 7 to July 9, 2016, Eid ul Azha\* September 13 to 15, 2016 Ashura\* October 11 & 12, 2016

(\*Subject to sighting of the moon)

### Programs on Offer

S. No.	Information	Bachelor of Business Administration (BBA)		Bachelor of Science (BS)				Master of Business Administration (MBA)		
5, 110.				Economics & Maths	Computer Science	Social Sciences and Liberal Arts	Accounting and Finance	Morning	Evening	
1	Admission Requirement	Higher Secondary School Certificate with a Minimum of 65% marks <b>OR</b> 'A' Level (Minimum of 2 'B's and 1 'C') in 3 principal subjects <b>OR</b> American High School Diploma Minimum of 80% <b>OR</b> An International Baccalaureate (Minimum 25 / 45)		Higher Secondary School Certificate (Pre-engineering OR General Group with Mathematics) with Minimum 60% marks OR 'A' Level (Minimum 1 'B' and 2 'C's) in 3 principal subjects including Mathematics OR American High School Diploma Minimum of 80% OR An International Baccalaureate (Minimum 24 / 45)		Higher Secondary School Certificate (Any Group with 60% marks) <b>OR</b> 'A' Level (Minimum 1 'B' and 2 'C's) in 3 principal subjects <b>OR</b> American High School Diploma (Minimum of 80%) <b>OR</b> An International Baccalaureate (Minimum 24 / 45)		A Minimum of 16 years of education out of which 4 years should have been spent in an HEC recognized university / degree awarding institute with: A Minimum of 60% aggregate marks OR A Minimum of 2.50 CGPA on a scale of 4.00 (as applicable) 8 A Minimum of 2 years relevant work experience gained after graduation / completion of 16 years of education with 2.5 CGPA or 60% whichever is applicable**		
2	Aptitude Test Component	<ul> <li>English Composition (MCQs)</li> <li>English Comprehension (Essay Writing Skills)</li> <li>Mathematics (MCQs)</li> </ul>		English Composition (MCQs)     Mathematics (MCQs)		<ul> <li>English Composition (MCQs)</li> <li>English Comprehension (Essay Writing Skills)</li> <li>Mathematics (MCQs)</li> </ul>		<ul> <li>English Composition (MCQs)</li> <li>English Comprehension (Essay Writing Skills)</li> <li>Mathematics (MCQs)</li> </ul>		
3	Aptitude Test - Difficulty Level	SAT-1		SAT-I & SAT-II (Mathematics) SAT-		I	GMAT			
4	Aptitude Test Exemption*	See Admission Policy					BBA Degree from IBA, Minimum 2.5 CGPA & 2 years work experience after BBA <b>OR</b> Minimum 600 score in GMAT			
5	Student Profile	Avg A	Avg Age: 19		Avg Age: 19			Avg Age: mid 20's		
6	Graduation Requirement	49 courses, 147 credit hours for BBA Responsible Citizen Internship (RCI) Corporate Internship	(Entrepreneurship) Responsible Citizen	48 courses, Research Project 150 credit hours Responsible Citizen Internship (RCI) Corporate Internship	46 courses, 147 credit hours Responsible Citizen Internship (RCI) Corporate Internship	45 courses, 144 credit hours 1 Culminating Experience / Thesis Responsible Citizen Initiative 8-10 week corporate internship	42 courses, 127 credit hours Responsible Citizen Internship (RCI) Corporate Internship	72 credit hours, Min. duration 24 months Comprehensive exam Corporate Internship for Non BBA Background	72 credit hours, Min. duration 42 months Comprehensive exam	
7	Fees Fall 2016****	Rs 180,500 / Semester		Rs 153,500 / Semester		r	Rs 180,500 / Semester	Rs 180,500 / Semester	Tuition fee of Rs 36,000 / - per course for all part time students	
8	Classes Start	August		August & January Augus		ust August & Janua		3 January		
9	Duration	4 years full time			4 years full time			2 year to 5 year	3.5 years to 7 years	
10	Campus	Main & City		Main 8	Main & City Main		ain	Main	Main & City	

The above are extracts of the IBA Admission Policy

<sup>\*</sup> Participation in Group Discussion & Interview is mandatory

<sup>\*\*</sup> For details, see Work Experience requirement

<sup>\*\*\*</sup> All equivalency claims shall be evaluated by the HEC (www.hec.gov.pk).

<sup>\*\*\*\*</sup> The IBA reserves the right to revise the fee without prior notice / Refer to Fee Structure

<sup>\*\*\*\*\*</sup> Full-Time MS Students shall be paid stipend of Rs: 30,000 / - per month

Master of Science (MS)			Executive MBA	Doctor of Philosophy (PhD)			
Computer Science	Economics	Mathematics	Various Specializations	Economics	Computer Science	Mathematics	Statistics
A Minimum 16 year's of education out of which 4 year's should have spent in an HEC recognized university / degree awarding institute with:  A Minimum of 60% aggregate marks OR  A Minimum of 2.50 CGPA on a scale of 4.00 (as applicable)  OR  A Minimum of A Minimum of 2.50 CGPA on a scale of 4.00 (as applicable)		A Minimum 16 year's of education (BS / MSc - Mathematics) out of which 4 year's should have spent in an HEC recognized university / degree awarding institute with:A Minimum of 60% aggregate marks OR  A Minimum of 2.50 CGPA on a scale of 4.00 (as applicable	A minimum of 16 year's education out of which 4 years at an HEC recognized university / degree awarding institute and minimum 3 years post qualification work experience <b>OR</b> Qualified Chartered Accountants with 2 years of post-qualification work experience <b>OR</b> Qualified ACCA upon completion of three years post ACCA work experience	MS / M Phil / Equivalent in rele recognized local / foreig Minimum 60% aggregate ma <b>OR</b> A minimum 3.0 CGPA in the last d Also have to fulfill specific requirement		gn university with: narks in the last degree degree where applicable***	
<ul><li>English Compo</li><li>Mathematics (</li><li>Subject Specia</li><li>Diffeculty leve</li></ul>	MCQs)	Mathematics (MCQs)     English Composition (MCQs)     Diffeculty level: TOEFL or IELTS	Business English (MCQs)     Case Study     Applied Mathematics (MCQs)	<ul> <li>English Composition (MCQs)</li> <li>Mathematics (MCQs)</li> <li>Subject Specialization</li> <li>Diffeculty level: TOEFL or IELTS</li> </ul>		Mathematics     English Composition (MCQs)     Diffeculty level: TOEFL or IELTS	Statistics     English Composition (MCQs)     Diffeculty level: TOEFL or IELTS
GRE General + Specialization GRE Math Subject Test		GMAT	GRE General + Specialization		GRE Math Subject Test		
Minimum 650 score in quantitative GRE (Int'I) OR 160 score in quantitative revised GRE (Int'I)		BBA Degree from IBA, Minimum 2.5 CGPA 8 3 years Work Experience OR Minimum 600 score in GMAT	OR		Minimum 650 score in GRE subjective Math		
	Avg Age: mid 2	20's	Avg Age: mid 30's Avg work experience: 10 year's	Avg age: 26			
11 Core Courses 4 electives courses + Thesis 30 Credit Hours	57 credit hours 16 courses & Thesis (9 credit Hours) [48 credit Hours through courses 9 credit Hours through Thesis]	6 Core courses, 2 electives 24 credit hours + Thesis 6 credit hours	22 courses 72 credit hours 1 Project Comprehensive exam	55 credit hours 28 credit hours through courses 27 credit hours through thesis  8 courses 24 credit hours + Comprehensive Exam + Dissertation		6 courses 18 credit hours + Comprehensive Exam + Dissertation	
All MS full-time students are required to pay Rs 92,500 / - per semester as tuition fee*****		Rs 30,000 / - per course Rs 20,000 / - per course (for Govt. Employees, armed forces and not for profit organizations)	Monthly stipend and full tuition fee waiver				
August August & January August		September, January and May	August August & Jai		& January		
	2-2.5 years		2 years - 5 years	4-5 years			
City		Main	Main	Main & City		Main	

ALL ADMISSIONS ARE SUBJECT TO CANDIDATES MEETING, MINIMUM ELIGIBILITY REQUIREMENT AND QUALIFYING APTITUDE TEST, GROUP DISCUSSION, INTERVIEW AS APPLICABLE.

To apply for any of the above Programs Please visit our website at www.iba.edu.pk or email: info@iba.edu.pk

### Anatomy of Higher Education

Higher education starts with undergraduate studies leading upto graduate courses. These are stopovers in a student's journey of obtaining knowledge and carving out a career in their chosen field of study. Undergraduate courses lay the basic foundation that is used as a springboard to pursue graduate courses or a master's degree.

Courses at an undergraduate level, also referred to as bachelor's courses, are usually taken after completing 10+2 / equivalent level in most countries. These courses are classified as BS / BA / BBA. Undergraduate programs are designed to strengthen the knowledge-base of young students. Courses in the freshman year are of an introductory nature, with a gradual increase in difficulty during sophomore, junior, and senior years.

After successfully completing their undergraduate degree, aspiring students can enroll in a graduate course such as a 'Masters' degree program. The highest graduate degree that a student can pursue is the doctoral degree which involves intensive research work.

### **Undergraduate Programs**

The IBA launched its Bachelor programs in Business Administration in 1982, conducted under the patronage of the Karachi University. These were 3-year programs, which continued till 1994. Upon acquiring degree awarding status that year, IBA changed the curricula of its bachelor programs. This was done to bring them in accordance with international standards .To this end the BS (Computer Science) program was introduced. In pursuit of making IBA undergraduate degrees compatible with international standards, all IBA undergraduate programs were upgraded as 4-year degree programs

in 2002. Cognizant of the growing demand for these programs, IBA introduced a series of BS Programs, including BS (Economics & Mathematics), BS (Social Sciences / Liberal Arts) & BS (Accounting and Finance) in 2012 and 2013. IBA thus expanded the array of undergraduate qualifications and degrees available to its students. These offerings were augmented by incorporating student-conducted tutorials, projects and other initiatives leading to a highly satisfying experience under a credible faculty and insightful mentors.

### **Graduate Programs**

The IBA initially offered MBA program only for day scholars. In 1957, an Evening Program was launched to cater to the needs of the numerous working executives and managers, who were interested in furthering their careers through business studies. As obtaining a Master's degree involves acquiring complex analytical and critical skills in a "particular" field, it allows students to develop specialized skills. Additionally, producing original work, including the writing and defense of a thesis or dissertation, is a major constituent of graduate studies. The MS degree is an "untagged" degree, as the name of the major is excluded from the degree title, whereas MBA is a tagged degree. Over the years, the MBA program has evolved significantly, aided by the revamped curriculum. As of 2011, 2 years work experience has been made mandatory students can embark on MBA study programs. The MBA Executive Program was launched in 2009 for the in service professionals who cannot attend week-days program. This program attracts senior level executives from both the private and public sectors.

The introduction of MS (Computer Science) and MS (Economics), in the years 2008 and 2010, respectively,

further diversified the streams of the graduate programs and enabled graduate students to work outside their specific field of study at graduate level. The MS programs, on the other hand, enable prospective applicants to enhance their long-term performance in the dynamic fields of science and economics. Aspirants of the graduate programs can expect a thoroughly transformational experience, which will leave a lasting impact on their careers and professional intellect.



### Ph.D Programs

The IBA launched its Ph.D. (Computer Science) program in the year 2005 and Ph.D. (Economics), (Mathematics) in the year 2011. A feather in IBA's cap, these three Ph.D. level programs epitomize IBA's endeavor to become a world class institution. They test the temperamental and analytical capacity of the potential candidates, while ensuring sustainable progression of their careers. These programs serve as valuable platforms for refining skills and honing the competencies of the pursuers of the degree. Before long, IBA has started a Ph.D. program in Statistics, thus remaining ever active in its path to eternal advancement.



#### Anatomy of Higher Education



# Postgraduate Diploma (PGD) Programs

In the realm of higher education, the IBA Karachi has recently started three post-graduate Diploma courses in Healthcare Management (focused to Hospital Management), Supply Chain Management and Human Resource Management. These courses have been designed to develop an in-depth understanding of strategic, tactical, and operational challenges which skilled practitioners are likely to face. Each PGD spans 1 year with 12 courses, a live project.

These courses will help bridge the competency gap in Pakistan and will enhance the Professionalism of those involved in the industry. The curriculum design is based on several years of research through various stakeholder surveys and focus groups. Each program is devised to develop critical thinking among students and motivate them in the application of their knowledge.

The studies will also be augmented by online learning facility through learning Management System. The following accreditations and partnerships help the program participants to prepare for advanced level skill set and immediate application of knowledge at the workplace:

- Academy of Human Resource Development, USA
- ✓ American Institute of Healthcare Quality (AIHQ)
- Project Management Institute, USA (Registered Education Provider)
- ✓ APICS, USA
- ✓ Institute for Supply Chain Management
- ✓ Indus Hospital
- Memon Medical Institute
- ✓ Tabba Heart Hospital
- ✓ Liaguat National Hospital

Program	Supply Chain Management, Human Resource Management and Project Management	Healthcare Management (focus Hospital Management)
Admission Requirement	<ul> <li>14 Years Education with 6 years' post-qualification work experience</li> <li>16 Years Education with 3 years' post- qualification work experience</li> </ul>	<ul> <li>Doctors with MBBS/BDS with 2 years' experience in hospital</li> <li>Nurse graduates with minimum 5 years' experience in hospital</li> <li>Other healthcare professionals with 16 years education and at least 2 years work experience in hospital</li> </ul>
Aptitude Test Component	<ul><li>Subject Specialization (MCQs)</li><li>Essay</li><li>Interviews</li></ul>	<ul><li>Subject Specialization (MCQs)</li><li>Essay</li><li>Interviews</li></ul>
Aptitude Test Difficulty Level	Subject Specialization	Subject Specialization
Aptitude Test Exemption		
Student Profile	Avg. Age: Mid 30s Avg. work experience: 10 years	Avg. Age: Mid 30s Avg. work experience: 10 years
Graduation Requirement	12 Courses 42 Credit Hours 1 Live Project	12 Courses 42 Credit Hours 2 Projects
Fees Fall 2016	Rs. 35,000/- per course Rs. 30,000/- per course (if full fees is paid in advanced) 33% discount for Public Sector Employees	Rs. 35,000/- per course Rs. 30,000/- per course (if full fees is paid in advanced) 33% discount for Public Sector Employees
Classes Start	January	January
Duration	1 Year	1 Year
Campus	City	City

### Associate Deans & Chairpersons

### **Associate Deans**



Faculty of Business Administration
PhD University of Auckland, New Zealand
MASc (Management Sciences) 8
MA (Economics), University of Waterloo,
Canada
MAS (AERC), University of Karachi
Areas of interest: Portfolio Management
Financial Econometrics, Financial
Economics 8 Microeconomics

Dr. Mohammad Nishat



Faculty of Computer Science
PhD & MS, Columbia University, USA
BS, Massachusetts Institute of Technology
Areas of interest: Simulation and
Performance Analysis of Wireless Networks,
Routing Issues in Mobile Adhoc Network &
Security Risk Assessment of System

Dr. Sayeed Ghani

### Chairpersons

Accounting & Law



**Asad Ilyas** 

Computer Science



Dr. Shakeel Khoja

Economics & Finance



Dr. Khadija Malik Bari

Management



Dr. Mohammad Kamran Mumtaz

Social Sciences & Liberal Arts



Dr. Faiza Mushtaq

Marketing



Dr. Huma Amir

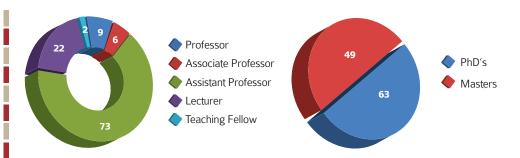
Mathematical Sciences



Dr. Junaid Alam

## Full Time Faculty at a Glance

Str	ength
PhD (Foreign)	50
PhD (Local)	13
Master (Foreign)	31
Master (Local)	18
Total	112
Pursuing Higher Education (Abroad)	20
Pursuing Higher Education (Local)	2



# THE FACULTY



#### **Full Time Faculty**

## Department of Accounting & Law (10)



Chairperson Department of Accounting & Law Pursuing PhD (Accounting), IMT Ghaziabad/Grenoble Ecole De Management CPA, Delaware, USA BBA (Accounting), Pace University, NY, USA

Ilyas, Mohammad Asad Assistant Professor



Senior Research Fellow (CBER) Member Library Committee Juris Doctor (Doctor of Law), Columbia Law School New York, USA BS (Economics), Wharton School of Business - Philadelphia, USA Bachelor of Applied Science, University of Pennsylvania -Philadelphia, USA

Ali, Mohammad Azam Assistant Professor



Ali Patel. Mohsin

Lecturer

MBA (Finance), Karachi Institute of Economics & Technology ACCA CertlA, ACCA (UK) MA (Economics), University of Karachi ACFE, Association of Certified Fraud Examiners, Texas, USA CMA, Institute of Certified Management Accountant



Pursuing Business Doctorate (Org. Behavior)) from GEM (France) jointly with IMT (India) MS (Computer Sciences), IBA (1st Position) FCMA, ICMAP, ACCA (UK), MA (Eco), University of Karachi Certified SAP Application Consultant Areas of interest: ERPs, SAP, Agent Based Modelling

Asif Jaffer, Muhammad Assistant Professor



Undergraduate Programs
MSc, Anglia Rusking University,
United Kingdom
ACMA, Chartered Institute of
Management Accountants (CIMA)
United Kingdom

Program Director,



LLB, (Hons), Thames Valley University, London, UK Areas of interest: International Trade Laws, Corporate Laws and Practice in Pakistan, Industrial Relations, Labour & Service Laws

Superintendent Girls' Hostel

LLM, International Law Temple

University, USA







LLM , University of California, Berkeley, School of Law (Boalt Hall) LLB , University of London (International Program)





Business Administration, Karachi ACCA (Applied Accounting), Oxford Brookes University BSc (Applied Accounting), Oxford Brookes University

MBA (Marketing), Institute of





Shah, Morial Lecturer

BA (Honours affiliate, Law Tripos Part I & II), University of Cambridge, Wolfson College, UK BS (FS), Georgetown University, Edmund A. Walsh School of Foreign Service, Washington DC, USA

## Department of Accounting & Law (continued....)



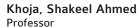
Program Coordinator, BS (Accounting & Finance) Fellow Member of Institute of Chartered Accountants of Pakistan Fellow Member of Associate of **Chartered Certified Accountant** BSc (Mathematics), University of Karachi

Tabraze, Haroon Faculty Member & Adjunct Faculty CEE

## Department of Computer Science (14)



Chairperson, Department of Computer Science IBA Best Researcher Award-2014 Post Doc Fellowship University of Southampton, UK PhD, University of Southampton, UK BE, UET, Mehran HEC Approved PhD Supervisor Awarded Best Teacher Award 2003 and 2011 by (HEC) Research Áreas of interest: Web Science, Learning Technologies





Arain, M. Waseem Assistant Professor



Associate Dean, (FCS) Chairman Academic Committee PhD & MS, Columbia University, USA BS, Massachusetts Institute of Technology Areas of Interest: Simulation and

Pursuing PhD, IBA, Karachi

MS (Information Technology),

Hamdard University, Karachi

Areas of interest: Performance

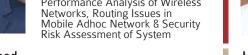
Analysis of Wireless Networks,

MAC and Routing Layer Issues

in MANET, WSN, Modeling and

Simulation, Information







Program Director Alumni Affairs PhD, Temple University, Philadelphia, USA MBA, IBA, Karachi PGD, IBA, Karachi Areas of interest: Philosophy of Computer Mediated Communication, Deliberative Communication, Open Source, Social Software, and Online Communities of Practice

PhD, George Mason University,

MS, George Mason University,

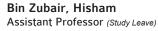
Areas of interest:

Asif, Zaheeruddin Assistant Professor



University of Antwerp, Belgium PhD (Appl. Math), Delft University of Technology, The Netherlands MCS, MSc, BSc (Hons.) (Applied Maths), University of Karachi

Postdoc (Appl. Math),





Ghani, Sayeed Associate Professor



Artificial Intelligence, Probabilistic Reasoning, Data Mining, Machine Learning and System Engineering

Haider, Sajjad Associate Professor

#### **Full Time Faculty**

## Department of Computer Science (continued....)



Program Director FCS
PhD, (CS) IBA, Karachi
MS (Computer Science), SZABIST,
Karachi
MS (Computer Science), University
of Karachi
Areas of interest:
High-Speed Next Generation
Networks, Modeling and
Simulation, Artificial Intelligence &
Statistical Inference

Iradat, S. M. Faisal Assistant Professor



Khan, Imran Assistant Professor



PhD. Salford University.

BA (Hons.), (Business Studies),

University of Sheffield International

United World College of the Atlantic

in the Center for Entrepreneurship

Development (CED) Female Entrepreneurship

Areas of Interest: Active involvement

MSc, UMIST

Baccalaureate (IB)



Nabi, Syed Irfan Assistant Professor

PhD, IBA, Karachi
MS, George Washington University,
USA
PGD, Technical Education,
Islamic University of Technology, (OIC)
Dhaka
BSc (Engg), NWFP University of
Engg & Tech, Peshawar PMP
Areas of interest:
Information Security Management,
Information Technology Policy and
Planning Project Management

PhD (Computer Science), Max

Planck Institute for Computer

University of Karachi, Karachi

MS (Computer Science), Saarland

Science, Germany

University, Germany

BS (Computer Science),



**Assistant Professor** 

PhD, (CS) IBA, Karachi MS, SZABIST, Karachi Areas of interest: Information Extraction, Knowledge Extraction, Semantic Web & Ontology



Rashid, Amber Gul Assistant Professor



Rauf, Imran Assistant Professor



PhD (Mathematics), University of California, San Diego BE (Computer Engineering), McGill University, Canada Areas of Interest: Data Science and Complex Networks



Rajput, Ouratulain Nizamuddin



Touheed, Nasir Professor

Coordinator Testing Services, Member Admission Committee & PhD, University of Leeds, England, UK MA (Mathematics), MS (Operations Research), University of California, Los Angeles Areas of interest: Parallel Processing, Operations Research, Numerical Analysis, Data Warehousing and Data Mining

### Professor Emeritus, IBA

#### Dr Ishrat Husain, Nishan e Imtiaz

Chairman, Centre for Excellence in Islamic Finance



Dr Ishrat Husain served as Dean and Director of IBA from 2008 to 2016. His period at IBA is termed as an era of rebuilding and transformation of the Institute to become one of the ranking Global Business schools.

Dr. Ishrat obtained Master's degree in Development Economics from Williams College and Doctorate in Economics from Boston University in 1978. He is a graduate of Executive Development program jointly sponsored by Harvard, Stanford and INSEAD. He is the Distinguished National Professor of Economics and Public Policy and serves on the Boards of several research institutes, philanthropic and cultural organizations. He has authored 18 books and monographs and contributed than three dozen articles in refereed journals and 27 chapters in books. A former Governor of the State Bank of Pakistan, he is currently Convener, Economic Advisory Council,

Ministry of Finance and Member, Advisory Council to the Minister of Planning, Development and Reforms. In recognition of his outstanding record of public service, the Government of Pakistan conferred upon him highest national award of Nishan e Imtiaz in 2016.

## Department of Economics & Finance (26)



Chairperson, Department of **Economics & Finance** DBA, University of Strathclyde, Glasgow, UK M.Sc, University of Strathclyde, Glasgow MA, University of Punjab, Lahore Areas of interest: Strategic Management and **Economics** 

PhD, Northeastern University,

Boston, USA

Areas of interest: Convergence Theory and

Karachi

Corruption





Abbas, Ali Gillani Lecturer (On Study Leave)



Pursuing PhD, Institute of Business Administration, Karachi MSc (Economics), Lahore University of Management Sciences BBA (Finance), Institute of Business

Administration, Karachi



Ali, Mehwish Ghulam Lecturer



Director, Center for Business & Economics Research. Former Chief Economist, Govt. of Sindh PhD (Economics), University of Bath, UK MAS (Economics), University of Karachi MA (Economics), University of Karachi 20 years of experience in Consultancy. research in the areas of Public Finance. Regional Economics & Macro Economics

Ahmed, Oazi Masood Professor



Pursuing PhD, ESADE Business School Spain MBA, LUMS BSc (Hons) (Economics), LUMS 4 years of Industry Experience Served as AVP Team Leader in Mezan Bank



Awan, Amer Igbal Assistant Professor (On Study Leave)

#### Ahmad, Naved Professor (Off Board-Active)

#### **Full Time Faculty**

## Department of Economics & Finance (continued....)



Bhatti, Imtiaz Assistant Professor

PhD (Public Finance, Econometric and Cost-Benefit Analysis), The George Washington University, USA (In Progress) MSc (Development Administration and Planning), University College, London



Butt, Hilal Anwar Assistant Professor

PhD (Economics), Hanken School of Economics MSc (Economics), Hanken School of Economics MPA (Finance), Quaid-i-Azam University, Islamabad



Ejaz, Lalarukh Assistant Professor

Pursuing PhD (Entrepreneurship), University of Southampton MA (Eco), York University, Toronto, Canada MA (Eco), University of Karachi Obtained Distinction in MA, York University Areas of interest: Public Choice Theory, Law and Economics

Post Doc, University of

University of Sciences and

PhD (Labor Economist), National

Technology, Pakistan & Sussex

HEC Approved PhD Supervisor

MPhil (Public- Private Wage

Differentials in Pakistan).

Ouaid-I-Azam University

Pennsylvania

University



Research Fellow, CBER
IBA, Karachi
PhD (Banking)
Tilburg University, The Netherlands
MBA (Finance) (Gold Medalist),
IoBM, Karachi
MSc (Economics) (Gold Medalist),
University of Karachi





Haider, Adnan Assistant Professor

Coordinator, MS Economics & BS Economics & Mathematics Program

PhD (Economics), PIDE, Islamabad MS (Applied Economics), AERC, University of Karachi, MSc (Computer Science and Mathematics), University of Punjab, Lahore, Pakistan



**Hyder, Asma** Associate Professor



MBA, Institute of Business Administration, Karachi Areas of interest: Pakistan's Economic and Financial Markets, Involved in an analysis project with Business Daily





Junaid, Ahmad Assistant Professor

Program Coordinator Finance Program

Research Fellow-CBER
MS & PhD (Financial Engineering),
IAE AIX Graduate School of
Management, ESSEC Paris
MBA (Finance), Muhammad Ali
Jinnah University, Pakistan



Khan, Amir Jahan Assistant Professor

PhD University of Warwick (in process) MSc (Economics), Warwick University U.K MA (Local Economic Development), University of Waterloo, Canada MAS, University of Karachi Areas of interest: Applied Microeconometrics, Labour / Education Economics and Local Economic Development

### Department of Economics & Finance (continued....)



Fellow Academy of Entrepreneurship Fellow Eastern Finance Association Khan, Haroon Assistant Professor (On Long Leave)

France

NUST, Pakistan

Sr. Fellow / Advisor Center for

PhD, (Management Sciences),

MBA (Finance & Investment),

Research Fellow (CBER)

Bachelors (Economics),

Pennsylvania

(CBM).Karachi

Law College

PhD, (International Economics),

Pennsylvania State University,

University of California, Santa Cruz

Masters (International Economics),

University of California, Santa Cruz

PhD (Finance), Massey University

MS (Finance), Massey University

Institute of Business Management

PGD (Finance), Massey University

LLB, Government Sindh Muslim

MBA (Banking and Finance),

Entrepreneurship Development

MS (Finance & Management Control),



PhD, University of Minnesota MSc, University of Minnesota MSc (Agricultural Economics), Sindh Agriculture University Areas of interest: Stochastic Dynamic Programming, Market Integration, Environmental Economics

Lohano, Heman Das Associate Professor (On Long Leave)



Senior Research Fellow (CBER) Member Library Committee Juris Doctor (Doctor of Law), Columbia Law School New York, USA BS (Economics), Wharton School of Business - Philadelphia, USA Bachelor of Applied Science, University of Pennsylvania - Philadelphia, USA

Ali, Mohammad Azam Assistant Professor



Nakhoda, Aadil Assistant Professor



Pursuing PhD from University of Birmingham, UK MSc Investments (Finance) Birmingham Business School, University of Birmingham, UK MBA, Finance / Marketing Institute of Business Administration, Karachi BE (Mechanical), NED University Karachi

Nauman, J. Amin Assistant Professor (On Study Leave)



Associate Dean, Faculty of Business Administration PhD, University of Auckland, New Zealand MASc, (Management Sciences) & MA, (Economics), University of Waterloo, Canada MAS, (AERC), University of Karachi Areas of interest: Portfolio Management Financial Econometrics, Financial Economics & Microeconomics

Nishat, Mohammad Professor



Sharif, Saqib Assistant Professor



Saba, Irum Assistant Professor

PhD (Islamic Finance), INCEIF,
Malaysia (In Progress)
M.Com (Finance), Islamia
University, Bahalwalpur
BA (Economics and English),
Islamia University of Bahawalpur



Tauseef, Sana Lecturer

Pursing Split PhD, IMT Ghaziabad / Grenoble Ecole De Management MS (Economics), Institute of Business Administration, Karachi (in progress) CFA ® Charter, CFA Institute MBA (Finance), Institute of Business Administration, Karachi Areas of interest: Business Finance, Financial Management and Financial Derivatives

#### **Full Time Faculty**

### Department of Economics & Finance (continued....)



Research Fellow (CBER)
PhD (Economics) Tohoku University, Sendai, Japan
MPhil (Applied Economics)
University of Karachi
MSc (Economics) International
Islamic University, Islamabad,



Program Director, EMBA
Program
MBA, Institute of Business
Administration, Karachi
DAIBP
Areas of interest:
Banking, Accounting & Finance

Ullah, Wali Assistant Professor

Umer, Muhammad Saleem Professor of Practice

## Department of Management (14)



Assistant Professor

Chairperson, Department of Management
PhD (Operations Management),
Lahore University of Management Sciences
ME, Texas A&M University
BS, GIKI
Areas of interest: Operations
Management, Small Business
Management, Entrepreneurship



Afghan, Nasir A. Assistant Professor

Program Director, MBA
Program

Best Teacher Award 2014 by
HEC
PhD, University of Twente,
The Netherlands
MBA, Maastricht School of
Management, The Netherlands
MSc, University of Karachi

PhD Management, Lahore

University of Management

BE Textile Engineering, NED

ME Industrial Management, NED

Sciences

Karachi

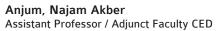


Student Advisor and Academic Director, (PGD, HR), CEE, Pursuing Split PhD Program at Pisa -Grenoble Integrative counselor (CPCAB), UK MSc (Organizational Psychology), Birkbeck, University of London, UK MS, (Management Sciences), SZABIST, Karachi Areas of interest: Women Studies, Career Development & Post-modernism

Ansari, Nyla Aleem Assistant Professor



PhD (Manufacturing Knowledge Management), Loughborough University MSc (Programmes & Project Management), University of Warwick BE (Mechanical Engineering), NED Karachi



Mumtaz, Mohammad Kamran



Ayaz, Muhammad Assistant Professor



Fatima, Mahnaz Professor

PhD, USA, MBA, IBA Karachi, BE (Mech), NED University, 29 years teaching experience at the IBA, Karachi and at Northern Illinois University (NIU), USA Ex-Member IBA-BoG, Ex Deputy Director Academics, Member Academic Board, Recipient of: MBA Gold Medal for best overall allround performance from IBA, 1983, Gerald Maryanov Fellow Award, 1991 from (NIU), USA, Best Teacher Awards: UGC 2001, IBA 2002, HEC 2009. Author of: 3 books, over 40 research papers and 400 articles in publications of international / national repute, Areas of interest: Corporate Strategy, Managerial Policy, Strategic Management, Development Economics, Quality Management, Public Policy and Social Policy.

## Department of Management (continued....)



Khalid, Rameez **Assistant Professor** 

Academic Director, (PGD Supply Chain Management) CEE. Chairman CPC PhD (Project Management), France MSc (Industrial Engineering). France BE (Mechanical), NED University PMP, CQSSBB, OCP, Assessor in OMS and OHSAS, HEC Approved

PhD Supervisor



Menezes, Leon Professor of Practice



Program Director, Career Development Center MBA, University of Hull, UK 33 years of Professional Experience Served as the **Executive Director at Shell** Pakistan



Mir. Shahid R. **Assistant Professor** 



Nazir. Usman **Assistant Professor** 

MBA, City University, Hong Kong BSc (Hons), Computer Science, City University, Hong Kong Worked at several multinationals Last served at JPMorgan Chase Bank, Singapore Taught at various Institutions in Asia Pacific



Oureshi. Shahid **Assistant Professor** 

Program Director, Center for **Entrepreneurial Development** (CED)

PhD, Technical University, Berlin MBA, LUMS, M.Sc (Engineering), Asian Institute of Technology, Bangkok, Thailand Areas of interest: Entrepreneurship, Strategic Management, Entrepreneurial Marketing and Marketing Research



Rizvi, Ameer H. Lecturer

MBA (General Management), University of the East, Manila, Philippines Areas of interest: Supply Chain Management and CRM. Experience at Companies like Oracle, KPMG and Arthur Consulting

Director OEC

Fulbright Post Doc. Research Scholar,

PhD, Adamson University, Philippines,

Methodology, Materials & Marketing

Monterey Institute of International

Studies, Monterey, USA

Entrepreneurship, Research

BE, NED University

Areas of interest:

Management



Saleem, Ashar Assistant Professor

PhD Organization Theory and Strategy, Lahore University of Management Sciences MBA Executive, University of Wah BE Mechanical Engineering, University of Engineering and Technology Lahore



Pursuing PhD (Business & Management), University of Manchester MA. (Human Resource Management). George Washington University, USA MBA, IBA Karachi BBA. IBA Karachi Areas of interest: Human Resource Management, Organizational Behavior and Comparative Management

Sagib, Syed Imran Assistant Professor (On Study Leave)

#### **Full Time Faculty**

## Department of Social Sciences & Liberal Arts (22)



Mushtaq, Faiza Assistant Professor



Ahmed, Babar Assistant Professor





PhD, Columbia University
Post-Doctoral Fellow, Harvard
University
MIA, Columbia University
BA, City University New York
Areas of Interest: Urban Politics,
Land Tenure and Grassroots processes
of Settlement, Globalization /
Governance and the city, Democracy
and Citizenship

Anwar, Nausheen H Associate Professor



Pursuing PhD, Johns Hopkins Anthropology Department MA (Social Sciences), The University of Chicago, IL BSc (Hons.) (Politics & Anthropology), LUMS





Baqai, Huma Associate Professor

Program Director,
Communication & Public Affairs
PhD (International Relations),
University of Karachi
Certified Trainer in Liberal Political
Values,
Areas of interest:

Conflict in South Asia



Pursuing PhD (Ethics & Philosophy) from Florida State University MPhil (International Relations), University of Cambridge MA (International Relations), University of Karachi Areas of interest: U.S. Foreign Policy, Just War Theory, Discourse Analysis

Butool, Syeda Beena Assistant Professor (On Study Leave)



Ghani, Asma Lecturer

Master of Science in Education-M.S.Ed. (Counseling and Counselor Education) Indiana University-Bloomington, USA Bachelor of Science (Social Science) Lahore University of Management Sciences, Lahore



Hasan, Maria Assistant Professor

Coordinator, Ardeshir Cowasjee Centre for Writing MA (Applied Linguistics), London Metropolitan University, UK MA (English Linguistics), University of Karachi MA (English Literature), University of Karachi Areas of interest: Socio Linguistics & Pragmatics



Ismail, Zeenat Professor

Coordinator, Talent Hunt Programs PhD, Institute of Clinical Psychology, University of Karachi Areas of interest: Human, Organizational and Consumer Behaviour, Business Communication Research Method and Social Psychology

## Department of Social Sciences & Liberal Arts (continued....)



PhD (International Relations), Lisbon University BA (Media Sciences), Polytechnic Institute of Tomar



Minai, Naveen Zehra

**Assistant Professor** 

PhD (Gender Studies), University of California BA (Hons) (Politics, Communication and Media Studies), Loughborough University



Assistant Professor

Munshi, Muhammad Bilal

PhD (Political Science)
University of Bristol
MA (International Affairs),
George Washington University
BA (Political Science), Boston
University

Lopes, Tiago André Ferreira Assistant Professor



PhD (English Literature)
McGill University, Canada
MA (English Literature)
McGill University, Canada
MA (Teaching English) Smith
College, Northampton,
Massachusetts
Bachelor of Arts, Bryn Mawr
College, Bryn Mawr, Pennsylvania



Nomanul Hag, Syed

Professor

Chairman, Library Committee
PhD, University College London,
Master of Science,
University College London,
Bachelor of Science (Engineering),
Hull University, England



Osman, Newal

Assistant Professor

PhD, (History) University of Cambridge, United Kingdom MSc (International History), London School of Economics, United Kingdom BSc (Mathematics & Economics) LUMS

Chishty Mujahid, Nadya Qamar Assistant Professor



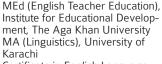
Lecturer

Masters (Philosophy and Anthropology), New York University (NYU) Bachelors (Political Science), University of California, Los Angeles (UCLA)



Qayyum, Rabail Lecturer

Coordinator Foreign Languages
Program
MEd (English Teacher Education



Certificate in English Language Teaching to Adults (CELTA), University of Cambridge



Raquib, Amana Assistant Professor

PhD (Religion, Philosophy and Ethics), University of Queensland MA (Philosophy), University of Karachi BA (Hons) (Philosophy), University of Karachi

#### **Full Time Faculty**

## Department of Social Sciences & Liberal Arts (continued....)



Rebaz, Javeria

Lecturer (On Study Leave)

Pursuing MPhil from National Defense University, Islamabad MA (Linguistic), University of Karachi BA (Hons), University of Karachi Areas of interest: Creative Writing and Translation



Sethi, Palvashay Lecturer

MSc Literature and Modernity, University of Edinburgh BA (Hons) English Literature, University of Essex BA (Hons) , Beaconhouse National University



PhD (Social & Developmental Psychology), University of Cambridge MPhil (Social & Developmental Psychology), University of Cambridge

Shafqat, Shahzad Assistant Professor



Master of Arts (Social & Political Thought) University of Sussex, United Kingdom. Bachelor of Arts (Cultural Studies) Beacon House National University, Pakistan.

Tahir, Ghazal Lecturer



## Department of Marketing (12)



Amir, Huma Assistant Professor





Akhund, Fatima Lecturer

MSc (Marketing), Queen Mary University of London BBA (Marketing), IBA, Karachi Areas of Interest: Marketing



Baig, Farah Naz Assistant Professor



Gill, Obaid Pervaiz

Lecturer (On Study Leave)

Pursuing PhD (Strategic Orientations & Brand), Australian School of Business, University of New South Wales Australia MS (Marketing & Strategy), Warwick Business School, UK BBA (Marketing), IBA, Karachi



Husain, Saima Lecturer

Pursuing Split PhD, University of Southampton BBA, IBA, Karachi MBA, IBA, Karachi Areas of interest: Marketing Issues in Pakistan, Principles of Marketing, Consumer Behavior and Media Management



PhD, Manchester, Business School, UK MBA, IBA, Karachi BE, NED University, Karachi Area of Interest: Innovation, Consumer Behaviour and Quality

Pursuing Split PhD, University of

MBA (Marketing), IBA, Karachi

**FMCG Branding & Retailing** 

Southampton

MS, SZABIST, Karachi

BBA, IBA, Karachi

Areas of interest:





Pursuing DBA GEM France – IMT Cohort MBA, IBA, Karachi BBA, IBA, Karachi Areas of interest: Marketing issues in Pakistan, Consumer Behaviour, Culture and Country-of-Origin effects





Mian, Ejaz A. Assistant Professor

PhD (Marketing), University of Sains Malaysia (USM) MBA, University of Toronto, Canada MA, University of Karachi BE, NED University Areas of interest: Marketing Management, Export Marketing, Advertising & Business Marketing in SMEs



Moiz, Jami Assistant Professor

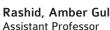
Superintendent Boy's Hostel MBA, Schiller International University, London HND, Cambridge Fellow, Babson College, Massachusetts, USA Areas of interest: Entrepreneurial Marketing, Strategy, Advertising and Management

#### **Full Time Faculty**

## Department of Marketing (continued....)



PhD, Salford University MSc, UMIST BA (Hons.) (Business Studies), University of Sheffield International Baccalaureate (IB) United World College of the Atlantic Areas of Interest: Active Involvement in the Center for Entrepreneurship Development (CED) Female Entrepreneurship





PhD (Marketing), Swansea

MBA (Marketing), IBA, Karachi

University, UK

University

MPhil (Statistics),

MSc (Statistics),

Lahore

Multan

Government College University,

Baha-Ud-Din Zakariya University,

(Sukkur Campus)

Rizvi, H. Wajid **Assistant Professor** 



Saeed, S.M. Lecturer

**Student Counselor** MBA, Institute of Business Administration, Karachi Trainer in various Executive Education & FBR Capacity Building Programs Areas of interest: Management, Marketing and HRM

PhD (Mathematics), ASSMS, GCU

MSc (Mathematics), UOS,

BSc (Mathematics & Physics)

Lahore

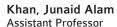
Sargodha

UOS, Sargodha

## Department of Mathematical Sciences (13)



Chairperson Department of **Mathematical Sciences** PhD, Abdus Salam School of Mathematical Sciences, Government College University, Lahore MSc (Pure Mathematics), University of Karachi





Ahmad, Naveed Assistant Professor



Ali. Danish **Assistant Professor** 



Alam, Magsood Lecturer



Bashir, Amir Assistant Professor (On Study Leave)



Postdoc (Appl. Math), University of Antwerp, Belgium PhD (Appl. Math), Delft University of Technology, The Netherlands MCS, MSc, BSc (Hons.) (Applied Maths), University of Karachi



## Department of Mathematical Sciences (continued...)



labal. Javed Associate Professor

PhD (Econometrics and Business Statistics), Monash University, Australia MAS (Applied Economics), University of Karachi MSc (Statistics), University of Karachi Area of Specialization: Econometrics and Business Statistics



Jamall, Mohammad Shoaib **Assistant Professor** 



PhD (Mathematics), University of California, San Diego MSc, University of Illinois, Urbana-Champaign BE (Computer Engineering),, McGill University, QC



PhD (Applied Mathematics), LUMS Pursuing one year postdoctoral offer from the Okinawa Institute of Science and Technology, Japan MSc (Pure Mathematics) with Distinction Areas of interest: Applied and Computational Mathematics, Sobolev Gradient Approach to Partial Differential Equations

Majid, Abdul Assistant Professor (On Study Leave)

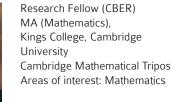


Meenai, Yaseen Ahmed

MSc, University of Karachi, (Silver Medalist) Recipient of Best Teacher Award from HEC Recipient of Best Paper Award, Informatics & Cybernetics Conference at Orlando, USA Areas of interest: Statistics. Numerical Computing, Mathematics and Statistical Inference



Raza, Ahmad **Assistant Professor** 



PhD (Financial Mathematics and Statistics),, University of Bucharest Romania MSc (Applied Mathematics), University of Karachi BSc (Hons) (Mathematics), University of Karachi BSc (Hons) (Mathematics)

Sheraz, Muhammad **Assistant Professor** 



Lecturer

Touheed, Nasir Professor

Coordinator, Testing Services Member Admission Committee & PhD, University of Leeds, England, UK MA (Mathematics), MS (Operations Research), University of California, Los Angeles Areas of interest: Parallel Processing, Operations Research, Numerical Data Warehousing and Data Mining

### **Visiting Faculty**

## Department of Accounting & Law (12)



Ahmad, Moiz

Executive Director,
The Institute of Chartered
Accountants of Pakistan
Deputy Chief Executive,
The Citizens Foundation
Director Finance, IUCN- The World
Conservation Union
FCA, Institute of Chartered
Accountants of Pakistan
MAS (Finance), Punjab University,
Lahore
BSc (Physics, Math), Punjab
University, Lahore



FCA, Institute of Chartered Accountants of Pakistan BCom, University of Karachi





Senior Faculty,
Sindh Judicial Academy
Pursuing PhD (Law), Punjab
University, Lahore
CA (Final Group-II) Accounting & Law,
Institute of Chartered Accountants
Pakistan
LLM (Corporate laws), S.M Law
College, Karachi
LLB, Urdu Law College

Aziz, Rahat



Chief Financial Officer (CFO) & Company Secretary, DHL Pakistan (Pvt) Ltd.
Certified Director, Corporate Governance, Pakistan Institute of Corporate Governance (PICG) FCA, Institute of Chartered Accountants of Pakistan (ICAP) FCMA, Institute of Cost and Management Accountants of Pakistan (ICMAP)

Idress, Muhammad Hanif



Former Managing Director / Chief Executive Officer Sind Engineering (Pvt) Ltd. MBA (Finance & Accounting), Institute of Business Administration, Karachi BSc (Maths, Physics), Adamjee Science College, Karachi

Kidwai, Midhat Azim



FCMA, Institute of Cost and Management Accountants FCA, Institute of Chartered Accountants of Pakistan

Kirmani, Ahmad Saeed



CMA , ICMAP LLB , University of Karachi BCom , University of Karachi



Aslam Murad Associates FCA, Institute of Chartered Accountants of Pakistan CMA, The Institute of Cost & Management Accountant of Pakistan BCom, University of Karachi

Chief Consultant.



ACCA Accounting and Finance BSc (Hons) Applied Accounting, Oxford Brookes University



Murad, Aslam

Quddusi, Faraz Ahmed

## Department of Accounting & Law (continued....)



CMA , Chartered Institute of Management Accountants (CIMA) CA , Institute of Chartered Accountants of Pakistan ACCA , Association of Chartered Certified Accountants



MBA, Georgia State University, Atlanta, USA CPA Texas, USA C.A finalist, Chartered Institute of Management Accountants, UK Areas of interest: Designing and Implementation of MIS in Large Organizations, Strategic Planning and Activity Based Costing Author of Book: Managerial Accounting for Financial Services



Financial Controller and Company Secretary, Bayer Crop Science (Pvt) Limited ACA, Institute of Chartered Accountants of Pakistan (ICAP) ACMA, Chartered Institute of Management Accountants (CIMA), UK

Ravda, Abdul Qadir

Saiyed, Aman U.

Usman, Saad

## Department of Computer Science (12)



Abbasi, Eram

President, MARE Consulting PhD, Shaheed Zulfikar Ali Bhutto Institute of Sci & Tec - (Pursuing) MS (Computer Science), SZABIST, Karachi MBA (MIS), CBM, Karachi



\_\_,

Chief Executive Officer (CEO), The Kaizen Forum MS (Computer Science), West Chester University of Pennsylvania, USA BE, NED University, Karachi



Assistant Professor,
Department of Computer Science &
Main Communication Network,
University of Karachi
Pursuing PhD (Computer Science),
University of Karachi
MA (Mass Communication),
University of Karachi
MS (Management Sciences),
SZABIST, Karachi
BS (Computer Science),
University of Karachi

Akhtar, Nadeem





Chief Executive Officer (CEO), Biztek Professionals MBA, Carnegie Mellon University, USA MS, George Washington University, USA BS, University of Maryland, College Park Certified PMP and CISA





Joint Director, State Bank of Pakistan BS (Engg.) (Sir Syed University of Engineering & Technology) MS (Specialization in Software Project Management), NUCES (FAST) MS (Economics and Finance) IoBM (CBM), Karachi





Mukhi, Shabbir

Director Technical and Delivery, Logic Information Systems, MS (Computer Science), SZABIST, Karachi BCSc, Dalhousie University, Canada

#### Visiting Faculty

## Department of Computer Science (continued....)



MBET (Business, Entrepreneurship & Technology), University of Waterloo BS (Computer Science), University of Karachi



Saeed, Muhammad

Assistant Professor, DCS/UBIT, University of Karachi. PhD University of Karachi. MS LUMS. Areas of Interest: Big Data Analytics, Data Mining, Parallel and Distributed Computing, Bioinformatics.



Sarim, Muhammad

PhD (Computer Vision and Machine Learning), University of Surrey Guildford, United Kingdom MSc (Physics), University of Karachi BSc (Physics), University of Karachi

Qadri, Syed Mazhar Hasan



PhD (Computer Aided Design of Switched Reluctance Motors), Imperial College, University of London BSc (Hons) (Electrical and Electronic Engineering), Imperial College, University of London



Assistant Professor,
Dept. of Computer Science,
University of Karachi
PhD, University of Karachi
(in progress)
MBA (Finance), University of
Karachi
MS (Computer Networks &
Communication),
Hamdard University
BS (Computer Engineering),
Sir Syed University of Engineering
&Technology, Karachi



IT Manager, Hinopak Motors Limited MS - CS, SZABIST (in Process) MBA (MIS), Institute of Business Administration, Karachi BE (Mechanical Engineering) UET, Lahore

Shaikh, Abdul Basit

Siddiqui, Farhan Ahmed

Zia, Shams Naveed

## Department of Economics & Finance (26)



MSc (Economics), The University of Warwick, UK BSc (Hons) Economics, Lahore University of Management Sciences



Visiting Faculty
MSc Development Economics,
University of London
BS (Hons) (Economics & Finance),
University of London



CFA, CFA Institute, USA MBA (Finance), University of Karachi BBA (Hons.), Karachi University Business School

Ahmed, Mahvish

Ali, Sayem

Ali, Syed Akbar

## Department of Economics & Finance (continued....)



Anas, Muhammad

MBA, Institute of Business Administration, Karachi BE (ELECTRICAL), NWFP University of Engineering & Technology







PhD (Economics), The University of Manchester, UK MSc (Economics), The University of Manchester, UK MAS (Applied Economics), University of Karachi MA (Economics), University of Karachi



Visiting Faculty

Bukhari, Syed Kalim Hyder



MBA, Lahore University of Management Sciences BA (Economics and Mathematics), Kinnaird College, Pakistan Department of Economics and Finance



Group Head - Corporate and Investment Banking MBA, Institute of Business Administration, Karachi Candidate for CFA Level II FRM. Global Association of Risk Professional (GARP)



MBA, Institute of Business Administration, Karachi MSc, University of Karachi

Cashmiri, Ayesha Samie

Ejaz, Muhammad

Haque, Ziaul



Huda, Sadiqul

Senior Vice President (SVP) Banking Division, Industrial Development Bank, Pakistan (IDBP) Masters in Economics, St. Louis University, USA MSc (Statistics), University of Puniab, Lahore MBA, Institute of Business Administration, Karachi



PhD (Economics), Australian National University, Australia MA (Development Economics), Williams College, USA MS Applied Sciences (Economics), University of Karachi



MBA (FINANCE), Institute of Business Administration, Karachi BBA (FINANCE), Institute of Business Administration, Karachi

Hyder, Zulfigar

Ismail, Zuhair Mushtaq

#### Visiting Faculty

## Department of Economics & Finance (continued....)



PhD (Health Economics), University of Kent, UK MPhil (Economic Efficiency of the Investment Strategies for the child Nutrition programs in Pakistan), University of Karachi MAS (Applied Economics), University of Karachi MA (Economics), University of Karachi

Iram, Uzma



CFA, CFA institute USA MBA (Finance & MIS), Institute of Business Administration, Karachi FRM, GARP, USA MS (Economics), Shaheed Zulfikar Ali Bhutto Institute of Sci & Tec BBA (Finance & MIS), Institute of Business Administration, Karachi

Irfan Ahmad, Syed



Irfanullah, Arif

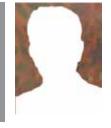
CEO, Irfanullah Financial Training MBA, University of Chicago ME (Engineering Management), Dartmouth College, USA BA, Dartmouth College, USA BE (Electrical Engineering), Dartmouth College, USA Department of Economics & Finance



Visiting Faculty EMBA , Lahore University of Management Sciences BSc (Hons) (Economics), Lahore University of Management Sciences



Joint Director,
Monetary Policy, Islamic Banking
and Research Department,
State Bank of Pakistan
Pursuing PhD, Institute of Business
Administration, Karachi
MA (Development Economics),
Williams College, USA
MAS (Applied Economics),
University of Karachi
MA (Economics), University of
Balochistan



Accountants of Pakistan CA , Institute of Chartered Accountants of Pakistan

Institute of Chartered

FCA,

Kazmi, Raza



Lakhani, Aziz A.



MSc (Economics), Lahore University of Management Sciences BSc (Hons) (Economics), Lahore University of Management Sciences



EMBA , Institute of Business Administration, Karachi - IN PROGRESS CFA , CFA Institute, USA - IN PROGRESS BBA , Institute of Business Administration, Karachi



Economist,
Research Department,
State Bank of Pakistan (SBP)
PhD (Economics),
Boston College, USA
MA (Economics),
Boston College, USA
BA (Economics and Mathematics),
Beloit College, Beloit, WI

Rasool, Warda

Naseem, Muhammad Azfer

Pasha, Farooq

## Department of Economics & Finance (continued....)



MBA, Lahore University of Management Sciences, Pakistan MA (Economics), University of Peshawar, Pakistan



Siddiqui, Ahmed Ali

Executive Vice President, Meezan Bank Limited MBA (MIS), Institute of Business Administration, Karachi BBA (Hons) (MIS), Institute of Business Administration, Karachi



Siddiqui, Danish Ahmed

Assistant Professor,
Karachi University Business School
PhD (Economics), University of
Karachi
MBA, Institute of Business
Administration, Karachi
MA (Economics), University of
Karachi
CFA-Level 1, CFA Institute, USA

Saleem, Asad Ullah



MBA (Finance), Institute of Business Administration, Karachi MA (Economics), University of Karachi BA (Economics, Math & Statistics), University of Karachi



MBA , Institute of Business Administration, Karachi BBA (Hons) , Institute of Business Administration, Karachi

Rahman, Zia Ur

Zaidi, Faraz

## Department of Management (18)



Amir, Samir S.

Director Research, Pakistan Business Council MBA, Institute of Business Administration, Karachi BE, NED University, Karachi



PhD (English Literature), Georgetown University MBA , Simmons College/ Harvard Cases MA (English Literature), Georgetown University MA (Literature and Linguistics), Lucknow University Teaching Diploma from Harvard University, Cambridge MA & Courses, Boston University, Boston





Chief Executive Officer (CEO) / Partner, Gold Mohur Corporation PhD (Management Sciences), SZABIST (In Progress) MPhil / MS (Management Sciences), SZABIST MBA (Finance & Marketing), Institute of Business Administration, Karachi BAC, Institute of Chartered Accountants Pakistan

Hassan, Imran Javed

31

#### Visiting Faculty

## Department of Management (continued....)



PhD, Management (Education), University of Lancaster, UK MA, Human Resource Development and Management Learning, University of Lancaster, UK MBA, Institute of Business Administration, Karachi BBA, Institute of Business Administration. Karachi



Practicing Member of ICMAP in Taxation,
Project Finance, Secretarial
Practices
FCMA, Institute of Cost &
Management
Accountant of Pakistan
MBA, Institute of Business
Administration, Karachi

MBA. Institute of Business

BBA (Marketing), Institute of

Administration, Karachi

Administration



MS (System Design and Management), Massachusetts Institute of Technology MS (Manufacturing Systems Engineering), University of Wisconsin-Madison, USA BE (Mechanical Engineering), NED Karachi

Khan, Sara

Khan, Jalal Ahmad

Khusrow, Uzair



Director Human Resources & Organization Development, Sanofi-Aventis, Karachi, Pakistan MBA, Quaid-e-Azam University, Islamabad



Karachi

**Business** 



Owner, International Trading Corporation MBA (Finance), Institute of Business Administration, Karachi MS (Chemical Engineering), The Pennsylvania State University, USA BS (Chemical Engineering & Computer Science), The Pennsylvania State University, USA

Mapara, Shakeel

Mazhar, Sarah

Mahesri, Sajjad H.



MBA (Int'l Business), AIT, Thailand BE (Industrial Engineering), NED UET BCom Professional Diploma in Project Management, PIM, Pakistan Certified Supply Chain Professional (CSCP) Program, PIM, Pakistan



MBA (General Management), Institute of Business Administration, Karachi LLB, University of Sindh BA, University of Sindh Department of Management



PhD (English Literature), University of Karachi MA (English Literature), University of Karachi BA (Political Science, Gen History, Islamic Studies), University of Karachi

Paracha, Muhammad Aamir Gul

Jaliawala, Muhammad Ashraf

Nazir, Faisal

## Department of Management (continued....)



MBA, Institute of Business Administration, Karachi BE (Mechanical Engineering), NED Karachi



Syed, Sabir A

MBA (Strategic Management of Organizations), Illinois Institute of Technology MS (Industrial Engineering Systems), University of Illinois at Chicago, IL USA BE (Mechanical Engineering), NED Karachi



Wasif, Muhammad

PhD (Mechanical Engineering), Concordia University, Montreal, Canada ME (Industrial and Manufacturing Engineering), NED Karachi BE (Mechanical Engineering), NED Karachi

Shams, Shuja



MBA, Institute of Business Administration, Karachi BE (Electrical). NED University of Karachi



Consultant Former CEO, Philips Pakistan MBA, University of Karachi MSEE, University of Southern California (USC), USA BE, NED University

Visiting Faculty



MEM, Yale University, USA MBA, IBA, Karachi BE, NED University Areas of interest: Small Business Entrepreneurship, Production and Operations, OB, Energy Management and **Environmental Protection** 

Shahbazker, Mohammad Kamil

Zaki, Shahid

Hussain, Mirza Sardar

## Department of Social Sciences & Liberal Arts (19)



Ali, Farzana

MA (English Literature and Stylistics), University of Karachi BA (English Literature, History & Philosophy), Kinnaird College, Lahore



Mulla, Ayesha



PhD (Applied Anthropology), Teachers College, Columbia University, New York - IN **PROGRESS** MA (Comparative International Education), Teachers College, Columbia University, New York BA (Political Science), Reed College, Portland, Oregon

Sattar, Muntasir

33

#### **Visiting Faculty**

### Department of Social Sciences & Liberal Arts (continued....)



Suhail. Adeem

PhD (Anthropology), Emory University - IN PROGRESS MA (Anthropology), **Emory University** MA (Ásian Studies), University of Texas at Austin BA (History), University of Texas at Austin BS (Electrical and Computer Engg), University of Texas at Austin



Ahmed, Syed Jaffar

Professor. Director, Pakistan Study Center, University of Karachi PhD (Social and Political Sciences), Cambridge University, UK MPhil (Pakistan Studies), University of Karachi MA (Political Science), University of Karachi BA (Hons) (Political Science), University of Karachi





Erum, Tazeen

MEd (Research) University of Sydney MA (English Literature), University of Karachi



PhD (Psychology), University of Karachi MA. Psychology with specialization in Clinical Psychology, University of Karachi



Moonis, Shahinda

University, New York City MA (TESOL), Teachers College, Columbia University, New York City MA (English Literature), University of Chittagong, Bangladesh BA (Hons) (English Literature), University of Chittagong, Bangladesh

MEd (TESOL), Teachers College,

EdD (Doctor of Education), Teachers College, Columbia University,

New York City

Columbia



Shaikh, Rabeel

United Kingdom BSc (Hons) (Major Social Sciences Minor Economics), Lahore University of Management Sciences

MBA, Institute of Business

Specialization in Soft Skills

Training and Development,

Business Communication and

Administration, Karachi

Career Counseling

MEd (Special Needs Education &

ment), University of Nottingham,

Educational Leadership & Manage-





Degree College

Khan, Muhammad Moiz



Nadeem, Zunaira

MA (English Literature), University of Karachi MPhil (English Literature), University of Karachi - IN PROGRESS BA (Hons) (English Literature), University of Karachi



Sayeed, Nadia

# **Visiting Faculty**

# Department of Social Sciences & Liberal Arts (continued....)



Assistant Professor, Department of Philosophy, University of Karachi PhD (Political Philosophy), University of Karachi MA (Philosophy), University of Karachi BA (Hons) Philosophy, Psychology, Economics, University of Karachi





Wasi, Nausheen

Pursuing PhD (International Relations), Karachi University MA (International Relations), University of Karachi

MA (Mass Communication),

BA (Hons), University of Karachi

University of Karachi



PhD (Political Economy), University of Cambridge, UK BA (Economics), California State University, USA

Sachithanandam, Sathananthan



PhD (History & Culture of The Islamic World, F.A.S.), Harvard University - IN PROGRESS MA (Area Studies in Middle East, F.A.S.), Harvard University BA (Near Eastern Languages & Civilizations, F.A.S.)



V



PhD (Creative Writing), University of Leicester, UK Masters (Creative Writing), University of Oxford, UK BA (Humanities), St. Joseph's College, Karachi

Naqvi, Aliya Iqbal

Perozani, Samina Wahid

Javeri, Sabyn

# **Visiting Faculty**

# Department of Marketing (18)



General Manager, Corporate Affairs Pak-Arab Refinery Ltd (PARCO) MBA, Institute of Business Administration, Karachi MS (Materials & Metallurgical Engg), University of Michigan, USA BE (Metallurgical Engineering), University of Karachi

Assistant Professor,

Textile Institute of Pakistan

MBA, Institute of Business

MBA (Marketing), Institute of

Business Administration,

MSc (Math), University of

LLB, University of

Karachi

Karachi

Karachi

Administration, Karachi



Kazi, Sabeen

MBA (Marketing), Institute of Business Administration, Karachi BBA (Marketing), Institute of Business Administration, Karachi Business Manager Makeup -L'Oreal Pakistan Manager Commercial Approach – Philip Morris International



Khan, Wajeeha Asim

MBA (Marketing and Finance), Lahore University of Management BA (Economics, Political Science and English Literature), DHA Degree College for Women Communications Specialist at Mazars Consultant at Aga Khan Foundation

Husain, Shah M. Saad



Chief Executive Officer (CEO), Brand Image (A marketing consultancy providing services in Branding, Advertising, Public Relations and Consumer Insight) MBA, Institute of Business Administration, Karachi in Association with Wharton School of Business Management, Pennsylvania, USA



Muhammad Irfan, Sheikh

MBA (Marketing), Institute of Business Administration, Karachi BBA (Marketing), Institute of Business Administration, Karachi

Mahmood, Javed



MBA, Institute of Business Administration, Karachi BS (Mech. Engg.), NED University of Engineering and Technology



Zafar, Yasmin

MBA (International Business and Management), University of San Francisco, San Francisco, USA MBA (Finance/Marketing), Institute of Business Administration, Karachi BSc (Experimental Food and Institutional Management), University of Karachi

Sibghatullah, Husaini M. Syed



Shaikh, Muhammad Ishague

Mahmud, Syed Akhtar

# Department of Marketing (continued....)



Ex. Director Marketing, Marsavco SARL (Former Unilever DRC) MBA, Hamdard University, Karachi BBA (Hons) , Hamdard University



Head of Debit Cards & New Ventures, United Bank Ltd (UBL) MBA (Marketing), Institute of Business Administration, Karachi MBA (Marketing), Oregon State University.Corvallis, USA



MBA (Marketing), Institute of Business Administration, Karachi MSc (Clinical Microbiology), University of Karachi BSc (Hons) (Microbiology, Biochemistry, Physiology), University of Karachi Director Marketing & Market Research at TCS Pvt Ltd

Ashraf, Noaman

Chaudhry, A. Jawad

Hasan, Alia



MBA , Institute of Business Administration, Karachi M.B.B.S. , Sindh Medical College, University of Karachi Head of Marketing & Sales at Macter International Marketing Manager at Hilton Pharma Pvt Ltd



MBA (Marketing), Institute of Business Administration, Karachi BBA, Institute of Business Administration, Karachi



Masters (Public Management), Carnegie Mellon University, Pittsburgh, Pennsylvania MBA, Institute of Business Administration, Karachi BSc (Economics, Mathematics & Statistics), University of Karachi

Hoda, Syed Saeedul

Hussain, Adnan

Hussain, Nazeeha



Head of Retail & Consumer Banking, Bank Islami Pakistani Limited (BIPL) PhD (Economics), University of Karachi MBA, IBA, Karachi BE, NED University of Engineering & Technology, Karachi



General Manager Retail Bank Al-Habib Limited, Karachi, Pakistan MSc (Marketing), UMIST, Manchester MBA, IBA, Karachi BBA, Institute of Business Administration, Karachi



MBA ,IBA, Karachi BBA (Hons), IBA, Karachi

Imran, Muhammad

Agrawalla, Najeeb

Shahzad, Tabish

### **Visiting Faculty**

# Department of Mathematical Sciences (18)



MSc (Statistics), University of Karachi BSc (Statistics & Mathematics), University of Karachi



Akhter Raza, Syed

Assistant Professor PhD (Computer Science), University of Karachi MSc (Statistics), University of Karachi BSc (Physics, Mathematics and Statistics), University of Karachi BSc (Hons), University of Karachi



Aziz, Zohaib

PhD (Statistics) from IBA Karachi (In progress) MA (Economics & Finance), University of Karachi MSc (Statistics - Time Series Analysis, Econometrics, Operations Research), University of Karachi BSc (Mathematics, Statistics, Economics), University of Karachi

Alam, S. Khursheed



Lecturer,
Department of Mathematics,
University of Karachi
Pursuing PhD (Operation
Research),
University of Karachi
MPhil (Fluid Dynamics),
University of Karachi
MSc (Applied Mathematics),
University of Karachi
BSc (Hons), University of Karachi



Inayatullah, Syed

Lecturer,
Department of Mathematics,
University of Karachi
PhD (Mathematics),
University of Karachi
MPhil (Operations Research),
University of Karachi
MSc (Applied Mathematics),
University of Karachi
BSc (Mathematics, Computer
Science & Statistics),
University of Karachi



Assistant Professor, University of Karachi, Institute of Space and Planetary Astrophysics, University of Karachi Post Doc. (Stony Brook University) PhD (Geo-Space Science), ISPA, University of Karachi MPhil (Applied Mathematics), University of Karachi MSc (Applied Mathematics), University of Karachi

Imtiaz, Muhammad



PhD (Computer Sciences), University of Karachi MA (Economics), University of Karachi MSc (Statistics), University of Karachi BSc (Computer Sciences, Statistics, Mathematics), University of Karachi



PhD (App. Maths, Fluid Dynamics, Differential Equation), University of Karachi MSc (App.Maths), University of Karachi BSc, University of Karachi



MPhil , University of Karachi PhD , University of Karachi - IN PROGRESS MSc (Statistics), University of Karachi BSc (Statistics, Mathematics and Physics), Federal Urdu University of Arts, Sciences & Technology

Jilani, Tahseen Ahmed

Khan, Najeeb Alam

Najam Uddin, Muhammad

Igbal, Muhammad Jawed

# Department of Mathematical Sciences (continued....)



PhD (Space & Planetary Astrophysics), University of Karachi MPhil (Mathematics), University of Karachi MSc (Mathematics), University of Karachi BSc (Hons) (Applied Mathematics), University of Karachi



PhD (Mathematics), University of Karachi MA (Mathematics), University of Karachi BA (Mathematics, Philosophy of Science, Islamic History), University of Karachi BE (Materials Sciences and Metallurgical Engineering), GIK Institute of Engineering Science and Tech



PhD (Applied Mathematics), University of Karachi MSc (Mathematics), University of Karachi BSc (Hons) (Mathematics), University of Karachi

Qureshi, Muhammad Shahid



Rehman, Sagib Ur



Deputy Director, State Bank of Pakistan Pursuing PhD (Economics), SZABIST, Karachi MBA (Public Sector Executives), Institute of Business Administration, Karachi MAS (Economics / Econometric), University of Karachi MPhil (Statistics), Govt. College University Lahore MSc (Statistics), University of Peshawer BSc (Statistics, University of Peshawer Mathematics), University of Peshawer



Postdoctor (Laser Spectroscopy of lanthanide series (Ta, Pr, La) & Atomic Beam Spectroscopy of Praseodymium Atoms), Institute of Experimental Physics, Graz University of Technology PhD Laser Spectroscopy, "Hyperfine Structure Studies of Praseodymium Atoms and Ion", Graz University of Technology MSc (Physics), University of Karachi BSc (Physics), Mathematics and



Assistant Professor,
Department of Mathematical
Sciences
PhD (Algebra), University of
Durham, UK
MSc (Math), University of Karachi
BE, NED University of Engg. &
Technology, Karachi

Salam, Abdus

Siddiqui, Imran Ahmad





PhD (Laser spectroscopy), Technical University Graz, Austria MSc (Physics), University of Karachi BSc (Hons) (Physics (H), Statistics & Mathematics), University of Karachi



PhD (Statistics), Monash University, Australia
MPhil (Statistics), University of
Karachi
MSc (Statistics), University of
Karachi
BSc (Statistics), University of
Karachi



MPhil (Astrophysics), University of Karachi - IN PROGRESS MSc (Applied Mathematics), University of Karachi BSc (Hons), University of Karachi

Zaheer Uddin

Yasmeen, Farah

Tasleem, Muhammad Zeeshan

# **Adjunct Professors**

# **Economics & Law**



Former Governor,
State Bank of Pakistan
Ex-CEO, Pakistan Business Council
36 years experience of global banking
including Head of City Bank Operations
in Middle East, Africa, UK, Central &
Eastern Europe.
Masters from Oxford University
Teaches: Global Economics and Political
Environments Course at the MBA
program besides delivering lectures and
seminars for IBA Executive MBA Program



Saveed Sadeg

Chairman,
Metage Capital Ltd. UK
Former CEO Nomura International
Advisor JS Investment Ltd and
Director, Silk Bank
Worked with Nomura Europe,
Credit Suisse
First Boston and World Bank
Adjunct Professor at Imperial College
Business School, London
Masters (Finance), Sloan School, MIT

Raza, Syed Salim

# Marketing



Director,
Excellence Exchange and Coaching
Connection Programs, Center for
Teaching Excellence,
Haas School of Business
Contribution: Capacity building of faculty
at IBA including conducting lectures as
a Visiting Faculty
PhD (Systems Engineering),
University of Pennsylvania



Former CEO, Byco Oil Pakistan Limited Former CEO, Karnaphuli Fertilizer Company Ltd Former CEO, Karachi International Container Terminal Ltd Former CEO, National Refinery Limited BSc Engineering (Chemical) (Major in Petroleum & Gas Technology) MBA (Marketing)



Member of the Boards of Education Fund for Sindh, Engro Polymer & Chemicals, Alfalah GHP Investments, and Port Qasim Authority.
CEO, Lotte Chemical Pakistan,
CEO/Commercial Manager, Pakistan PTA Ltd Director, Pakistan Business Council (PBC) Former Vice President, Overseas Investors Chamber of Commerce & Industry (OICCI)

Azhar, Wasim

Jamal, Mohammad Qaiser

Saad, Asif

# Management



Former President & CEO, Engro Chemicals Ex-Chairman, PIA, PTCL & KSE, Mechanical Engineer by Profession President of Overseas Chamber of Commerce; also serving on the Boards of a number of Multinational Corporations, SBP & listed Pakistani Companies and Philanthropic Organizations



# Social Sciences & Liberal Arts

Former Senator,



Jabbar, Javed

Ex-Federal Minister for Information and Broadcasting
Highly respected author, commentator on media, political and international relations.
Ex-Regional Counselor and
Vice President, IUCN
Teaches: Media, International Relations and Political Science Courses to MBA
Students



Visiting Professor,
Columbia University, New York
Over 29 years of teaching and research
experience in the well known
international universities including
Columbia University, John Hopkins
University and University of Oxford.
PhD (History), University of Cambridge
MPhil (Economics), University of
Cambridge
MSc (Social Planning in Developing
Countries), London School of Economics
8 Political Sciences

Zaidi, S. Akber

# Heads of Departments

Capt. Ahmed Zaheer (Retd) PN, afwc



Registrar

Moeid Sultan



**Director Finance** 

Abdul Wajed Khan



Controller of Examinations

Imran Batada



Director ICT

Dr. Qazi Masood Ahmed



Center for Business & Economics Research

Adnan Hameed



Head of Human Resource

Fahad Rehman



Head of Internal Audit

Muhammad Anwar



Head Librarian & Incharge Research Data Center

Shamsuzzoha Jafri



Sr. Manager Corporate Affairs & Secretary BOG

Shahid R. Mir



Director QEC

# **Program Directors**

Syed Sharjeel A. Hasnie



Undergraduate Program

Dr. Shahid Qureshi



Center for Entrepreneurship Development

Dr. S.M. Faisal Iradat



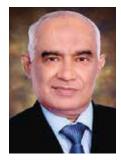
FCS Program

Dr. Nasir A. Afghan



MBA Program

M. Saleem Umer



**EMBA** Program

Dr. Izhar Hussain



Center for Executive Education & Summer School

Dr. Huma Baqai



Communication & Public Affairs

Leon Menezes



Career Development Center

Kamal Haq Siddiqi



Center for Excellence in Journalism

Dr. Zaheeruddin Asif



Alumni Affairs

# **Program Directors & Coordinators**

Ahmed Ali Siddiqui



Director, Centre for Excellence inIslamic Finance

Dr. Minhaj A. Qidwai



Healthcare Management Program - CEE

Nyla Aleem Ansari



Director PGD (HRM) Program - CEE

Rameez Khalid



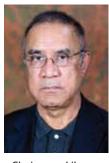
Director PGD (SCM) Program - CEE

Dr. Nasir Touheed



Coordinator, Testing Services

Dr. Syed Noman ul Haq



Chairman, Library Committee

**Haroon Tabraze** 



Coordinator, BS Accounting & Finance Program

Dr. Zeenat Ismail



Coordinator, Talent Hunt Programs

Rabail Qayyum



Coordinator, Foreign Languages Program

Dr. Adnan Haider



Coordinator, BS Economics & Math & MS & PhD Economics & Program

# Academic Calendar 2016-2017

### **SUMMER SEMESTER 2016**

### Summer Semester 2016 begins: June 13, 2016 (Monday)

Months	Total Days	Sundays	Holidays	Exams. Days	Teaching Days
June 13, 2016	18	2	-	-	16
July, 2016	31	5	3	2	21
August 02, 2016	02	-	-	2	-
Total Days	51	7	3	4	37

Activity	Action by	Commencement Date	Completion Date	
Online Course Registration	Students	June 09, 2016	June10, 2016	
Mid Term Exams	Controller of Exams	July 04, 2016	July 05, 2016	
Faculty Evaluation	Students	July 18 2016	July 19, 2016	
Preparatory Holiday	Students	July 31, 2016	July 31, 2016	
Final Exams	Controller of Exams	August 01, 2016	August 02, 2016	
Promulgation of Results	Faculty	August 01, 2016	August 08, 2016	
Comprehensive Exam	August 20, 2016			

### **FALL SEMESTER 2016**

### Fall Semester Begins: August 19, 2016 (Friday)

Months	Total Days	Sundays	Holidays	Exams. Days	Teaching Days
August 19, 2016	13	2	-	-	11
September, 2016	30	4	2	5	19
October, 2016	31	5	2	1	23
November, 2016	30	4	1	6	19
December 29, 2016	29	4	3	10	12
Total Days	133	19	8	22	84

#### **NOTES**

**Graduate Program Faculty members who opt to conduct one Mid-Term Exam only:** May conduct this from October 10 to October 15, 2016. There will be no graduate classes during this week.

**Graduate Program Faculty members who opt to conduct two Term Exams:** May conduct both term exams with the U/G Program exams during class timings Graduate classes will be conducted as per schedule during these two weeks.

Winter Orientation Program 2017 (MBA): November 28, 2016 to January 13, 2017

Short Winter Semester 2017 (MBA): January 2 to January 14, 2017

Activity	Action by	Commencement Date	Completion Date		
Online Course Registration	Students	June15, 2016	June 21, 2016		
First Term Exams	Controller of Exams	September 26 2016	October 01, 2016		
Second Term Exams	Controller of Exams	November 7, 2016	November 12, 2016		
Faculty Evaluation	Students	December 5 2015	December 8, 2016		
Preparatory Holiday	Students	December 16, 2016	December 16, 2016		
Graduate Program* Preparatory-Week	Students	December 10, 2015	December 16, 2016		
Final Exams	Controller of Exams	December 17, 2016	December 29, 2016		
Promulgation of Results	Faculty	December 17, 2016	January 13, 2017		
Comprehensive	January 28, 2017				
*For students taking one mid-term Exam only					

Orientation Day: August 18, 2016 (Thursday)

### **SPRING SEMESTER 2017**

### Spring Semester Begins: January 16, 2017 (Monday)

Months	Total Days	Sundays	Holidays	Exams. Days	Teaching Days
January 16, 2017	16	2	[ - ]	- ]	14
February, 2017	28	4	-	6	18
March, 2017	31	4	1	-	26
April, 2017	30	5	-	6	19
May 23, 2017	23	3	2	10	8
Total Days	127	18	3	22	85

#### **NOTES**

**Graduate Program Faculty members who opt to conduct one Mid-Term Exam only:** May conduct this from March 6 to March 11, 2017. There will be no graduate classes during this week.

Graduate Program Faculty members who opt to conduct two Term Exams: May conduct both term exams with the U/G Program exams during class timings. Graduate classes will be conducted as per schedule during these two weeks.

Summer Orientation Program 2017 (MBA): June 19, 2017 to August 12, 2017

Activity	Action by	Commencement Date	Completion Date
Online Course Registration	Students	November 21, 2016	November 24, 2016
First Term Exams	Controller of Exams	February 20,2017	February 25, 2017
Second Term Exams	Controller of Exams	April 3, 2017	April 8, 2017
Faculty Evaluation	Students	May 2, 2017	May 5, 2017
Preparatory Holidays	Students	May 11, 2017	May 11, 2017
Graduate Program* Preparatory-Week	Students	May 5 2017	May 11, 2017
Final Exams	Controller of Exams	May 12 2017	May 23, 2017
Promulgation of Results	Faculty	May 12, 2017	June 07, 2017
Comprehensive	August 19, 2017		

\*For students taking one mid-term Exam only

Orientation Day: January 14, 2017 (Saturday)

### **SUMMER SEMESTER 2017**

# Summer Semester Begins: June 12, 2017 (Monday)

Months	Total Days	Sundays	Holidays	Exams. Days	Teaching Days
June 12, 2017	19	2	3	-	14
July, 2017	31	5	-	2	24
August 02, 2017	02	-	-	2	-
Total Days	52	7	3	4	38

Activity	Action by	Commencement Date	Completion Date
Online Course Registration	Students	June 09, 2017	June10, 2017
Mid Term Exams	Controller of Exams	July 04, 2017	July05, 2017
Faculty Evaluation	Students	July 17 2017	July 18, 2017
Preparatory Holiday	Students	July 31, 2017	July 31, 2017
Final Exams	Controller of Exams	August 01,2017	August 02, 2017
Promulgation of Results	Faculty	August 01, 2017	August 08, 2017

### **FALL SEMESTER 2017**

Fall Semester Begins: August 21, 2017 (Monday)

Online Course Registration – 11 to 15 April, 2017

# Our International Linkages & Strategic Alliances



IBA takes pride that it has never compromised on quality in its standards of student intake, classroom instruction and discipline, assessment and testing during the sixty years of its existence. The challenge has been to continue the emphasis on quality, while promoting a culture of inquiry, inquisitiveness and innovative thinking. In our drive to reach ever higher, we consider it imperative to periodically review the admissions policy and align it with international practices.

The policy for admission in various programs / courses of study at the Institute of Business Administration may be stated as follows:

### **Salient Points**

- Admissions will be offered to all those who qualify a strict merit-based admission criteria irrespective of their race, religion, gender, ethnicity or socioeconomic background.
- There are no reserved / quota seats for any category at IBA.
- No effort will be made to fill all available seats or lower the criteria if an insufficient number of candidates apply or an individual candidate fails to satisfy the above criteria.
- The cut-off for individual programs in the Aptitude Test will be decided by the admissions Committee using rigorous methods based on statistical analysis.
- The Admission offer obtained by the test takers will remain valid for a period of 16 months and may be availed for admission only once; however, the minimum academic eligibility requirements will be those applicable at the time of actual admission.
- There will be one Aptitude Test for admission to both the campuses of IBA. Candidates may choose their specializations after a minimum of 2 years of study at IBA for undergraduate and 1 year for graduate programs.

- There is no distinction in the fee structure between the Main and City Campuses.
- No qualified candidate will be refused admission on the basis of his / her inability to pay IBA fees; these candidates are required to apply for financial assistance and meet the criteria for the same.
- A merit scholarship is available at IBA, according to which candidates falling in the top 10% of the list of candidates (published at the culmination of the admission process) admitted to the full time BBA, BS (Accounting and Finance) & MBA (Morning) programs will be offered a 50% reduction in their tuition fees, in lieu of participation in a work study program.

#### **Conditions**

The admission is based on candidate's ability to meet the following conditions:

- Apply online and register for the Aptitude Test.
- Pay the required fee for processing of his / her admission application and obtain admit card.
- Qualify the Aptitude Test or provide proof for exemption from the Aptitude Test by providing SAT I / SAT II / GMAT / GRE score transcript, whichever is applicable.
- Participate in a group discussion (where applicable) and appear for an interview and clear both
- Meet the minimum academic eligibility requirement for the concerned program and provide its mark sheet / transcript.
- Provide equivalence certificate in case of holders of degrees issued by non-Pakistani universities / boards.

# **Admission Policy & Procedures**

 Students, who clear the undergraduate aptitude test and subsequent interviews and group discussions, but do not meet the minimum eligibility criteria for the relevant program, would be given admission in the same or the following year; provided they improve their grades and meet the current eligibility criteria and submit the new grades before the start of the classes for that session.

# Aptitude Test, Group Discussion & Interviews

- The aim of the Aptitude Test is to evaluate candidates for their quantitative and analytical capabilities, logical reasoning communication skills, reading comprehension lexical resource, grammatical range, and aptitude for the program.
- The aim of the group discussion is to evaluate candidates on their background, academics and other achievements, leadership potential, extra curricular interests, verbal communication, mannerism, integrity, appearance and enthusiasm.
- The interviews are designed to bring out the qualities needed to not only to succeed in the chosen program of study but also the potential of the students to contribute positively to the society when they graduate.



# The following are exempted from appearing in the IBA Aptitude Test:

#### BBA program - SAT I

- A score of 630 (out of 800) in Evidence-Based Reading and Writing
- A score of 640 (out of 800) in Mathematics
- A score of 6 (out of 8) on each of three dimensions for Essay

(Reading, Analysis, and Writing)

### BSSS program - SAT I

- A score of 600 (out of 800) in Evidence-Based Reading and Writing
- A score of 600 (out of 800) in Mathematics
- A score of 6 (out of 8) on each of three dimensions for Essay

(Reading, Analysis, and Writing)

#### BSAF program - SAT I

- A score of 600 (out of 800) in Evidence-Based Reading and Writing
- A score of 600 (out of 800) in Mathematics
- Scores of Essay are not required for the purposes of admission, however may preferably be submitted for placement in English courses subsequent to admission

### BSCS and BSEM program – SAT I

- A score of 600 (out of 800) in Evidence-Based Reading and Writing
- A score of 610 (out of 800) in Mathematics
- Scores of Essay are not required for the purposes of admission, however may preferably be submitted for placement in English courses subsequent to admission

#### - SAT II

 A score of 650 (out of 800) in SAT II (Subject Test) in Mathematics

### BBA program – ACT

- A Composite Score of 29 (out of 36)
- An English / Writing Score of 25 (out of 36)

### BSSS program - ACT

• A Composite Score of 28 (out of 36)

• An English / Writing Score of 25 (out of 36)

#### BSAF, BSCS and BSEM program - ACT

- A Composite Score of 28 (out of 36)
- Score of English / Writing is not required for the purposes of admission, however may preferably be submitted for placement in English courses subsequent to admission

# Program wise requirements for Admission

More specific information about the requirements for admission to the individual programs is appended as under:

# **Undergraduate Programs**

Applicants to the BBA Program must have completed their:

Higher Secondary School Certificate with a minimum of 65% marks A. Levels with a minimum of 2 .B.s and 1 .C. in three principal subjects such that there should be no grade less than a .C. across the three

principal subjects. No credit is applicable for any subsidiary, general, or advanced supplementary paper

#### OR

American / Canadian High School Diploma with a minimum of 80% or an International Baccalaureate with at least 25 points out of 45. All other degree holders must provide an equivalency certificate from IBCC.



Applicants to the BS Programs (CS, Economics & Mathematics) must have completed their:

Higher Secondary School Certificate (Pre-Engineering) with a minimum of 60% marks OR Higher Secondary School Certificate (General Group with Mathematics) with a minimum of 60% marks

#### OR

A. Levels with a minimum of 1.B. and 2.C.s in three principal subjects (including Mathematics) such that there should be no grade less than a .C. across the three principal subjects. No credit is applicable for any subsidiary, general, or advanced supplementary paper

#### OR

American / Canadian High School Diploma with a minimum of 80% or an International Baccalaureate with at least 24 points out of 45. All other degree holders must provide an equivalency certificate from IBCC.

Applicants to the BS Programs (Accounting & Finance, Social Sciences & Liberal Arts) must have completed their:

Higher Secondary School Certificate with a minimum of 60% marks

#### OR

A. Levels with a minimum of 1.B. and 2.C.s in three principal subjects such that there should be no grade less than a .C. across the three principal subjects. No credit is applicable for any subsidiary, general, or advanced supplementary paper

OR

American / Canadian High School Diploma with a minimum of 80% or an International Baccalaureate with at least 24 points out of 45. All other degree holders must provide an equivalency certificate from IBCC.

# **Graduate Programs**

Applicants to the MBA, MBA (Evening) and MS Programs must have:

A minimum of 16 years of education (culminating in a master degree or equivalent) out of which 4 years should have been spent in an HEC recognized university / degree awarding institute\* with 2.5 CGPA or 60% in last degree (whichever is applicable).

IBA BBA graduates applying for admission to MBA program, with a CGPA of 2.5 or above and having two years post BBA work experience (Three years. work experience in case of EMBA) are exempted from the IBA test. A minimum of 2 years of relevant work experience gained after graduation / completion of 16 years of education (culminating in a master degree or equivalent) with 2.5 CGPA or 60% (whichever is applicable) satisfying minimum requirement for MBA admission.

Work experience is not required for MS Program. For details, see work experience requirement given below. A minimum of 60% aggregate marks in the last degree where applicable; provided numerical scores of each subject are mentioned in the mark sheet.

#### OR

A minimum of 2.50 CGPA on a scale of 4.00 in the last degree where applicable; provided alphanumeric grades of each subject are mentioned in the mark sheet. (IBA, BBA graduates must also meet this requirement).

# Applicants to the PhD Program must have:

MS / M.Phil. / Equivalent in relevant subject from HEC recognized local / foreign university. A minimum 60% aggregate marks in the last degree; provided numerical scores of each subject are mentioned in the mark sheet.

#### OR

A minimum of 3.0 CGPA on a scale of 4.00 in the last degree where applicable\*; provided alpha numeric grades of each subject are mentioned in the mark sheet. PhD candidates will also have to fulfill more specific requirements laid out by the respective departments.

\*All other degree holders must provide an equivalency certificate from HEC (www.hec.gov.pk).

# Post Graduate Diploma (PGD)

Applicants to the Post Graduate Diploma programs must have:

### Supply Chain Management, Human Resource Management and Project Management

- 14 Years Education with 6 years' post-qualification work experience
- 16 Years Education with 3 years' post- qualification work experience

### Healthcare Management

- Doctors with MBBS/BDS with 2 years' experience in hospital
- Nurse graduates with minimum 5 years' experience in hospital
- Other healthcare professionals with 16 years education and at least 2 years work experience in hospital



# Applicants to the EMBA (Executive MBA Programs) must have:

16 years of education (culminating in BS / BBA / BE / MA / M.Com / LLB / MBBS etc.) and 3 years of experience gained after completing education.

#### OR

Qualified Chartered Accountants with 2 years of post-qualification work experience.



OR

Qualified ACCA upon completion of three years of post ACCA work experience For details, see Work Experience Requirement given follow. Holders of professional degrees / certificates (BE, MBBS, LLB, CPA, CA, ACCA, etc.) are encouraged to apply for MBA / Masters Programs. The Institute also admits, without any prerequisite, visiting students in single courses depending upon the availability of seats.

\*All equivalency claims shall be evaluated by the HEC (www.hec.gov.pk).

# **Credit Transfer Policy**

A transfer candidate is defined as follows.

- A candidate who has attended any of the top 100 universities derived from the international ranking compiled by Shanghai Jiao Tong University's Institute of Higher Education or by The Times Higher Education Supplement (THES) or Quacquarelli Symonds (QS). Course credits are also acceptable from Lahore University of Management Sciences, and Karachi School for Business & Leadership and the universities with which IBA will signing (or has signed) MOU's.
- The candidate must have been enrolled in degree programs at these universities.
- The candidate's CGPA must be 3.0 or above on a scale of 4.0 or equivalent. The candidate has passed all the stages of admission process and has been offered admission at IBA.
- Eligible candidates may apply for transfer to any of the IBA degree programs with the following stipulations:
- IBA reserves the right to accept or reject all or any such candidates.
- Subject Interviews may also be conducted prior to admission if so desired by IBA.
- A transfer committee appointed by IBA shall determine the courses to be accepted for transfer of credits of such candidates.
- Transfer of credits will be applicable to those courses with .B. or above grades.
- A minimum of 50% of total degree credits must be completed at IBA.
- Courses transferred shall be indicated in the final transcript as being 'transfer credits'.

The grades of transfer credits will be included in the calculation of the CGPA and such students will be entitled to compete for positions / medals. The dropped out students of any program who get admission again by clearing the IBA Admission Test and other requirements will get the credit of the courses in which they had obtained .B. grades provided they rejoin the program within 16 months from the date they had dropped out. For transferring credits from one IBA program to another, if the course code is exactly the same the course will automatically be accepted in the new program.

# Work Experience

#### Requirement for applicants of MBA Program:

Work requirement for admission to IBA's MBA program will comprise of 2 years of post qualification work experience in multinationals, large domestic corporations, and large family business. For self employed and smaller family businesses the .Work Evaluation Committee. will decide if the experience is acceptable for admission to IBA. The work evaluation committee will comprise of a member of the Admission Committee, Director MBA Program and an IBA alumnus with at least 10 years of work experience. This work requirement will only be considered provided it has been achieved after applicants have obtained 16 years of education with 2.5 CGPA or 60% (whichever is applicable) and satisfies the minimum eligibility requirement for admission in the MBA Program. The education requirement should meet the criteria established by HEC. Work experience gained during CA. ACCA (Affiliate). D. Pharma and MBBS will not be considered as a relevant work experience for admission to the MBA Program.

### For applicants of Executive MBA Program:

Experience requirement for admission to IBA's Executive MBA programs will comprise of 3 years of work experience (for those having 16 years of education). For self employed and smaller family businesses the 'Work Evaluation

Committee' will decide if the experience is acceptable for admission to IBA. This committee will comprise of a member of the Admission Committee, Director EMBA Program and an IBA alumnus with at least 10 years of work experience. This work requirement will only be considered after applicants have obtained 16 years of education as stipulated in the foregoing paragraphs. The education requirement should meet the criteria established by HEC.

#### Applicants with a Criminal Record

The IBA acknowledges the key role of education in the rehabilitative process and a criminal record will not preclude an applicant from being offered a place at the institute. However, as part of its duty of care to its staff and students, the IBA will ask for information about any relevant items on a criminal record. Similarly, IBA will ask any student rusticated or expelled on disciplinary ground from any other institution for additional information about any relevant items.



### **Admission Procedure**

Online Application Applications are accepted through IBA Online Admissions System. The link to IBA Online Admissions System is available on IBA.s website (www.iba.edu.pk). To apply online, applicants need to fill out an online Admission Application Form, print a bank challan and take it to the designated bank branches to deposit the admission processing fee. The bank challan duly stamped by the bank officer is then to be taken to the Admissions Office for collection of the Admit Card on the prescribed dates as per the procedure.

### **Issuance of Admit Cards**

Applicants residing in Karachi can obtain their Admit Cards by visiting the Admissions Office of any campus of IBA with a copy of the bank Challan. Applicants residing outside Karachi can request for their Admit Cards to be delivered to them by means of emails. The details of getting the Admit Card by means of emails will be posted on the IBA website around the time of admission process. List of authorized branches is given on the IBA web site.

# **Aptitude Test**

The Aptitude Test is conducted simultaneously in Karachi and other cities on specified date announced in media / on our website. Candidate may choose the test location during applying online. The Admit Cards issued to the applicants indicate the test center, date, and reporting time. Please make sure to read all instructions given on the back of the Admit Card carefully. The applicants should bring their Admit Cards along with a photo ID to be able to appear for the Aptitude Test. Candidates who pass the Aptitude Test qualify for the group discussion followed by an interview.

### **Interview List**

The names of candidates who qualify the Aptitude Test and are eligible to participate in group discussion, interview activities will be displayed on our website. These candidates are to report to the venue at the designated date and time for the said activity.

### **Documents Required**

Candidates are required to bring the following documents in original on the day of Group Discussion and Interview:

- Matriculation / .O. Levels certificate with transcript / marks sheet . Higher Secondary School Certificate (Part I) / 'A' Levels (First year) certificate with transcript / marks sheet
- Bachelors degree with transcript / marks sheet\* . Masters degree with transcript / marks sheet\*
- Work experience certificate\*
   \*where applicable

# **Group Discussion**

The selected candidates are divided into groups. These groups are given a topic to debate and discuss amongst themselves. During this process, communication skills, interpersonal skills, confidence and leadership potential are assessed.

### Interview

Interviews are conducted for evaluating the level of maturity, academic aptitude, motivation, interpersonal skills and career focus of the applicants.

### List of Successful Candidates

The names of candidates who qualify the admission requirements will be notified through a list on our website



(www.iba.edu.pk). These candidates will get their Admission Letter, Fee Challan and other documents through an email sent by the admission office. As a prerequisite for issue of Admission Letter and other documentation, all successful candidates are required to deposit the transcripts bearing proof of their having met the minimum academic eligibility requirements for the respective programs.

#### **Enrolment**

Only those candidates should deposit their fee in the prescribed banks who have met the academic eligibility criteria for the Program concerned (other candidates should not deposit any fee as they will face a lengthy process of getting the refund). These candidates must, however, submit the following documents in original, along with copies attested by a gazette officer to complete the enrolment process:

- Matriculation / .O. Levels certificate
- HSC / .A. Levels certificate with transcript / marks sheet
- Bachelors degree with transcript / marks sheet
- Masters degree with transcript / marks sheet
- Work experience certificate\*
- Migration certificate of the university / board concerned, except in the case of Karachi University / Karachi Board
- Equivalence certificate in case of holders of degrees / certificates issued by non- Pakistani universities / boards
- Original copy of Fee Challan deposit slip
- · \*where applicable

**Disclaimer:** Any candidate who provides false or incorrect information about work experience, grades, financial status of the family, (or any other required material), or submits any fake supporting documents will be permanently debarred from applying to IBA.

# General

The primary goal of rules and regulations is to ensure the quality and standard of education as well as to encourage professionalism.

They also promote transparency in academic administration through the appropriate definition, communication and implementation of institutional policies. Adherence to rules and regulations by all concerned parties is vital for the proper functioning of the programs. Some of the core elements of the Rules & Regulations pertaining to the academic conduct at IBA are appended below for guidance and compliance by all concerned:

### Discipline

Regularity, punctuality and conformity to schedules and deadlines are basic requirements at IBA and are expected equally from faculty members and students. This ensures a strong commitment towards professional excellence in all those who come to teach or learn at the IBA

### **Good Standing**

Students are required to maintain discipline, good conduct and behavior during their studies at the IBA. A student shall be deemed to have lost good standing if his / her conduct and behavior is found objectionable from a disciplinary point of view. Consequently his / her name shall be dropped from the rolls of the Institute.

### Attendance

A distinguishing feature of the IBA is its stringent adherence to the academic calendar. A detailed program is provided on the first day of every semester. Students are required to attend lectures, laboratory sessions, seminars and fieldwork specified for every course in a semester. The course instructor takes attendance in each class session. Late comers are marked absent even if late by one minute. No excuse is accepted. If a student

accumulates more than the permissible absences, he / she is awarded an F. in that particular course. Students found tampering with attendance records in any way will immediately be expelled from the institute.

Full-time students are allowed 4 absences in a 75 minute course offered in regular semesters and 3 absences in a course offered in summer semester.

EMBA participants are allowed 3 absences in a course with 3 hour sessions.

Part-time / evening students are allowed 7 absences in each course offered in regular semester and 5 absences in a course offered in summer semester.

Students representing the IBA in conferences/ seminars/ events, participating in sports at national or international level or participating in exchange programs may seek 2 additional absences subject to recommendation by the concerned Chairperson and approval by the Dean & Director. Attendance of classes on the first and last day of the semester is compulsory for all Students.

### Cheating & Plagiarism

The IBA maintains a strict policy on academic impropriety. Based on its zero-tolerance for such activity, any student found cheating or using unfair means in examinations is immediately expelled from IBA and is declared ineligible for re-admission. A booklet highlighting IBA's Policy on plagiarism is available on the portal for all students to read and comply.

### Transfer of Credits

Students belonging to Postgraduate Diploma (PGD) in Business Administration and MBA Evening Programs may seek advance credit for not more than two required courses, which they may have successfully completed while being students in the Certificate Program. They are subject to the following conditions:

 The student must have held a Master's degree with 60% marks at the time of admission to the Certificate Program

- The semester final grade in the course was at least "B"
- C. The course for which the credit is sought was completed within two years from the date of admission in the PG

Students of PGD in Business Administration (Evening Program), who have not completed diploma course work, can take MBA courses only as certificate students and may get credits for these courses in their degree course work later, subject to the following conditions:

- a. The student must have completed a minimum of 5 PGD courses
- b. The remaining PGD courses are not available to the students in the evening
- c. The student is unable to remove his course deficiency in the Morning Program due to his / her occupation.
- d. The student removes his PGD course deficiency as soon as the remaining courses are available to him / her.

#### Course Load

MBA Evening / PGD students are allowed to enroll in maximum 6 credit hours in a semester (including Summer Semester). If a student has an average CGPA of 3.0 in the previous semester he/she may take 9 credit



hours courses (excluding summer). If he / she is enrolled in a Corporate Strategy course then an additional 3 credit hours course may be studied (only 6 credit hours in that semester).

The course load for full-time degree program students is 18 credit hours.

A student cannot take additional course(s) in any semester except in the final semester (BBA-VIII and MBA-IV).

If a student needs to remove his / her deficiency, he / she can do so by dropping a course. In the final semester (BBA- VIII and MBA- IV), a student may however take two additional courses to complete course work.

All students are to note that FULL LOAD VARIES FOR DIFFERENT SEMESTERS AND DIFFERENT PROGRAMS.

#### Withdrawal from a Course

Full-time students are allowed to withdraw from two courses in a semester if such withdrawal helps the student in improving their performance in the remaining courses. The withdrawal must be sought on prescribed form within one week of the second term examination result or within one week after the announcement of midterm examination results in the summer semester.

Part-time students are allowed to withdraw from some or all of the courses for which they have registered in a semester. Permission to withdraw from a course must be made on the prescribed form available from the Program office within one week of the second term examination result or within one week after the announcement of midterm examination results in the summer semester. Withdrawal from a course is not treated as failure. However, once a student has accumulated more than the permissible absences in any course, he / she is not allowed to withdraw from that course and is awarded an 'F'.

Executive MBA participants can withdraw from a course within one week after the announcement of Mid-term exam result. They need to fill out withdrawal form available with EMBA program office.

A "W" grade would be indicated on the transcript for a withdrawn course. It does not impact the GPA.

#### Semester Freeze

- Full time students may apply for semester freeze by submitting a formal application to the program office. However, students on probation are not allowed a semester break. All courses are marked as withdrawn when a semester break is applicable.
- Part time students should also inform the program office if they intend to not study any course in a particular semester.
- Applications for semester freeze must be submitted at least one week before commencement date of final exams.

### Policy for Make-up Examinations

- I. Morning Program Students of both the campuses: Under normal circumstances, no make-up examination shall be allowed for missing Midterm or Semester Final Examination.
- II. Evening MBA / EMBA Program Students: Evening / EMBA program students, who are sent out of Karachi during term and final exams on

official assignments by their respective organizations, may be allowed to take make-up examinations under the following conditions:

- a. This facility will only be availed once for either one of the midterm exams or the final exam.
- b. The concerned student shall be required to provide the following documents at least one week before the scheduled exam:
- (1) A certificate / official letter from his / her organization giving details of his / her official assignment.
- (2) Evidence of official travel comprising tickets or boarding cards for air travel as applicable.
- (3) The concerned student shall be required to appear in the make-up of a term exam within three weeks of the original exam date and within six weeks for the semester final exam on payment of make-up exam fee of Rs. 10,000/-.

# Extraordinary Circumstances for Makeup Examination

In extremely serious cases, authenticated by recognized hospitals, the Academic Committee may on recommendation of the concerned Chairperson, consider allowing make-up exam in midterm exams only.



The committee's decision in this regard shall be final. This facility shall, however, be allowed for only one of the two midterm examinations in a semester. The policy on make-up exams under extraordinary circumstances will also include the cases (i) in which a student's spouse is hospitalized in extremely serious condition, or (ii) in case

of the death of mother / father. All applicants will have to produce documentary evidence to substantiate their request. Other conditions of make-up exam will remain unchanged.

No make-up of semester final exam shall be allowed on medical grounds of any kind. In case a student misses his / her final exam on personal / medical grounds, or other extraordinary circumstances he / she may apply for "I" (Incomplete) with all supporting documents including medical certificates through his / her respective program coordinator to the Academic Committee (AC). If the AC is satisfied with the genuineness of the claim then it may award an "I" instead of an "F" in that course. In that case the concerned student will have to appear at the examination of that course in the following semester without attending classes provided the attendance of that student was complete. However, if the AC is not satisfied with the genuineness of the case, then "F" will be awarded. This policy will be applicable for all IBA programs.

The fee for re-take examination under above mentioned circumstances is Rs. 8,000 / - per course.

### **Options for Faculty**

In cases where make-up exams have been allowed, the concerned course instructors in consultation with concerned chairperson have the following options:

### a. Re-conducting exams

The course instructor may develop a makeup exam for the student if possible. The course instructor needs to ensure that the student does not get an unfair advantage if the missed exam was difficult. The makeup exams can be for one missed exam per course only.

### b. Assigning an Average Grade

The course instructor can offer an average to the student. However the course instructor must consider whether to award the class average or average of student's overall performance as he / she may be a class topper or a weak student. The aspect of unfair advantage needs to be taken into account as a particular student may study more for some courses and less for others to balance out their overall performance.

subject to a deposit of Rs. 8,000/ - per course, which is refundable if any significant improvement in grades / marks is found after rechecking. They may request rechecking for only one of the midterms or final exam.

#### Dean's List

The Dean's List is an Honorary Academic list of students who are exceptional performers at the Institution. The list is published at the end of each semester and displayed on

The following absolu	The following absolute grading scheme is used to evaluate a student's s academic performance:				
A	A	93-100	4.00		
A	Α-	87-92	3.67		
	B+	82-86	3.33		
В	В	77-81	3.00		
	В-	72-76	2.67		
	C+	68-71	2.33		
С	С	64-67	2.00		
	C-	60-63	1.67		
F	F	0-59	0.00		
I	I	Incomplete			
W	W	Course Withdrawn			

# c. Assigning a Project or Assignment

The course instructor can assign additional course work which may help the student cover the missed work and can be evaluated on that basis.

### Make-up of Final Exam

If a student has missed the final exam, an average grade or assignment is not allowed as the student has not been tested on a large portion of the syllabus. A makeup exam must be conducted as stated above.

### Rechecking of Final Paper

Students may requested for Rechecking of exam scripts

the portal and website. There are separate lists for BBA / BS / EMBA and MBA (morning) programs. All credit courses will be counted. A position on the Dean's List entitles the student to wear the IBA logo in a star on his / her ID card as a symbol of distinct identification which also allows him / her to avail benefits such as book discounts. Additionally, the said special mark will be displayed on the Dean's List achiever's transcript and against his / her entry in the graduate directory. Furthermore, students on the Dean's List are entitled to merit scholarship in the subsequent semester.

### Honors & Medals

The following will be the criteria for including a student's name in the Dean's List:

- a. A candidate for Dean's List should have a CGPA of 3.5 or above.
- b. He / She must be in top 5% of his class / batch.
- c. There must be no C- or lower grades in any of the courses during the semester.
- d. The student must have completed the normal course load for his / her particular semester. As per IBA program announcement the course load for degree program students is typically 5 for Computer Science students and 6 for other students in regular semesters.
- e. He / she must not have been subjected to any disciplinary action within the Institute during the semester. (Disciplinary actions will include all those actions for which student can be suspended).
- f. The grades of the students earned from any top 100 universities of the world, as well as LUMS and the universities with which IBA will sign MOUs, will be included in their CGPA and they will be entitled to compete for the positions / medals.
- g. However, the credits for grades earned from universities other than those mentioned above will be decided on case to case basis but will not be included in the CGPA. Their positions / ranking will be determined by the courses they would take at IBA. This will be applicable for all degree programs at IBA.
- h. The semester average will be calculated on a weighted basis and shall include all courses studied at IBA.
- i. Students who obtain an academic semester average of 90% or more will earn the honor of the Dean's List with Distinction.

j. The student must be deemed by the Dean 8 Director's Committee (Associate Deans and Director) to be worthy of being on the Dean's List.

# BBA / BS / EMBA / MBA / Overall Medals

The top three students qualifying following criteria will be awarded Gold, Silver and Bronze medals respectively. The criteria for award of medals will be as under:

- The student, who has the highest CGPA (Cumulative Grade Points Average), without any failure, shall be eligible, provided the CGPA is 3.5 or higher.
- In case of a tie where the CGPA is the same, the student with the higher average percentage shall be eligible for the award of Medal.
- A student with "C" or lower grades in any subject shall not be eligible.
- No award will be made unless there is a candidate of sufficient merit. For example, if only one student qualifies according to the above mentioned criteria, he / she will be awarded a gold medal and there will be no silver or bronze medal.

# MBA Marketing, Finance (Specialization) Gold Medal

The specialization Gold Medal shall be awarded to the student who fulfills the following criteria:

- The student must have taken a minimum of 2 electives in the area of specialization. . He / she must have an "A" in both subjects.
- If the student has more than 2 electives in the field of specialization, the best 2 shall be counted, provided that the student has no "C+" or a lower grade in the field of specialization, and has no failure in the 3rd and 4th semesters of MBA. If more than one student has the same grades, then the student with the higher cumulative percentage in the 2 electives shall be eligible.

- Each student shall declare his / her field of specialization in writing at the beginning of MBA 4th semester.
- No non-credit course taken by a student in the 3rd and / or 4th semester shall be convertible to a credit course for the purpose of determining merit.

### **Executive MBA Gold Medal and Shields**

Executive MBA Gold Medal will be awarded to the top performers of the graduating class on the basis of CGPA. Further, the second and third highest performers on the basis of CGPA are awarded Shields. All other conditions as applicable to awarding of medal & shields at the IBA are observed.

### Best Project Medals, Shields and Cash Awards

Announced annually in respect of top performers of the graduating classes

### **Grading & Evaluation**

In addition to the above absolute scale, relative grading is also possible. Faculty members have the option of choosing either the Absolute or Relative Grading Scheme and may also decide the percentage that will get A.s, B.s, and C.s. A guideline of the same in the relative grading scheme will be available to help faculty in implementing the Relative Grading Scheme.

Student performance is evaluated through a system of assessments spread over the entire period of their studies. In addition to the final examination at the end of each semester, students are tested through term exams, a series of short quizzes, class discussions, written assignments, research reports, presentations on different topics, etc, all of which contribute to the final grade. A student sits for 2 term examinations for each course every semester (scores of both term examinations are counted towards the final grade). A number of surprise quizzes are also taken during the semester to monitor the performance of the students. In determining

the course grade, 60% of the final grade is based on the semester work and 40% on the semester final examination. However, the Institute reserves the right to modify these weights. A Cumulative Grade Point Average (CGPA) is computed at the end of the semester. Final grades in each course are converted to grade points on the following basis:

Sum of (credit hours X grade points) / Sum of credit hours

The initial CGPA of the PGD / MBA / EMBA / MS students of the Evening Program is calculated on the basis of the first 6 courses taken by them. Withdrawals and failures, if any, are also counted. "F" Grades are shown on the Provisional / Final Transcripts but are not counted in CGPA once the deficiency (F) is removed by the student.

### Minimum GPA Requirements

A student must maintain a minimum CGPA of 2.2 on a cumulative basis during his/her stay at the IBA. Any student with a CGPA of less than 2.0 is dropped from the rolls of the Institute forthwith.

If in any semester a full-time student's CGPA falls between 2.00-2.19, he/she would be put on probation in the chronological next semester during which he/she would be required to bring his/her CGPA up to the desired point, i.e., 2.2.

Similarly the part-time (evening program) students with CGPA between 2.00 - 2.19 would be on probation in the next semester in which they register, which may be different from the chronological next semester at IBA. During probation they too would be required to bring their CGPA upto 2.2.

At the end of the semester, any student on probation is required to improve his / her CGPA and bring it up to the required minimum 2.2.

If a probationer shows an improvement, but his CGPA is still below 2.2, his / her probation may be extended for another semester. If he / she still fails to bring his CGPA to 2.2 by the end of the next semester, he / she is dropped from the rolls of the Institute.

If a student fails to pass certain courses and yet manages to maintain his / her CGPA equal to or above 2.2, he / she is allowed to repeat and clear the course(s)or substitute(s) (wherever permissible) before the degree is awarded to him / her.

The CGPA is computed at the end of each semester including a summer semester that a student might have enrolled in.

GPA Requirement for Award of BBA / BS / MS / MBA / EMBA Degrees:

- If an undergraduate (BBA / BS ) program student's CGPA in the final semester is less than 2.2 but not below 2.0, the student shall be required to repeat one semester of the lowest academic standing or certain courses in order to bring his / her CGPA up to 2.2 with the following conditions:
- The student who succeeds in improving the CGPA (minimum 2.2), will be eligible for award of the BBA degree.
- b. The student, who fails to improve the CGPA, will not be eligible for award of BBA degree. Such a student shall be issued transcript of credits earned.
- c. An MBA / EMBA Program student whoseCGPAin the final semester is less than 2.2 but no below 2.0 shall also be required to repeat one semester of the lowest academic standing or certain courses in order to be eligible for the award of MBA degree. If the student improves the CGPA (minimum2.2), degree shall be awarded (other conditions applicable), otherwise only a transcript of credits shall be issued. The time period to remove the deficiency and to bring CGPA to a minimum 2.2 is one year.

### Improvement of Grades

Students are allowed to repeat course(s) for improvement of grades with the following conditions:

 The better of the two attempts would be treated as the final result towards CGPA calculation and there would be no averaging.

- A student who repeats course(s) would not be eligible for Gold Medal and Dean's list.
- This option will not be available to those students who have graduated or have been dropped out.

#### **Summer Semester**

Students doing an internship during the summer semester are not allowed to register for an advanced credit or additional course. However, such students are allowed to remove deficiency in one course during the summer semester. Students not doing an internship, can clear up to two deficiencies, or enroll for two advanced courses in the summer semester. Students may withdraw from one course during the summer semester. Withdrawal should be sought within a week after the announcement of the mid-term examination result.

### **Internship Evaluation**

The summer internships for full-time students are closely monitored and evaluated. During the internship period, follow- up meetings are arranged between the intern and faculty members to discuss the intern's progress and concerns, if any. Feedback about the performance of the internee intern is obtained from his / her supervisor. At the end of the internship, the student submits an internship report and is also interviewed for feedback regarding his/ her experience.

### **Comprehensive Examination**

Every graduating (MBA/EMBA) student is required to pass a comprehensive examination on completion of course work. This 4 hour examination is held after every regular semester. After completion of course works, the maximum period allowed to clear the comprehensive examination is 10 years for the students admitted prior to 2004, in maximum 3 attempts. However, the students admitted in 2004 and onwards are allowed maximum 5 years to pass the comprehensive examination from the date of completion of course work with no restriction on number of attempts. MBA students admitted in fall 2010 and onwards are allowed a

maximum of three attempts only to pass the comprehensive examination in 5 years from completion of course work. Students, who fail to pass comprehensive examination, are eligible only for the individual course certificates. A student is eligible for a transcript / degree only after passing the comprehensive examination. However, he / she may obtain a provisional certificate on completion of the course requirement.

### Time-Bar Rule

The students admitted prior to 2004 have 10 years to complete their course work and pass the comprehensive examination to be eligible for the award of MBA degree. Maximum three attempts are allowed to such students to pass the comprehensive examination. The students admitted in 2004 onwards have a total of 5 years in case of MBA and 7 years in case of BBA to complete their course work. There will be no restriction on the number of attempts for such students to pass the comprehensive examination within 5 years from completion of course-work. As of Fall 2010, MBA/EMBA students are allowed a maximum of three attempts only to pass the comprehensive examination in 5 years from completion of course work.

- For course work, the period shall be counted from the date of admission.
- For comprehensive examination, the period shall be counted from the date of completion of course work.

# For Evening Program Students / EMBA Participants

Maximum time allowed for PGD: 3.5 years\*

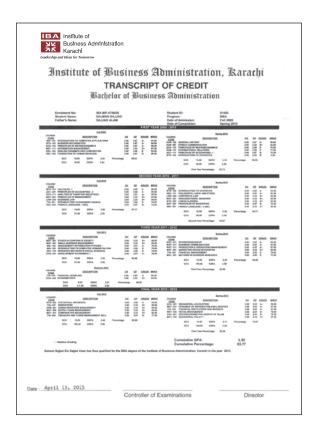
Maximum time allowed for MBA: 5 years from date of PGD completion Maximum time allowed for Comprehensive Exam: As above

\*In case a student opts to do PGD only, then 3.5 years' time limit will apply otherwise there would be no time

constraint for PGD and Masters and the student could continue and complete his / her MBA (Evening) in total seven years.

### Transcript of Record / Degree

Students can get a transcript of their grades from the Institute within 2 weeks on payment of Rs. 2,500 /-. Urgently required transcripts can be obtained within three working days on payment of an additional Rs. 2,500/-.



### Degree

Degree is issued within one month from the date of application on payment of Rs. 6,000/- .Fee for Duplicate

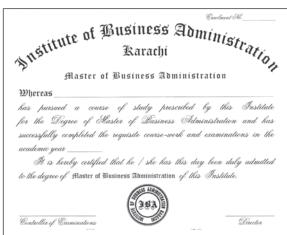
/ Urgent Degree is Rs. 6,000 /- in addition to the ordinary fee. Degree shall be issued only to the student in person or to a person duly authorized by the student if the student is out of city.

Degree fee for Graduating year 2016-17 will be Rs: 6,000/- for Bachelors & Masters Students and Rs: 10,000/- for PhD Students.

### Duplicate Transcript / Degree

In case a degree has been lost, duplicate transcript / degree can be applied for on prescribed application form along with:

- (1) A formal application for issuance of duplicate transcript /degree
- (2) An affidavit on a stamp paper of Rs. 100-/duly attested by a First Class Magistrate
- (3) Original cutting from any newspaper announcing the loss of the transcript / degree.
- (4) FIR of lost transcript / degree.
- (5) Copy of transcript in case of duplicate degree
- (6) CNIC copy.



# Fee Structure Spring-2017

Morning Programs				
Particulars	BBA & MBA	BS (Accounting & Finance)	BS (Computer Science, Eco & Math, Social Sciences & Liberal Arts)	MS (Economics, Mathematics & Computer Science)
Tuition Fee	Rs. 168,000/-	Rs. 168,000/-	Rs. 141,000/-	Rs. 80,000/-
Student Activity Charges	Rs. 4,500/-	Rs. 4,500/-	Rs. 4,500/-	Rs. 4,500/-
Lab cum Library Charges	Rs. 4,500/-	Rs. 4,500/-	Rs. 4,500/-	Rs. 4,500/-
Examination Charges	Rs. 1,500/-	Rs. 1,500/-	Rs. 1,500/-	Rs. 1,500/-
Development Charges	Rs. 2,000/-	Rs. 2,000/-	Rs. 2,000/-	Rs. 2,000/-
Total Recurring Charges	Rs. 180,500/-	Rs. 180,500/-	Rs. 153,500/-	Rs. 92,500/-
	Additional Course Fee Rs. 28,000/-	Additional Course Fee Rs. 28,000/-	Additional Course Fee Rs. 28,000/-	Additional Course Fee Rs. 20,000/-

Evening Programs			
Particulars	MS (Economics, CS, IT & Mathematics) MBA-Evening		
Tuition Fee	Pak Rupees	Total Fee	
One Course	Rs. 28,000/-	Rs. 36,000/-	
Two Courses	Rs. 56,000/-	Rs. 64,000/-	
Three Courses	Rs. 84,000/-	Rs. 92,000/-	
Four Courses	Rs. 112,000/-	Rs. 120,000/-	
Lab cum Lib. Charges (Per Semester)	Rs. 4,500/-		
Examination Charges	Rs. 1,500/-		
Development Charges	Rs. 2,000/-		

One-Time Charges (At the time of Admission)				
Admission Charges Rs. 20,000/-				
Transcript Fee Rs. 2,500/-				
Total One-Time Charges Rs. 22,500/-				

### For those students who wish to use the transport / hostel facilities, relevant charges are as under

Transport Fee (per semester) Rs. 30,000/-Hostel Fee (per semester) Rs. 55,000/-

Hostel Security Deposit (new students only)

Rs. 1,000/- (Refundable)

#### Mode of Payment

- \* Fee can be deposited at All Branches of Faysal Bank Limited in Karachi.
- \* Pay order/Cheque in the name of IBA Karachi can be delivered to Finance Department at the Main Campus.

#### Notes

- \* Figures are subject to approval by the IBA Board of Governors.
- \* 5% Tax shall be applicable on total fees of the year, if fee is 200K or more.
- \* The charges mentioned above are for one semester only, except for admission charges.
- \* All regular (Morning) students shall be liable to pay fixed fee for the semester, maximum cut off for fixed fee is 4 courses or more.
- For any further information you may contact (Finance Department) at 021-38104700 Ext: 2320

#### **Financial Assistance**

The IBA seeks the brightest minds regardless of their ability to pay for tuition. No applicant who qualifies the admission test and fulfills other requirements is refused admission because of unaffordability. At the IBA Financial Aid office, we are ready to help you and your family turn your dream of an IBA education into a reality. The sources of financing available are scholarships, endowments etc.

The IBA provides Financial Assistance to all deserving and needy students. The Financial Aid Committee analyzes applications, performs physical verification of the data provided and then sanctions aid to those who meet the criteria. In the academic session 2015-16, as many as 627 students received financial assistance amounting to Rs. 154,336,800/million.

### **Scholarships**

IBA gratefully acknowledges the continuous support and generous contributions made by the following organizations, companies, and individuals as contributors to scholarships for needy students:

# Donors of General Scholarships [64 Donors]

- 1. Abdul Fatah Memon Scholarship
- 2. Aftab Associates (Pvt.) Ltd
- 3. Akhtar Textile Industries (Pvt) Ltd
- 4. Amin Issa Tai
- 5. Anonymous Scholarship
- 6. Azim Sultan Scholarship
- 7. Babar Rafiq Scholarship
- 8. BankIslami Pakistan Limited

- 9. Bhaimia Foundation Scholarship
- 10. BURJ Bank Scholarship
- 11. Central Depository Company of Pakistan Limited
- 12. Chevron Pakistan Limited Scholarship
- 13. Engro Foundation Scholarship
- 14. Fauzia Rashid Scholarship
- 15. G.M. Qureshy Scholarship
- 16. Government of Sindh Endowment Fund Scholarship
- 17. Habib Metropolitan Bank Ltd. Scholarship
- 18. Hassan Scholarship
- 19. HEC USAID Scholarship
- 20. HEC-French Need Based Scholarship
- 21. HEC-Need Based Scholarship
- 22. Helium (Pvt) Limited Scholarship
- 23. IBA Alumni Islamabad Chapter
- 24. IBA Alumni UAE Chapter
- 25. IBA Alumni-UK Chapter
- 26. IBA Faculty Scholarship
- 27. ICS Group Company Scholarship
- 28. Indigo Textile (Pvt) Ltd
- 29. Infaq Foundation Scholarship
- 30. Jamal Hassan Scholarship
- 31. Jubilee General Insurance
- 32. Late Mr. Ghulam Faruque. Cherat Cement Co. Ltd
- 33. Launch Ceremony 60th Anniversary
- 34. Lucky Cement / Abdul Razzak Tabba Scholarship
- 35. Lucky Commodities (Pvt.) Ltd
- 36. Mateen Family Scholarship

- 37. Mitsubishi UFJ Foundation Scholarship
- 38. Mr. Khalid Saleh Mohammad Jafrani
- 39. Mr. Nadeem Elahi TRG
- 40. Mr. Pervez Haroon Scholarship
- 41. Mr. Shahzad Sabir
- 42. Ms. Farheen Umar -1994
- 43. Ms. Fatima Ahmad
- 44. Ms. Rummana Hasan Class of 1993
- 45. Ms. Sehr Fatima Class of 1994
- 46. Mubashira Hafeez Scholarship
- 47. NBP Scholarship
- 48. Others Scholarship
- 49. Oxford & Cambridge Society Scholarship
- 50. Pakistan Customs Scholarship
- 51. Pakistan Petroleum Limited (PPL)
- 52. Project Management Unit, KPK Scholarship
- 53. PSO Scholarship
- 54. Punjab Education Endowment Funds Scholarship
- 55. Saya Weaving Mills (Pvt) Ltd.



- Shaban Ali G Kassim Scholarship Karam Ceramics Limited
- 57. Shafi Scholars
- 58. Shell Pakistan Scholarship
- 59. Sitara Chemical Industries Ltd
- 60. SSGC Scholarship
- 61. Sumitomo Corporation Scholarship
- 62. Syed Nasir Uddin & Begum Nasir Scholarship
- 63. Syed Sarfaraz Ali Ghori Scholarship
- University of Karachi Alumni Association of Baltimore and Washington Scholarship Metropolitan Area, USA

### Donors of Scholarships for Talent Hunt Programs [4 Donors]

- 1. CDP-Government of Sindh, Sindh Foundation Program
- 2. CDP-Government of Sindh, Sindh Talent Hunt Program
- IHSAN Trust-Meezan Bank Limited, National Talent Hunt Program
- 4. OGDCL Pakistan –Balochistan / Khyber Pakhtunkhwa Talent Hunt Programs

# Donors of Scholarships for Student Loan (Qarz e Hasna) Schemes [2 Donors]

- 1. Ihsan Trust Meezan Bank
- 2. National Bank of Pakistan

# Donors of Scholarships for Faculty / Student Exchange / Visit Programs [5 Donors]

- 1. Engro Foundation
- 2. Engro Foods
- 3. Infag Foundation
- 4. Mr. Sadeg Sayeed
- Mr. Munib Islam

### **Endowment Funds**

These funds constitute donations made by various philanthropists and benevolent organizations. The income generated from these funds is used to supplement faculty salaries, provide research funds, contributes to foreign faculties, academic program enhancement, case study development, external accreditation and academia development, both locally and internationally. All endowment funds are administered by the Board of Trustees, which includes those organizations / persons who have donated or pledged a minimum amount of Rs. 30 million or more in cash or kind. A list of endowment related funds currently in operation at the IBA is appended as under:

# Donors of Development Fund [33 Donors]

- 1. Abdullah Foundation (Sapphire)
- 2. Adamjee Foundation
- 3. Al-Hukamaa International School
- 4. Allied Bank Limited
- 5. Arif Habib Corporation Limited
- 6. Aziz Tabba Foundation
- 7. Bank of Punjab
- 8. Bestway Foundation
- 9. Class of 1971 and 1972



- 10. Donor Wall
- 11. Education & Literacy Department, Govt.of Sindh
- 12. EFU General Insurance Limited (EFU Group)
- 13. Engro Foundation
- 14. Fauji Fertilizer Bin Qasim Limited
- 15. HBL Foundation
- 16. Higher Education Commission (HEC)
- 17. IBA Alumni
- 18. International Industries Limited (IIL)
- 19. Mahvash and Jehangir Siddiqui Foundation
- 20. Marine Group of Companies
- 21. Martin Dow
- 22. Mega Conglomerate Private Limited (Mega Group)
- 23. National Bank of Pakistan
- 24. OBS
- 25. Pepsico
- 26. Philip Morris International (PMI)
- 27. Standard Shipping Pakistan (Pvt.) Ltd.
- 28. State Bank of Pakistan
- 29. The Aman Foundation
- 30. The HUB Power Company Ltd (HUBCO)
- 31. TPL Holdings (Pvt.) Ltd.
- 32. Unilever Pakistan
- 33. United Bank Ltd.

# Donors of Endowments / Endowed Chairs Funds [33 Donors]

- 1. Allied Bank Limited
- 2. Askari Bank Ltd
- 3. Bank Alfalah Limited
- 4. Bank Al-Habib Limited
- 5. Deutsche Bank

- 6. English Biscuit Manufacturers
- 7. Fatima Fertilizer Co. Ltd.
- 8. Faysal Bank
- 9. Gatron Industries Limited
- 10. Getz Pharma (Pvt) Limited
- 11. Govt. of Sindh
- 12. Habib Bank Limited
- 13. IBA Alumni
- 14. IBA Alumni Dinner 2013
- 15. Indus Motors
- 16. International Textile Limited
- 17. Ismail Industries Limited
- 18. Launch Ceremony 60th Anniversary
- 19. Martin Dow
- 20. Millat Group of companies
- 21. Mr. Hussain Kassam
- 22. Mr. Towfiq Chinoy
- 23. National Bank of Pakistan
- 24. National Investment Trust Limited (NiT)
- 25. Pak Arab Fertilizers Ltd.
- 26. Pakistan International Container Terminal Ltd.
- 27. Premier Insurance Limited
- 28. President's Endowment Fund
- 29. Soneri Bank
- 30. Standard Chartered Bank
- 31. UCH Power (Pvt.) Limited
- 32. Zulfigar and Fatima Foundation
- 33. IBA Advisory Council

# Donors of Faculty Development Fund [9 Donors]

- 1. Barclays Bank PLC, Pakistan
- 2. Cadbury Pakistan Limited
- 3. Central Depository Company
- 4. Chevron Pakistan Limited
- 5. English Biscuit Manufacturers
- 6. Higher Education Commission (HEC)
- 7. Indus Motors
- 8. Naseem Allawala, ESO.
- 9. National Foods Limited

# Donors of Endowment Fund for General Scholarships [23 Donors]

- 1. Aftab Associates Endowment
- 2. Atiya-e-Naseem Scholarship
- 3. Atlas-IBA Scholarship Endowment Scholarship
- 4. Darayus Happy Minwalla
- 5. Dr. I. A. Mukhtar Endowment for Scholarship (IBA-Alumni)
- 6. Eastern Automobiles (Pvt) Ltd, F.N. Irani
- 7. Feroz Textile Mills Limited
- 8. HBFCL Endowment Scholarship
- 9. HBL-Endowment Scholarship
- 10. IBA-Karachi Class of 1986
- 11. Jamsheed K. Marker Endowment Scholarship
- 12. Mr. Zafar Khan & Ms. Tahireh Zafar Khan
- 13. Hommie & Jamsheed Nusserwanjee Charitable Trust
- 14. Ms. Asima Haq Batch 2000
- 15. Muhammad Umar Khan Shaheed Scholarship

- 16. Mumtaz Hassan Khan
- 17. Other Endowment Scholarship
- 18. PSO Endowment Scholarship
- 19. Sardar Yasin Malik Scholarship
- 20. Syed Mumtaz Saeed Scholarship
- 21. The Captain Foundation
- 22. The Sapphire Endowment Scholarship
- 23. Zahida Zorawer Endowment Scholarship



# Donors of Endowment Fund for Talent Hunt Programs [5 Donors]

- 1. Abdullah Group, Hyderabad
- 2. Abdul Waheed Khan Scholarship
- 3. Asghari Khanum Scholarship
- 4. KPMG Pakistan Scholarship
- 5. Mowjee Foundation (Sultan Mowjee Endowed Scholarship)

# Procedure for obtaining Financial Assistance

### Objective

IBA has a dedicated Financial Assistance Office and Financial Assistance Committee which administers all students financial need related affairs.

### Eligibility

Financial assistance shall be offered to eligible applicants who have been assessed as needy. This is in the form of a "Financial Assistance Package" which is designed based on the recognition that an education in the Institute is a partnership involving the student, his/her family and the Institute. The packages include 'Merit Scholarships' as well which become part of entitlement for those students who obtain merit position during their aptitude test and duration of their program

### Financial Assistance Packages

The Financial Assistance Packages include the following:

#### a. Instalment Plan

 In principle, tuition fee for each semester is payable in full; those students', who are not able to pay the due fee in full, may apply to Director Finance for instalment method of payment.

- The student can apply for paying the fees in three equal instalments. These instalments must be paid within the same semester period.
- The Director Finance shall approve the application after ensuring the need of the student.
- Payment of instalments will be made by giving post-dated cheques for the agreed dates.

#### b. Deferment of Fees

- In case student did not pay his/her total fee within a particular semester then the Director Finance shall send a request letter to the student to pay the outstanding amount due.
- The Director Finance may call the student and if circumstances suggest his/her parents may also be called to evaluate the financial position of the student to reach to the amicable solution for the recovery of fees. The student shall also be directed to avail other options available in "Financial Assistance Package", which are discussed later in this document.
- If there is no other option available and the circumstances necessitate, the Director Finance may defer the payment of fee to a certain date.
- In all cases when fee is overdue for payment of any semester, Director Finance shall always write to student and ask for payment of dues.

- If student is unable to pay in full then as a first step the Finance Department shall compel the student to make payment through postdated cheques.
- The post-dated cheque should be cleared within the same semester period, so that the student's amount is cleared before the admission to the next semester.
- If any of the postdated cheques is dishonoured and student is unable to pay against those dishonoured cheques then Director Finance may call the student / parents of the student for settlement of dues before the start of the next semester.

# c. Need Based Financial Assistance / Scholarships

- There are number of scholarships available which are awarded to needy students only and are based on the assessed need level.
- All students/applicants seeking financial assistance shall be facilitated on the basis of assessed need level.
- The Scholarship Committee scrutinizes the application along with supporting documents submitted by the students seeking financial assistance and scores their need level against laid down criteria and compares it to the need level of other applicants to assess the level of assistance that can be made available on the basis of available funds.



### d. Merit Scholarship

- Awarded to Freshmen First Academic Year of Study:
   Merit scholarship is extended to candidates who have
   scored high enough for their names to appear in the top
   10% of the list of candidates appearing in aptitude test
   and thereafter qualifying to be admitted to the Regular
   Full Time Programs. The list of these candidates is
   published at the culmination of the admission process i.e.
   qualifying aptitude test, group discussion, and interview
   and providing proof of having met the minimum
   academic eligibility standards for the concerned
   program. These candidates will be entitled to avail a 50%
   reduction in their applicable tuition fees in their first
   academic year of study, i.e. Fall entrants will be eligible
   for Fall and Spring semesters and Spring entrants for
   Spring semester only.
- Awarded to Full time Students of the Regular Programs whose names appear on the Deans' Lists: Those students whose names appear on the Dean's List in year 2 to year 4 would get merit scholarships equivalent to 50% applicable tuition fees. The criterion of maintaining 3.5 CGPA for merit scholarship in years 2 to 4 will not apply for continuation of their respective merit scholarships. Only those full time students in the year 2 to year 4 who are on the Dean's List at the end of Spring Semester would be eligible for availing Merit Scholarship for next two semesters, i.e. Fall and Spring.

### e. Study Loans

 IBA also facilitates its students in securing loans to meet their tuition fee. These may be interest free loans (Qarz-e-Hasna) to facilitate students during the course of their study. Applications for such loans will be invited from amongst candidates who have already applied for 'need based financial assistance' but could not meet the criteria for the same.

### f. Work-study Appointment Scheme

- The scheme enables needy students to supplement their finances through part time work on-campus and helps students minimize their debts servicing burden upon graduation. The HR Dept promulgates each semester along the positions available for students to take up on-campus part time jobs / internships. The remuneration of such jobs is calculated on hourly basis.
- IBA strongly believes that such on-campus jobs and internships are an important tool in recruiting, developing talent in meeting the needs of today while preparing the workforce for the future.
- The three different programs available for IBA students seeking to gain work experience on campus include:
  - Paid Student Interns (Summer interns as well as for other times during the year)
  - Part-time student employees
  - Teaching assistants/ Research assistants
- Details of these work programs are available in the SOP's listed under "Rules for Student recruitment – internship, part-time employment and teaching/ research assistants" available with the Career Development Centre.

# How to apply for Financial Assistance

Students may apply for financial assistance on the prescribed form posted on the website and send their applications to the 'IBA Financial Assistance Office' during the stipulated application period.

# Corporations Financing for Study Expenses

Students at IBA, like any other top University of the world, have a well-known accreditation and acceptability in the corporate market. Some of the companies are financing

students study programs by providing required financial assistance to the students, as part of their vision to invest in the future human resource capital. A bond is signed between student (one who seeks financial assistance) and company (financer), according to which student will have to serve the company as an employee as soon as he/she completes his degree program from IBA. Company sees it as an investment in the future human resource capital. Details of such opportunities are available with the IBA Career Development Centre (CDC).



The IBA Karachi has two campuses spread over 72 acres of real estate. The years 2008 to 2016 have witnessed a major revamp of infrastructure and facilities at both its campuses. The turnaround which began in 2008 is the result of a multi-pronged strategy to develop programs, faculty and facilities to bring IBA in the Top 100 Business Schools of the World by 2019.

The development of new facilities and infrastructure at both the campuses included construction of three new multistoried state-of-the-art academic buildings, an auditorium, a 14 storied multipurpose tower, a student center cum sports complex, three hostel buildings and five ancillary support buildings. Eleven existing buildings were remodeled, expanded and refurbished as part of the development strategy. In addition a clinic block and two new blocks for Boys Hostel are under construction and are expected to be ready by end of 2016. As a result of this revamping of facilities & infrastructure, IBA has 47 functioning buildings in 2016 compared to 29 in 2000. The covered area under instructional, administrative and amenities space has correspondingly increased from almost 230,000 sq.ft to 696,000 sg. ft. In March 2016 the institute also acquired a 10 acre plot in the DHA City environs in the suburbs of Karachi; plans are afoot to establish a community college as a feeder institution and skills training center by 2019.

The Main Campus located in the environs of the University of Karachi, houses around forty classrooms, eight seminar rooms, five computer labs, fourteen break out rooms. These are located in the three academic buildings, namely the Adamjee Academic Center, Abdul Razzak Tabba Building, and the Aman Center for Entrepreneurial Development. All instructional spaces are now centrally air-conditioned and fully equipped with the latest audio-visual and video conferencing facilities to boost the overall

learning endeavor. These academic facilities are augmented by the Gani & Tayub Auditorium with a capacity of three hundred persons, a brand new library, a video conferencing lab and a Faculty Lounge. Additionally, the Main Campus is the venue of a sprawling student center, complete with gymnasiums for male and female students, a large cafeteria, an event hall, indoor courts, outdoor sports field for cricket and football, tennis courts, a volley ball court, a basketball court, a jogging track, and a 450-capacity Amphitheatre.

The City Campus is in the heart of the business district of the city. It consists of the Chinoy Administration Building, the Faysal Bank Academic Block, the Habib Bank Academic Building, and the Center for Executive Education, which together field excellent premises for various programs. Existing facilities include twenty eight class-rooms and eight computer/ICT laboratories. The City Campus is also home of the Center for Executive Education (CEE), Center for Excellence in Journalism (CEJ), Center for Business & Finance Research (CBFR) and the Center for Excellence in Islamic Finance (CEIF).

A fourteen-storied, instructional-plus-residential premises, namely the Aman Tower, and a modern 430-seat auditorium are twin premises which house these centers along with a well-equipped library.



### Monument Garden

The newly constructed Monument Garden is an initiative to further the process of honoring IBA's top achievers. The garden's vertical columns are inscribed with the names of gold medalists from various convocations. The Monument Garden's legacy serves as an inspiration to the onlookers and students. The Garden inspires and motivates students to work harder so that one day, they too can look at their name with pride as only the best of the best will succeed in gaining a place in this garden.





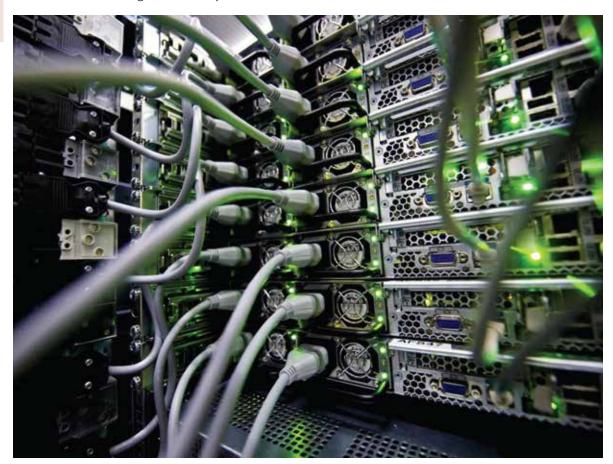
#### **ICT Infrastructure and Services**

The Information and Communication Technology department provides ICT services to IBA Main and City Campuses, Hostels and Staff Town, serving a total of around four thousand users on and off campus and a sizeable number of Alumni. The principal aim of the ICT department is to bring state of the Art Technology in to IBA, provide essential services and promote automation and meet the end user's requirements of all communication that includes Internet, Email, Distance Learning (Video Conferencing), Unified Communications (VoIP) etc. Appended below is a brief description of the ICT facilities at IBA:

- Tier III data center that provides centrally managed services to users.
- Video Conferencing service being utilized to the fullest for meetings, online workshops / seminars, distance / collaborative learning etc.
- Lecture recording system to facilitate recording lectures and supporting distance learning.
- Seven general purpose computing labs are fully functional at both campuses, with state of the art PCs and peripherals, three labs have been upgraded with Core i5 and Core i7 based computers.
- More than 250 Mbps of internet providing wireless connectivity to provide local network and internet connectivity to mobile users.
- Enterprise Resource Planning (ERP) integrated Computer-Based system used to manage internal and external resources including tangible assets, financial resources, materials, and human resources.
- Academic Alliances with major technology vendors, e.g. Cisco, EMC, IBM etc along with certified cutting-edge technologies.

- A series of websites information on which is available through the IBA website (http://iba.edu.pk/)
- . Learning Management System (Sakai) providing all the learning, teaching and collaboration tools.
- PeopleSoft GL Financial & HRMS, for supporting finance and human resource / general administrative matters.
- . Faculty Presentation System which provides for evaluation and hiring of new faculty.

- Smart boards in selective classrooms to help in delivery of more interactive and understandable lectures and presentations.
- . IBA portal has been revamped to make it more interactive and user friendly for the students, staff and faculty.



### The Libraries

The IBA Libraries aspire to support teaching, learning and research at the institute by developing promoting and advocating systems, resources and services imperative to access relevant information. Libraries at both of the campuses are regularly updated with latest learning materials like books, e-books, case-studies, online databases. Around 3000 new titles, at average, are added every year to the library collections. Specialized sources of information consisting of research published by educational institutions, National and International research organizations, and government agencies are also collected to facilitate indigenous research.

### **Library Spaces**

Libraries at both the Campuses have been reconstructed and remodeled to provide a stimulating learning environment. The physical library spaces and facilities have been designed keeping the contemporary learning styles, which cater to the needs of 21st century learners, in mind. Some of the featured learning spaces are: collaborative learning spaces, individual study and learning spaces, multimedia learning spaces, research nooks, laptop friendly desks, leisure study and library coffee shop as extended collaborative learning space.

# library Services

The IBA Libraries endeavor to offer wide-range of innovative academic services, supported by cutting technologies, to the faculty, students and staff to contribute to their scholastics and life-long-learnings. To know more about library offerings, visit our website at http://library.iba.edu.pk

### Library Resources

IBA Libraries offer campus-wide and remote access to very rich collection of multi-disciplinary digital

databases in full-text, consisting of e-books, e-journals, case studies and industry related research analysis reports. The libraries subscribe to more than 24 electronic databases, which provide access to around 10000 e-journals and 1,25,000 e-books. Some of the key databases subscribed by the library are:

- EBSCOhost Business Source Complete, Academic Academic Search Premier, and EconLit with full-text
- 2. WARC World Advertising Research Centre:
- 3. Emerald Insight
- 4. Wiley-Blackwell Journals
- 5. Taylor & Francis Journals
- 6. SpringerLink
- 7. JSTOR
- 8. INFORMS Institute for Operations Research and the Management Sciences:

- 9. ACM Association of Computing Machinery:
- 10. Pakistan Law Site
- 11. Ebrary (e-books database)
- 12. World Bank e-Library
- 13. IMF e library:
- 14. Passport by Euro monitor Market Research database
- 15. DataStream Professional for Academics by Thomson Reuter
- 16. UN Comtrade Database
- 17. Islamic Finance New IFN
- 18. ORBIS-BANK FOCUS
- 19. BANKSCOPE
- 20. Press Display
- 21. Grammarly@edu

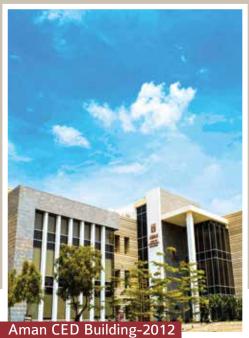


# **Bricks & Mortar**

Buildings & Structures Rebuilt or Constructed New 2008 - 2016







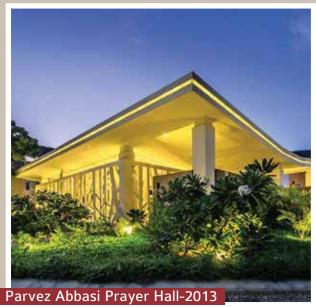






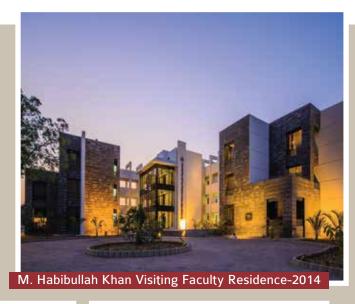






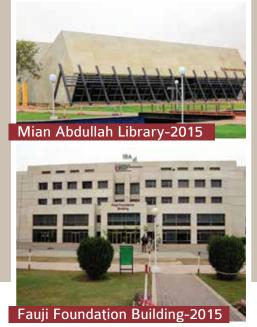




















# TALENT HUNT PROGRAMS OBJECTIVE

To prepare talented students from under-privileged areas of Pakistan for IBA Entry Test and to finance the education of students who are able to clear the IBA entry test due to financial constraints.

#### National Talent Hunt Program (NTHP)

IBA launched the National Talent Hunt Program (NTHP) in 2004 jointly financed by IBA & corporate and public sector organizations with the objective to prepare talented students from the deprived areas of the country for the preparation of aptitude test for BBA/BS degree courses. This program primarily targets students from the backward areas of Balochistan, Punjab, Sindh, FATA, Khyber Pakhtunkhawa and Gilgit Baltistan who are unable to apply for admission in IBA due to financial constraints. In 2016, we invited the following students:

• Students who have secured 75 % or above in the Matric / HSSC –Level –I examination conducted by the Board of Intermediate & Secondary Education of Pakistan in the year 2015 and will be appearing for the HSSC –Level –I / HSSC Level-II examination in the year 2016.

Upon qualifying for the NTHP orientation program, trainees' lodging / boarding and tuition are provided free of cost. A small stipend is also provided to cover their other personal expenses. The statistics of students who joined the program since its inception are as under:

PROGRAM OF STUDY (NTHP)									
Year	No. of Students trained at the Orientation Program	Successfully Qualify the Aptitude Test	ВВА	BS (Economics & Mathematics)	BS(SSLA)	BS (Accounting & Finance)	BS (Computer Science)	Total Students admitted	Graduated from IBA
2004 -2015	378	123	45	10	5	12	49	121	32

#### Sindh Talent Hunt Program (STHP) & Sindh Foundation Program (SFP)

The STHP Program was launched in 2009 jointly financed by IBA Karachi & Community Development Program (CDP), Planning & Development Department –Government of Sindh. The program primarily targets students who are among the top-20 in the merit list in their respective Intermediate boards from remote areas of Sindh. As of 2013 the Sindh Talent Hunt Program (STHP) has been revamped and presented as the IBA Sindh Foundation Program.

	PROGRAM OF STUDY (Sindh Talent Hunt & Foundation Programs)								
Year	No. of Students trained at the Orientation Program	Successfully Qualify the Aptitude Test	ВВА	BS (Economics & Mathematics)	BS(SSLA)	BS (Accounting & Finance)	BS (Computer Science)	Total Students admitted	Graduated from IBA
2009-2011	69	14	5	_	-	-	9	14	14

	PROGRAM OF STUDY (NTHP)								
Year		No. of Students trained at the Orientation Program	Successfully Qualify the Aptitude Test	BBA	BS (Economics & Mathematics)	BS(SSLA)	BS (Accounting & Finance)	BS (Computer Science)	Total Students admitted
2013	3	36	10	_	5	_	_	5	10
2014	1	32	8	1	1	1	-	5	8
2015 Fall 2015 Int	take	35	7	2	-	1	1	3	7
Spring 2016 Int	itake	-	6	-	-	2	1	3	6
		103	31	3	6	4	2	16	31

#### Collaboration with the OGDCL Pakistan:

#### Balochistan & Khyber Pakhtunkhwa Talent Hunt Program (2016)

IBA Karachi & OGDCL Pakistan has signed the MOU to launch the fully funded program OGDCL Balochistan Talent Hunt Program and OGDCL Khyber Pakhtunkhwa Talent Hunt Program for the deserving & talented students belonging from the Balochistan & Khyber Pakhtunkhwa districts. The main objective of the Talent Hunt programs is to provide an opportunity to the needy and under privileged students of HSSC Level-I and HSSC Level-II belonging from the rural background of Khyber Pakhtunkhwa & Balochistan for the IBA aptitude test of BBA/BS programs. This extended eight-week orientation program will be based on merit cum need consideration designed to train students mainly in the areas of English, Mathematics, Presentation and Communication skills which enhance students' knowledge and emphasize on personal development & grooming. The program help students in attaining the quality professional education and improving their employment prospects.

**Scope of the Program:** The program's class size would be approximately 50 for Khyber Pakhtunkhwa Talent Hunt Program and 40 trainees for OGDCL Balochistan Talent Hunt Program students would be selected through a competitive process to attend the two months orientation program at IBA Karachi. All the facilities will be provided in the vicinity of IBA including Transportation to and from the hostel will be provided & accommodation to boys at IBA Boys hostel & Girl students will be provided separate accommodation in New Girls Hostel under the direct supervision of a designated lady staff member.

#### **CRITERIA**

#### **OGDLC** Balochistan Talent Hunt Program:

#### Matric / HSSC Level-I Students:

Students who have secured 65 % or above marks in the Matric / HSSC Level-I examination conducted by the Balochistan Board of Intermediate & Secondary Education of Quetta in the year 2015 and will be appearing for the HSSC Level-I / HSSC Level-II examination in the year 2016.

## OGDLC KHYBER PAKHTUNKHWA TALENT HUNT PROGRAM:

#### Matric Students:

Students who have secured 75 % or above marks in the Matric examination conducted by the Board of Secondary Education of Khyber Pakhtunkhwa in the year 2015 and will be appearing for the HSSC Level-I examination in the year 2016.

#### **HSSC Level-I Students:**

Students who have secured 70 % or above marks in the Matric examination conducted by the Board of Intermediate Education of Khyber Pakhtunkhwa in the year 2015 and will be appearing for the HSSC Level-I examination in the year 2016.



Orientation Ceremony of the OGDCL Talent Hunt Programs, May 28, 2016, G & T. Auditorium, IBA Main Campus





Those who qualify at the IBA admission test and interviews would be awarded full scholarship to take care of all their expenses for a period of four years which covers the tuition fee, Hostel Accommodation, Mess Expenses, Transportation expenses, Books & Material.

### OGDCL Balochistan & Khyber Pakhtunkhwa Talent Hunt Program - Batch 2016

Program	Students applied in the Program	Appeared in the Initial Assessment Test	Cleared the Assessment Test	Enrolled in the Orientation Program
OGDCL- BTHP	438	320	65	50
OGDCL- KPKTHP	489	348	72	57

#### **ROARING SUCCESS STORIES FROM STUDENTS OF TALENT HUNT PROGRAMS**



Haseeb Fakhar Akhund student of BS (Accounting & Finance)—VIII semester has been selected in 'The Washington Center (TWC) Program' for Spring Semester 2016.

He is a scholar of IHSAN TRUST under the **National Talent Hunt Program** of Batch 2012 and would be spending his 8th semester at Washington DC.



Awais Rasool student of the BBA Program—Fall 2012, Semester VII, under the National Talent Hunt Program — Batch 2012 was selected as a "Delegate" to represent IBA Karachi in

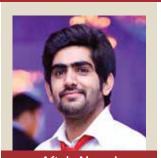
the Harvard Initiative for Latin American Relations – Fall Conference -2015 held in Harvard University, Cambridge (USA) from Oct-31 to Nov-1, 2015.



Rija Arslan Adhami, student of the BS(AF) –Fall 2013, semester VII, under the National Talent Hunt Program – Batch 2013 was selected for the Spring semester 2016 in the Grand Valley

State University, Michigan, USA through Global UGRAD Exchange Program -2016. She was also selected in the Dean's List at GVSU-USA & scored 3.60 GPA.

#### **NOTABLE ACHIEVERS**



Aftab Ahmed Rahim Yaar Khan Batch of 2010



Muhammad Ahmed Multan BS(CS) Batch of 2014



Muzammil Abbas Bukhari
Bahawalpur
BS(CS) Batch of 2014



Muhammad Salman Ashraf Bahawalnagar BS(CS) Batch of 2014



Syeda Fizza Ali Kot Addu BBA Batch of 2014

# **Anatomy of the Student Body**

(Spring 2016)

Prog	luate rams 34)	Undergraduate Programs (2751)		PGD Programs (292)		Total
MALE	<u>FEMALE</u>	MALE	<u>FEMALE</u>	MALE	<u>FEMALE</u>	
200	134	1651	1100	175	117	3377

Male: 60.52% Female: 39.48%

Average age: 23

A public sector institution of higher education has to play an important role in contributing directly or indirectly to the socio-economic development of the country. While teaching and research will generate the direct linkages by providing high caliber human resources to the economy in the medium to long term an institution such as IBA has an obligation to strengthen its community, corporate sector, public sector and nonprofit sector linkages in the short run. These linkages can be fostered by providing advisory and consultancy service, nurturing entrepreneurship and innovation and training of mid-career executives. The vehicles through which this is taking place at IBA include the the Center for Entrepreneurship Development & the Center for Business and Economics Research. Appended below is a brief description of each of these centers.

# Center for Entrepreneurship Development (CED)

Established in 2012 with funding received from the AMAN Foundation, the programs offered by the CED have been developed in partnership with Babson College of Entrepreneurship in Boston, USA. The CED focuses on developing students' abilities to formulate, explore and create ideas. It trains them to carry ut an in-depth analysis of disciplinary and inter disciplinary subjects. It also allows them to get hands on experience in the industry by applying their knowledge and training to generate and sell ideas in the real world. This unleashes their potential, increases their confidence, independence and creativity which will nurture the necessary skills to become entrepreneurial in thinking and practice.

## Center for Business and Economic Research (CBER)

The Centre for Business and Economic Research (CBER) is a think-tank within IBA which conducts interdisciplinary research for private firms and public organizations. It provides excellence in applied economic and business research to the government, development agencies, and central bank as well as to businesses managers all across Pakistan. Established in 2010, it is now growing in reputation as one of the leading centers for social science research on economics and business in Pakistan. The Centre's current areas of specialization include macroeconomic modeling, analysis of large and complex datasets on Pakistani firms and social sector, and consumer confidence surveys.



The CBER is a multi-disciplinary center. Our holistic research draws expertise from various departments in IBA ranging from Finance and Economics, Accounting and Law, Management, Marketing to Social Sciences.

A parallel purpose of CBER is to stimulate research by faculty, students and staff at IBA. CBER has taken

many initiatives since its inception including the establishment of a research grant, inauguration of the IBA Working Paper Series, initiation of seminar sessions (regular dissertation presentations collaborations with education and government Institutions and conferences. CBER aims to deliver opportunities for researchers to publish their work and later present it at national and international conferences.

#### **Ardeshir Cowasjee Centre for Writing**

A melting pot for the literary minds in IBA, the Ardeshir Cowasjee Center for Writing is one of the many facilities located in IBAs Alumni Student Center.

Named after a renowned columnist, the Writing Center, as it is popularly called, was established in 2014. It provides students with the help they need to enhance their writing skills by providing individualized feedback on their writing. The student can have an appointment or drop in session for a 45 minute consultation session on any of their writing projects. The writing center employs competent tutors from amongst IBAs student base, who help support faculty in their efforts to promote effective writing at IBA. Faculty recommends different students, and they are given in-depth tutoring sessions at the writing center. But more than just catering to the need of the IBA student body, the Writing Center promote a culture of dialogue and discussion. Some of the initiatives by the writing center include:

- Book Club: A monthly meet up on selected books
- 'When writers speak': Talks by famous authors
- Academic Writing Workshops

#### Centre for Excellence in Journalism (CEJ)

The Centre for Excellence in Journalism (CEJ) is an initiative for the professional development, training and networking of Pakistani journalists and media professionals. It is collaboration between the International Center for Journalists (ICFJ), IBA, and the Medill School of Journalism at Northwestern University.

Located on the 4th Floor of the IBA Aman Tower at IBA's City Campus, the CEJ offers online and in-person training modules for journalists and media professionals. Faculty from the Medill School of Journalism, ICFJ trainers, and eminent local journalists conduct, skills-based courses geared towards meeting the needs of Pakistani newsrooms.



The Centre has close links with the media industry and its advisory board comprises of eminent media professionals. News Directors assign their staff to attend development programs at CEJ; independent media professionals are also welcome to participate. The CEJ actively hosts talks and panel discussions that are free and open to the journalism community.

In addition to instructional and office space, the CEJ area includes a broadcast studio, state-of-the-art multimedia lab, fully equipped editing suites and Production Control Room (PCR). The lab offers journalists a chance to learn practical skills in a simulated newsroom environment where they have access to the latest technologies and resources.

To facilitate access to CEJ trainings and courses of participants from outside of Karachi, a limited number of scholarships are also available for travel and lodging. Since 2014, the Centre has conducted eleven training programs covering a variety of subjects for print, broadcast and digital media. Some of these were on TV documentary production, news reporting for TV and print, data journalism, feature writing, editing for print and investigative journalism.

More information about the Centre and its programs can be found at www.cej.iba.edu.pk, Facebook CEJ at IBA, Twitter @CEJatIBA, or email at: cej@iba.edu.pk

# Centre for Excellence in Islamic Finance (CEIF)

Centre for Excellence in Islamic Finance was established at IBA with the objective of providing a platform for discovery, enhancement and dissemination of knowledge in the field of Islamic Finance. It aims to be a world class Centre and leader in the Islamic Finance industry.

CEIF, based in the Aman Tower at IBA's City Campus, will offer Short courses, Executive training programs, Degree programs and later on Phd programs as well. A two year MS program is planned to be launched in the upcoming year.

IBA CEIF has won a competitive award under a challenge competition organized by State Bank of Pakistan (SBP) financed through a program by DIFD, UK. IBA has entered into a strategic partnership with Meezan Bank Ltd. to establish CEIF, which started its operations from October 1st, 2015.

CEIF has signed two MoUs with IRTI (Islamic Research and Training Institute) to collaborate in the area of research and document a Country report on Islamic Finance Sector in Pakistan.

CEIF has launched its professional training workshops to meet the demand of skilled personnel in Islamic Finance Industry. The first training was conducted on Introduction to Islamic finance followed by workshop on Shariah Audit and Compliance. For more information and updates in upcoming training sessions, follow CEIF on Facebook www.facebook.com/ceif15 or visit the website ceif.iba.edu.pk



#### Center for Executive Education (CEE)

The Center for Executive Education was formed in 2004 to provide opportunities to executives working at different echelons in organizations to enhance their careers by gaining knowledge and insight into state-of-the art management techniques and technologies.

The programs at CEE are designed for professionals from Board to C-Level and high-potential managers to senior and junior executives from around the country. Intensive one-day to several day courses focused on a particular area of interest. The non-degree, executive education and management development programs provide business professionals with a targeted and flexible means to advance their career development goals and position their organizations for future growth.

## The Center specializes in executive education and management development activities through:

- ✔ Directors' Training Program (Corporate Governance)
- ✓ Managing Family Businesses
- ✓ Client-Specific Management Development Programs
- ✓ Open Enrolment Programs
- ✔ Post-Graduate Diploma Programs

The Directors' Training Program offered by Center for Executive Education (CEE), IBA, Karachi, is approved by the Securities & Exchange Commission of Pakistan (SECP). This program is extensively prepared by subject matter experts and is designed to keep Board Members and Directors of listed companies abreast of leading trends and practices that promote good governance, protect competitive advantages and prepare for regulatory change.

With an aim to offer Global Executive Programs in Pakistan with local relevance, CEE offers programs for CXOs and Business Unit Heads in joint collaboration with Indian School of Business (ISB). The faculty for these programs are drawn from some of the Top B-Schools. The CEE also offers a modular series of 10 workshops for the Family Businessmen of Pakistan.

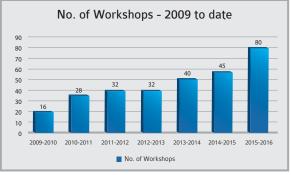
During 2015-16, CEE hosted several Management Development Programs on emerging topics for Unilever Pakistan, Pakistan Refinery Limited, Engro Fertilizers Limited, Pakistan Customs, Higher Education Commission of Pakistan, Aga Khan University Hospital, Highnoon Laboratories, Australia Awards - Pakistan and many more organizations.

The Center also offers Open Enrolment Programs. These workshops bring together individuals and teams from multiple organizations in one location to learn from each other. These workshops are announced through training calendar on different emerging themes including but not limited to Leadership, Strategy, Management, Research, Business Communication, Project Management and Supply Chain Management.

In January 2015, CEE-IBA launched three Post-Graduate Diploma programs. Designed to develop in highly skilled practitioners an in-depth understanding of strategic, tactical and operational issues; each PGD is spread over a span of 1 year, with 12 courses, a live project. These programs will help bridge the competency gap in Pakistan and help enhance the professionalism of those involved in the industry. Each program is devised to develop critical thinking among students and give them practical application of knowledge to manage teams and workplace. The Customized Diploma program is offered to Atlas Group with fourth batch passed in 2016. The following four PGDs are offered:

- (1) Supply Chain Management
- (2) Human Resource Management
- (3) Healthcare Management (Focused to Hospital Management)
- (4) Business Administration (Client-Specific)







#### The Skill Development Program

Skills Development Program (previously called as Business English & Skills Development Program) at the Center for Executive Education has been providing language and academic proficiency courses for more than two decades.

## The objectives of Skills Development are as follows:

- Build skills & competencies.
- Provide targeted development solutions for the most frequently identified areas where development is needed.
- ✓ Design & deliver readily applicable courses.
- Increase the skill level and employability of participants.
- Ease the step up from junior roles to taking charge of a unit.

### Post Graduate Diploma (PGD)

#### **Course Curriculum**

The course curriculum is responsive to the needs of the industry and is endorsed by an Advisory Board drawn from among the expert practitioners of the industry and academia.

#### **Project Reports**

Each participant will be required to develop 1 project (in groups) on a subject of critical importance duly approved by the Subject Advisory Committee / respective Academic Directors of PGD programs.

#### Classes are scheduled as follows:

Saturdays – 0230pm to 0915pm

Sundays – 1000am to 0515pm

#### Degree

Post Graduate Diploma (Subject Specialization) degree shall be awarded on qualifying: Course work with minimum 2.2 CGPA and Completion of Live Project

# PGD Healthcare Management (focus Hospital Management)

#### **Program Overview:**

The PGD in Hospital Management has been designed for those, interested in pursuing their career in Hospital and Healthcare Management. It is geared towards those, working in public or private hospitals and healthcare organizations. It will prepare students, in becoming effective leaders in their organizations. Students will be able to practically apply the learning's in their work set up.

#### **Eligibility Criteria:**

- Doctors with MBBS/BDS with 2 years' experience in hospital
- Nurse graduates with minimum 5 years' experience in hospital
- Other healthcare professionals with 16 years education and at least 2 years work experience in hospital

## PGD in Human Resource Management

#### **Program Overview:**

PGD in Human Resource Management will equip the

students with the knowledge and skills required for managing human resource and organizational culture in a way that contributes to the development of individuals and organizations. It will provide requisite academic perspective and help participants to understand and apply it judiciously in their work environment. It will help participants create more productive & satisfying workplaces for themselves & others.

#### **Eligibility Criteria:**

16 years education with three years' post qualification work experience Or

14 years education with six years' post qualification work experience

In any subject from HEC recognized university

## PGD in Supply Chain Management (SCM)

#### **Program Overview:**

PGD in Supply Chain Management is designed to develop highly skilled supply chain practitioners with an in-depth understanding of strategic, tactical and operational issues relating to the end-to-end of Supply Chain Management. It will familiarize the students with the best practices in the industry (both local and international).

The PGD in SCM is designed towards developing SCM Professionals with proficiency in analytical, communication, strategic thinking, increasing managerial insight and developing specialist supply chain management competencies.

#### **Eligibility Criteria:**

- 16 years education with three years' post qualification work experience **Or**
- 14 years education with six years' post qualification work experience in any subject from HEC recognized university

For course list please see page # 192



# Milestones in the Journey of Excellence

## **Development of Programs**

#### 1955

Institute established as 'Institute of Public and Business Administration' (IPBA), a USAID-financed business school project on the US. MBA Model, Programs commenced in the PIIA building in Karachi, with technical support from the Wharton School of Finance & Commerce and the University of Pennsylvania, USA

#### 1956

- Faculty set up at the Department of Commerce. Karachi University in collaboration with the University of Southern California
- Commenced offering Morning Program in (MBA) as a constituent unit of the Karachi University

#### 1957

Evening Programs launched in graduate studies (MBA)

IBA Faculty and Dacca University jointly developed MBA Program, in collaboration with Kelly School of Business for MBA Programs, to begin in former East Pakistan

2-Year BBA Program Introduced

#### 1982

3-Year BBA (Hons) Program launched

#### 1983

- MBA (MIS) Program launched
- Center for Computer Studies established in collaboration with IBM. Pakistan

#### 1987

IBA declared Center of Excellence by the US Government through USAID

ANZ - Grindlavs Bank

BBA Program and MBA Executive Programs (self-financed) started at the City Campus

Became independent of KU, received Charter as a fully autonomous and degree awarding institution.

- BBA (MIS) Program introduced
- BS (Computer Science) Program launched

- 4 -Year Undergraduate Program launched in Business Administration and in Computer Science
- Center for Executive Education (CEE) established

#### 2004

NTHP (National Talent Hunt) Program) launched

#### 2005

PhD (Computer Science) Program launched

#### 2008

MS (Computer Science) Program launched

- Center for Entrepreneurship Development (CED)
- Executive MBA (weekend) Programs launched
- STHP (Sindh Talent Hunt Program) launched

#### 2010

- MBA (Banking) Program introduced in collaboration with Dean's List and Best Final Year Project Awards 4-year BS (Economics & Mathematics) Program
  - MS (Economics) Program introduced
  - IBA Corporate Leaders Advisory Board formed
  - Memo of 10 years collaboration signed with Babson University

#### 2011

- South Asia Quality Assurance Systems (SAQS) Accreditation received
- First student acquires a PhD degree from IBA
- Student exchange & study programs commenced with foreign universities
- IBA received membership of European Foundation for Management Development
- PhD (Economics) Program launched
- Center for Business and Economics Research (CBER)
- MBA curriculum revamped including introducing requirement for 2 years of work experience
- Structured Mentoring and Student Development Programs started
- BBA curriculum revamped to make it a terminal degree
- BBA Entrepreneurship Program initiated Responsible Citizen Initiative Program introduced
- Responsible Citizen Initiative Program introduced
- Department of Mathematical Sciences and Department of Social Sciences & Liberal Arts established

#### 2012

- New streams (18 & 24 months) introduced in the MBA
- Memo of collaboration signed with the University of
- MS (leading to PhD Program in Economics & Math)
- Alumni crossed 10,000 graduates mark
- Overseas Chapters of IBA Alumni launched in UAE, UK, & Canada
- IBA registered as Education Provider of Project Management Institute
- MoU signed with the Indian School of Business (ISB) to promote Executive Education in Pakistan
- Personal Effectiveness Course Introduced
- MoU Signed with SP Jain Institute of Management Research

### 2013

- 4-year Undergraduate Program launched in Social Sciences & Liberal Arts
- Memo of collaboration signed with the Institute of Chartered Accountants of Pakistan

### 2014

- Memo of collaboration signed with Chartered Institute of Management Accountants
- Memo of collaboration signed with Association of Chartered Certified Accountants
- Memo of collaboration signed with Institute of Bankers Pakistan

# **Development of Infrastructure**

#### 1955

Institute established in PIIA Building premises near Governor Newly constructed multipurpose building completed House, with 4 classrooms, a reading hall, and 2 offices (8000 sq.ft) in PIIA building on Havelock Road.

### 1961

Shifted to Kandawalla Building, M.A. Jinnah Road. Construction planned for a Campus each at Karachi University (Main) & Garden Road (City) Campus

Construction completed; Morning and evening classes commenced at Main (1965) & City (1967) Campuses

- 2 story Building (FCS) added at the City Campus
- Boundary walls constructed around the IBA, Main Campus & Staff Town, demarcating IBA Land

Acquired 8,459 sq. yards plot in North Nazimabad for Vocational Training Centre

### 2010

- 4-year Undergraduate Program launched in Accounting
   Upgrading and renovation work of Adamjee Academic Block completed at the Main Campus
  - Upgrading and renovation work of Cafeteria completed at the City Campus

#### 2011

Upgrading and renovation work of Gani & Tayub Auditorium completed at the Main Campus

#### 2012

- at the Main Campus
- Building completed at the Main Campus
- Academic Centre completed at the City Campus
- Upgrading and renovation work of Towfiq Chinoy Administration Building completed at the City Campus

- completed at the Main Campus
- Construction of Alumni Student Center completed at the Main Campus
- Construction of Sports Arena comprising a cricket ground, a football ground, two tennis courts, a basketball court, and volleyball courts completed at the Main Campus
- Upgrading and Renovation work Sir Anwer Pervez Boys Hostel completed at the Main Campus
- Construction of Captain Haleem Siddiqui (150 bed Boys Hostel) completed at the main campus
- Upgrading and renovation work of HBL Academic Center completed at the City Campus
- Construction of M. Habibullah Visiting Faculty Residence completed at the Main Campus
- Tier III Compliant Data Center inaugurated at the City Inauguration of OBS Courtyard Campus
- Power Generation Center and sewerage treatment plant commissioned

#### 2014

- Construction of Parvez Abbasi Prayer Hall completed at the Main Campus
- Construction of Aman Center for Entrepreneurship
   Construction of New Girls Hostel (100 bed) completed at the IBA Staff Town
- Upgrading and renovation work of Faysal Bank
  Construction of 400 seats Jahangir Siddiqui Auditorium completed at the City Campus

- Upgrading and Renovation works of Fauji Foundation Building completed at the Main Campus
- Construction of Abdul Razzak Tabba Academic Block
   Upgrading and renovation works of Mian Abdullah Library entered final stages of completion at the Main
  - 14-Storey Aman Tower Building entered final stages of completion at the City Campus
  - Work commenced on the construction of a 250 beds Block – B of the New Boys Hostel
  - Overall covered area of buildings and structures at the IBA premises crossed the 750,000 sq.ft mark

- 14 storey Aman Tower building inaugurated
- Centre for Excellence in Journalism established in collaboration with Medill School
- Centre for Excellence in Islamic Finance established

Compiled by: The office of the Registrar - 2016





# 60 Years of Visionary Leadership

Dr. I.A Mukhtar



to October 1972



to May 1976



to June 1984



November 1996 to July 1999



November 1996



Dr. Zafar H. Zaidi



to May 2000

### Dr. Javed Ashraf





May 2000 to June 2002



Mr. Danishmand

June 2002 to March 2008



Dr. Ishrat Husain

to March 2016



Dr. Sayeed Ghani

(Acting Charge)

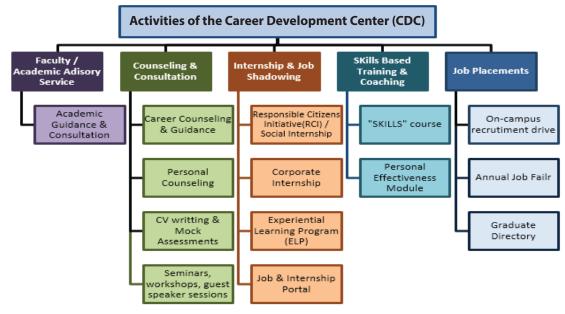
Journey of Excellence

### **Student Services**

### **Career Development Center**

The Career Development Center (CDC) at the Institute of Business Administration (IBA) is dedicated to facilitating students and graduates in the overall process of self-evaluation. The CDC aids students by creating awareness about career opportunities and assists in career development and job search thereby increasing the employability of graduating IBA students. It also develops strong and tangible linkages between employers and IBA graduates.

We offer a wide range of career-related services to IBA students, alumni, and our partnering employers who are looking to recruit from the IBA community. Our main focus lies in building long term relationship with corporate, social and public sector organizations within Pakistan and also with international employers.





#### **Student Services**

# Responsible Citizen Initiative (RCI Program)

Strengthening our outreach to the community has been an essential ingredient of IBA's current strategy. To enable this, we have introduced the 'IBA Student Community Service' project. It comprises of 6-8 week mandatory internship aimed at raising the level of awareness of IBA students to the problems and challenges faced by the Social Sector in Pakistan. These internships are offered to our undergraduate programs' students specifically in the nonprofit and NGO sector. The focus of the project is to take the students outside of their comfort zone and connect them with those parts of the society with whom they may not have ever interacted. Through this initiative we hope to bring our students in direct contact with the segment of society which is not blessed materially. This involvement with those less privileged will also help them develop awareness about the larger, diverse environment which impacts our economy and businesses, thus enabling them to become more effective leaders with greater empathy for the less privileged in our society.



# The Experiential Learning (ELP Program)

The ELP was introduced in January 2015. It is an integral part of the BBA program which provides students with an opportunity to acquire knowledge of industry and introduce them to prospective organizations; thereby increasing their chances of employability in companies. The program is spread over a period of four months. A group of 4-5 final semester students undertake an assignment in real life business environment and provide solutions related to managerial and organizational problems. During the program, students will conduct primary and field research, analyze individual issues that warrant investigation and find cost effective implementable solutions for partner organizations. Students are made available for project from Monday- Friday with classes being held on Saturdays only. The requirement to attend office differs from company to company. Depending on the company, a small amount may be paid monthly to the students as stipend. Companies could engage one or more student / groups in a relevant project with their organization in areas, not restricted to but may include:

- . Management Control Systems
- . Human Resource Restructuring Strategic Analysis & Management
- . Marketing Strategy
- . Supply Chain Management
- . Resource Mobilization strategies
- . Financial Management
- . Process Re-engineering and Change Management
- . New ventures / Feasibility Studies



## Extra & Co-Curricular Activities - Review

S.No	Society/ Club	Patron	Events Conducted in 2015-2016
1	Adventure Club	Mr. Ameer Rizvi	- Summer & Winter Trip - Snorkeling - Turkey Trip - Kund Malir - Shooting and Camping
2	Alumni & Placement Society	Dr. Zaheeruddin Asif	- IBA Career Fair - Alumni Dinner - Get Set Go
3	Arts Society	Dr.Tiago Andke Ferreira Lopes	- Enigma - Art Gallery
4	Boys Hostel Society	Mr. Jami Moiz	- Hostel Alumni Dinner - Basant - Welcome Party - Night Football & Cricket Tournament
5	Boys Sports Society	Mr. Asad Ilyas	- Futsal & Cricket Tournament - Hosted the world's greatest football free-stylist - Sean Garnier - IBA Sports Olympiad
6	Community Welfare Society	Ms. Saima Hussain	- Sufi Night - Movember Fest - Donation Drive for Earthquake victims - CWS volunteered in the Urban - Forest Project with Afforest
7	Computer Science Society	Dr. Sajjad Haider	- Pro battle 2016 - Technopreneurship Conference - InfoTech Series – A series of workshops and seminars Codefest - Startup Weekend
8	Dramatics Society	Dr. Framji Minwalla	- Staged the Play ' 80, 90 Pooray 100' - LUMS Dramafest Competition
9	Economics Club	Ms. Tahira Marium Jaffery	Hosted a session with IMF President Representative for Pakistan Mr. Tokhir Mirzoev     INFER - Participated in SAESM
10	Entrepreneurship Society	Dr. Shahid Quershi	- IYEC - Ennovate
11	Finance Club	Ms. Sana Tauseef	Hosted a session with IMF President Representative for Pakistan, Mr. Tokhir Mirzoev     Awareness Session on Islamic Banking     Session on Pakistani Capital Markets     INFER
12	Girls Hostel Society	Ms. Mahreen Nazar	- New Year Celebration - Annual Dinner
13	Girls Sports Society	Ms. Farah Naz Baig	Organized Soap Soccer, Foosball and Badminton Tournament     Hosted the world's greatest football free-stylist     Sean Garnier - IBA Sports Olympiad
14	Go Green Society	Mr. Mohsin Ali Patel	- Beach Cleanup - Green Campus Initiative
15	Human Resource Club	Ms. Nyla Aleem Ansari	- INSPIRE
16	Iqra Society	Mr. M Asif Jaffer	- Falsafa e Haq: Hussain Ibn Ali, the embodiment of bravery - Annual Islamic Conference - Scattered Pearls Series (For Women) - Walk the talk series - Various Seminars and Conference





### Extra & Co-Curricular Activities - Review

S. No	Society/ Club	Patron	Events Conducted in 2015-2016
17	Leadership Club	Dr. Nasir Afghan	- IBLC
18	Literary Society	Ms. Ghazal Tahir	- Tajdeed-e-Ahd-e-Wafa - YALE - IBA Literary Festival
19	Marketing Club	Mr. Jami Moiz	- Launched Women's Banking Program in collaboration with HBL
20	Mathematics & Astronomy Club	Dr. Danish Ali	Seminar on 'An elementary introduction to error correcting codes' by Prof. Dr. Micheel Waldschmidt     Seminar on 'Big Data'     Mathematica
21	MBA Club	Dr. Nasir Afghan	- Mentorship Session with Ex-CEO Gillette - 'MBA Chronicle' newsletter
22	Media and Commun- ications Society	Dr. Huma Baqai	- I-MARC - Director's Cut: Screening of the film 'Moor'
23	Music Society	Ms. Yasmin Zafar	<ul> <li>Nescafe Basement auditions</li> <li>IBA Idol</li> <li>IBA Music Olympiad</li> </ul>
24	Photography Society	Mr. Ameer Rizvi	- IBA Documentary - IBA Beautification Project, - International Exhibition, - Intercity Photography - Cultural Photography of Sindh
25	Public Speaking Society	Ms. Nadia Sayeed	- MUNIK - IBA Debating Championship - Participated in Harvard MUN
26	Social Sciences Club	Dr. Syed Noman Ul Haq	- Politik - Speaker Sessions in collaboration with Habib and other Universities - Chai Khana - Social Media Awareness Campaign - Distinguished Lecture Series - Sehwan - Gorakh Trip - "Mental Health" Social Media Awareness Campaign
27	IBA Wide Student Council (ISC)	Mr. S M Saeed	-Welcome Party - 6th Annual Seminar on Imam Hussain (AS) - Hosted visit by President of World Bank - IBA Students Week - Distinguished Lecture Series





# Activities Galore (Fall 2015 \* Spring 2016)











### **Activities Galore**



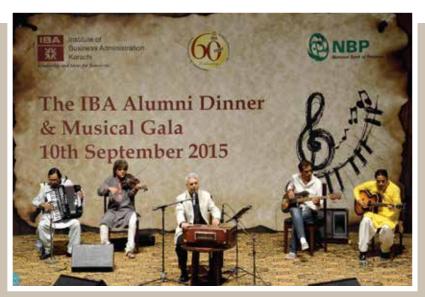








### **Activities Galore**











### **Important Events**

#### Launching of book on IBA History

The 60th anniversary celebrations reached their culmination point on December 31, 2015 with the launching of the book "Chronicling Excellence: History of IBA".



#### **ICICT 2015**

The 6th International Conference on Information and Communication Technologies (ICICT), sponsored by HEC Pakistan and IEEE, Inc. USA was held to promote academic and organizational research activities in the discipline of Computer Science and Information System in Pakistan.

#### Sports Break through

IBA student Mahoor Shahzad won the title of Women's single in the All Pakistan Ranking Badminton tournament. She represented Pakistan in the tournament held in Turkey, Egypt and Bahrain.

# Inauguration of 14 Storey Aman Tower at City Campus

IBA celebrated the Inauguration the 14 storey Aman Tower donated by the Aman Foundation. The building hosts a library, 32 residence rooms for visiting faculty,



8 classrooms, 2 lecture theatres, 8 seminar halls and also accommodating IBA's Centre for Executive Education (CEE), Centre for Excellence in Journalism (CEJ), Centre for Excellence in Islamic Finance (CEIF) and the Centre for Business 8 Economics Research (CBER).

# Signing of MOU for establishment of IBA Campus at DHA City

A MoU was signed on March 8, 2016 with DHA Karachi for the establishment of a 10 acre IBA Campus. The campus will be established astride the Karachi-Hyderabad Super Highway at the DHA City Site

# Farewell in Honor of the Outgoing Dean & Director IBA, Dr. Ishrat Husain

The first ten days of March 2016 were dedicated to multiple farewells in honor of the Dean & Director IBA, Dr. Ishrat Husain, whose eight year tenure came to an



#### Oscar winning Movie Screening.

Sharmeen Obaid Chinoy's movie "A Girl in the River" was screened at the IBA by the Media and Communications Society.

# Outreach Activities organized in different Districts of Balochistan

OGDCL Khyber Pakhtunkhwa Talent Hunt Program was launched on 20 March 2016 with the help of OGDCL Pakistan, Project Management Unit (HED) Govt. of Khyber Pakhtunkhwa and Meezan Bank Limited as a part of IBA's outreach activities.

#### World Bank's President Visit to IBA

The ISC hosted the President of the World Bank Dr. Jim Yong Kim on February 2016 at JS Auditorium at the city campus. A panel discussion was held followed by Questions and Answers session. The panelists were the President of the World Bank Dr. Jim Yong Kim, President of Descon Group Mr. Abdul Razzak Dawood and Founder of Kashf Foundation Ms. Sadaffe Abid.



#### **Important Events**

# Inauguration of the Centre for Excellence in Journalism (CEJ)

The U. S. Ambassador, Mr. David Hale inaugurated the CEJ on February 27, 2016. Representatives of IBA's partner institutions, the Medill School of Journalism, Northwestern University and the International Center for Journalists (ICFJ), Washington D.C. were present on this occasion.



# Visit of the President, London School of Economics

Prof. Craig Calhoun, President and Director, London School of Economics (LSE) visited IBA. He addressed the students of M.S. Economics and MBA on the Future of Capitalism. Prof. Calhoun was accompanied by Dr. Mukulika Banerjee, Director of South Asia Centre at LSE, Dr. Nilanjan Sarkar, Deputy Director, Ms. Fayeeza Nagvi of Aman Foundation.



# IBA awarded research project by Sindh Government

IBA has been awarded a World Bank funded project by the Government of Sindh for providing technical assistance under the Sindh Public Sector Management Reforms Project (SPS-MRP) to the Finance Department, Board of Revenue, Excise and Taxation Department and the Sindh Revenue Board.

#### Inauguration of CBER new facility

Syed Murad Ali Shah, Minister of Finance, Government of Sindh inaugurated the Center for Business and Economic Research (CBER) located in the Aman Tower.



#### **Academic Events**

- Mr. Sadeq Sayeed, former CEO, Nomura Global and Adjunct Professor of Finance at IBA delivered a public lecture on May 2 at the Main Campus. His topic was Financial Crisis Management.
- Dr. Tahir Ali, formerly of United Nations Human Right Commission (UNHRC) addressed the students on May 17th on "the UN as Aid provider: Ideas and Reality".
- Mr. Marcel de Virk, Ambassador of Netherland visited IBA Main Campus on May 6th and addressed the students on "Pakistan-Netherlands Economic Cooperation".

- Ms. Sharmeen Obaid Chinoy, the Oscar and Emmy Winning documentary producer addressed the students on May 11. Her topic was "Transforming Dreams to Reality".
- Mr. Vaqar ul Islam, CEO Jaffar Brothers and President, TiE Karachi delivered a lecture on "How to Lead a Successful Career" at Talk World at IBA on May 14.
- Ms. Nafisa Shah, a member of the National Assembly and a leading sociologist spoke to the students on May 14 on "Pakistan's incremental tilt to the right: What freedom means in a constitutional democracy".
- Dr. Christophe Jaffrelot, Director of Research at Centre Nationale de Recherché Scientifique (CNRS) and Director at Centro de Recherché Internationales (CERI), Paris delivered a lecture on 'Instability and Resilience in Pakistan" on September 22.
- Dr. Pascal Boniface from French Institute for International and Strategic Alliance (IRIS) addressed the students on 'The Changing World Order and the International Crisis' on September 2016.
- Shuja Nawaz, a political and strategic analyst formerly Director South Asia Program, Atlantic Council held a focus-group on campus on October 2nd with Social Sciences students to discuss their impressions of local and global responses to terrorism.
- Dr. Yaqoob Bangash, Chairman, History Department of the IT University, Washington spoke about his recently published book, A Princely Affair: Accession and Integration of Princely States in Pakistan.

#### **Important Events**

- Aamer Ahmed Khan, News Director at Aaj TV, former head of BBC Urdu, and former editor of Herald gave a talk titled "The Khaki, The Mufti and the Media: The New Media and Civil-Military Relations in Pakistan".
- Dr. Kaleemullah Lashari former Director Archeology discussed Science and Archaeology on October 26th with the students of History of Science Class.
- Dr. Hamit Borzaslan, Director of Studies for CERI at EHESS in Paris gave a talk titled "Regionalism, Secularism and Nation in Turkey" on October 28th.
- The Media and Communications Society screened Jami's film, Moor, on October 31st. Jami introduced the film, and took questions from students later.
- Dr. Gerhard Pfister, a German Mathematician who specializes in Algebraic Geometry conducted a seminar on singularities on October 5 under the auspices of Maths and Astronomy Club.
- Dr. Asad Q. Ahmed, Associate Professor and Director of Graduate Studies in the Department of Near Eastern Studies at the University of California – Berkeley, gave a talk titled 'Islam's invented Golden Age and the Golden age of Islamic Studies on Nov 11.
- Maria Beimborn, a PhD candidate in the Department of Social and Cultural Anthropology at Ludwig-Maximillians-Universitat in Munich, Germany conducted an interactive session on Nov 25th with students in Muntasir Sattar's course, Introduction to Social and Cultural Anthropology. The session focused on Ms. Beimborn's fieldwork on the linkages among welfare, citizenship, and the state.

- Dr. Laurrent Bonnefoy, CNRS research fellow at the Centre de Recherches Internationales (CERI / SciencesPO), and deputy principal investigate of the WAFAW/ERC (When Authoritarianism Fails in the Arab World / European Research Council) project, gave a talk titled 'Yemen at War: A Political and Strategic Assessment' on November 26.
- Dr. Larry Pintak, Dean School of Journalism, Washington State University discussed the Master's program of Journalism commencing in 2017.
- Mr. Kashif Matin Ansari, President, (ICMA) discussed the possibilities of exemptions in ICMA examinations for BS Accounting students
- Mr. Neezar Mewawalla, Chairman, Aga Khan Education Services, Mr. Farhan Bhayani, CEO and Mr. Salman Khimani explored the opportunities of joint AKES-IBA educationists training programs for Gilgit Baltistan.

#### **Visitors Log**

#### June-July, 2015

- Mr. John Kriegsman, US Treasury Department
- A delegation from Hainan, China led by the State Secretary of Education signed a MoU forcollaboration between IBA and the Hainan Universities.

#### August 2015

- Mr. Naeem Zamindar, Country Director, Acumen Pakistan
- Mr. Sabir Sami, Regional CEO YUM
- Mr. Hasan Javid, Pakistan's Ambassador to Germany

Mr. Go Yamada, Japanese Journalist, NIKKEI group of newspapers.

#### September 2015

 Ms. Riffat Masood, Pakistan's Ambassador to Norway discussed the possible cooperation with Norwegian Institutions of higher learning.

#### December 2015

- Ms. Komal Mahindra led a World Bank delegation for Women X
- Brian Asmus, US Consulate

#### February 2016

 Mr. Reiner Schmiedchen, Consul General, Germany

#### March 2016

- Dr. Miles Davis, Dean, Shenandoah University,USA
- Dr. Amanda Bullough, President, University of Delaware
- Dr. Xavier Cirera, Economist, World Bank Group
- Dr. Asad Zaman, Vice Chancellor, Pakistan Institute of Development Economics
- Mr Bruno Managing Director Nestle visited IBA CED
- Dr. Mohamad Akram Laldin, Executive Director ISRAZ



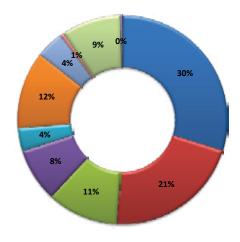
### Convocation 2015

The annual convocation was held on Sunday, December 6, 2015. It was a historic event as it coincided with the 60 year celebrations of the Institute and had the largest number of students (591) graduating in a single convocation to date. Mr. Ahsan Iqbal, Federal Minister for Planning and Development was the Chief Guest on this occasion. An audience of approximately 1000 included parents, members of faculty, eminent personalities from academia, corporate and public sectors. Some 365 undergraduates and 226 graduates (male 62 percent and female 38 percent) were conferred degrees at the convocation. The proceedings of the convocation acquired special significance for the graduates this year - as it was the first time ever that degree scrolls were individually received by all graduating students. Medal recipients this year also received cash awards sponsored by various multinational firms. The convocation culminated in refreshments served in the main lawn with the well illuminated and recently commissioned Mian Abdullah Library and the Administration building providing a back drop, which were visited by the guests.



Anatomy of the Graduating Batches (2015)				
Batch	No. of Students			
BBA - Fall 2011 (Main Campus)	177			
BBA - Fall 2011 (City Campus)	125			
BS (CS) - Spring & Fall 2011	65			
MBA (Direct & TBBA) Spring 2013 - 14 / Fall 2013 - Main Campus	49			
MBA (Direct & TBBA) Spring 2013 - 14 / Fall 2013 - City Campus	21			
MBA Evening (2014)	71			
MS - Computer Science	25			
MS - Economics (2014)	4			
Executive MBA (2015)	54			
PhD (CS)	2			

Year	Cumulating Total Graduates
1957 - 2003	6178
2004	6473
2005	6805
2006	7067
2007	7417
2008	7875
2009	8373
2010	8857
2011	9467
2012	9912
2013	10341
2014	10838
2015	11431



# **Undergraduate Programs**











- Bachelor of Business Administration (BBA)
- Bachelor of Business Administration (BBA) Entrepreneurship
- Bachelor of Science (BS) Accounting & Finance
- **■** Bachelor of Science (BS) Computer Science
- Bachelor of Science (BS) Economics & Maths
- Bachelor of Science (BS) Social Sciences & Liberal Arts



## Bachelor of Business Administration (BBA) Program

The BBA program comprises of four years of rigorous education which allows the student to have a broader view of the world. Students go through an academic program that not only emphasizes the essentials of business subjects, but also introduces them to the basic concepts of social sciences and liberal arts. In their freshman and sophomore years, students study subjects such as history, anthropology, psychology, philosophy and logic and media study. Additionally, students are required to undergo training in a foreign language and can choose among three languages: Arabic, Chinese and French. To increase the foreign marketability of its graduates, IBA is now introducing a study of culture and history of the language. For example, in French, students will be introduced to the history and culture of France and Francophone Africa. All BBA students are required to enroll for Personal Effectiveness, a non-credit course which builds and enhances the soft skills mandatory for success.

In the past, students only had the choice to specialize in either Marketing or Finance. With our new BBA program, students can choose among a host of electives to major in Marketing, Finance, Human Resource, Entrepreneurship, and MIS.

Based on the feedback from our own alumni, human resource representatives of major corporations and some of the chief executives of the companies, we have included the aspect of experiential knowledge into the curriculum of our BBA program. Students now undergo a six months on-the-job training in the real business environment. They spend their last semester working in a business of their choice. This not only allows them to network with their future employers, but it also introduces them to the challenges of the real business world.

Curriculum Structure				
Duration	4 years			
Semesters	8			
Courses	46			
Total Credit Hours	150 + Project			

Required Courses					
Section	Knowledge Area	Courses			
А	University Core Courses	4			
В	Business Core Courses	26			
С	Business Electives	10			
D	Non - Specialization Courses	12			
E	Experiential Learning Project (12 Hrs)	1			
	Total Courses	46			

A. University Core Courses					
Course Title	Course Code	Credit Hours	Pre-Requisite		
English Grammar & Composition	SSC101	3	-		
Speech Communication	HUM201	3	-		
*Socioeconomic Philosophy of Islam (SEPI) <b>or</b> Philosophy, Logic & Ethics (PLE)	SSC301 / HUM357	3	-		
Pakistan History	SSC151	3	-		

<sup>\*</sup>All Muslim students are required to register for SEPI. Non-Mulsim students may take either SEPI or PLE.

B. Business Core Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
Intermediate Microeconomics	ECO201	3	-
Principles of Accounting	ACC111	3	-
Intermediate Macroeconomics	ECO202	3	-
Principles of Management	MGT201	3	-
Financial Accounting	ACC201	3	ACC111
Organizational Behavior	MGT221	3	SSC102, MGT201
Principles of Marketing	MKT201	3	-

B. Business Core Courses (Contd)					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Introduction to Business Finance	FIN201	3	-		
Financial Institutions and Markets	FIN301	3	FIN201		
Business Communication (2+1 CH)	MGT211	3	MGT201, SSC102		
Financial Management	FIN401	3	FIN201		
Analysis of Pakistani Industries	ECO211	3	ECO103 / ECO201 & ECO104 / ECO202		
Management Accounting	ACC381	3	ACC111, ACC201		
Business Law	LAW205	3	-		
Methods of Business Research	MKT301	3	MKT201,MTS202		
Human Resource Management	HRM401	3	MGT201, MKT201		
Development Economics	ECO301	3	ECO103 / ECO201 & 104 / ECO202		
Production and Operations Management	MGT311	3	FIN201, MGT201, MKT201		
Marketing Issues in Pakistan	MKT401	3	MKT201		
Small Business Management	MGT401	3	FIN201, MGT201, MKT201		
Managerial Policy	MGT430	3	ECO103, ECO201, FIN201, HRM401,		
Managerial Folicy	10101430	3	MGT201, MGT211, MGT221, MKT201		
Foundation of Human Behavior	SSC102	3	-		
International Relations	SSC111	3			
Language-I	SSCXXX	3	-		
Language-II	SSCXXX	3	-		

C. Business Electives						
Course Title	Course Code	Credit Hours	Pre-Requisite			
Accounting Information System with SAP*	ACC507*	3	-			
Analysis of Financial Statements*	ACC561*	3	ACC201			
Corporate Governance & Practices in Pakistan*	LAW553*	3	LAW501			
Microeconomics	ECO312	3	ECO201			
Introduction to Econometrics	ECO341	3	ECO103 / ECO201, ECO104 / ECO202 8 MTS202			
Applied Econometrics	ECO342	3	ECO341			
International Trade	ECO511	3	ECO103 / ECO201			

C. Business Electives (Contd)					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Major Issues in Pakistan Economy	ECO403	3	ECO103 / ECO201 & ECO104 / ECO202		
Research Methods in Economics	ECO411	3	ECO103 / ECO201, ECO104 / ECO104 & MTS202		
Public Finance	ECO451	3	ECO103 / ECO201, ECO104 / ECO202		
Islamic Economic System	ECO452	3	ECO103 / ECO201, ECO104 / ECO202		
Labor Economics	ECO654	3	ECO103 / ECO201, ECO104 / ECO202		
Population Economics	ECO454	3	ECO103 / ECO201, ECO104 / ECO202		
Comparative Economic System	ECO455	3	ECO103 / ECO201, ECO104 / ECO202		
Economics and Strategy	ECO456	3	ECO103 / ECO201, ECO104 / ECO202		
Natural Resource and Environmental Economics	ECO461	3	ECO103 / ECO201, ECO104 / ECO202		
Rural Development	ECO462	3	ECO103 / ECO201, ECO104 / ECO202		
Financial Economics	ECO562	3	ECO103 / ECO201, ECO104 / ECO202		
Game Theory	ECO464	3	ECO103 / ECO201, & MTS101		
International Political Economy	ECO465	3	ECO103 / ECO201, ECO104 / ECO202		
Monetary Economics	ECO566	3	ECO103 / ECO201, ECO104 / ECO202		
History of Economic Thought	ECO467	3	ECO103 / ECO201, ECO104 / ECO202		
Agriculture Economics	ECO468	3	ECO103 / ECO201, ECO104 / ECO202		
Regional Economics	ECO469	3	ECO103 / ECO201, ECO104 / ECO202		
Health Economics	ECO471	3	ECO103 / ECO201, ECO104 / ECO202		





Course Title	Course Code	Credit Hours	Pre-Requisite
Jrban Economics	ECO472	3	ECO103 / ECO201, ECO104 / ECO202
Nelfare Economics	ECO473	3	ECO103 / ECO201
Resource Economics	ECO474	3	ECO103 / ECO201, ECO104 / ECO202
nvestment Banking	FIN451	3	ECO103 / ECO201, ECO104 / ECO202 8 FIN401
nternational Finance	FIN452	3	ECO104 / ECO202 & FIN401
Security Analysis	FIN453	3	FIN401
Corporate Finance	FIN454	3	FIN401
Portfolio Management	FIN455	3	FIN401
Financial Risk Management	FIN456	3	FIN401
Derivatives	FIN457	3	FIN401
Fundamentals of Treasury and Fund Management	FIN458	3	FIN401
Recruitment and Selection Techniques	HRM430	3	MGT201, HRM401
Occupational Health and Safety	HRM445	3	MGT201, HRM401
ndustrial Relations Management	HRM451	3	MGT201, HRM401
Organizational Analysis and Research	HRM452	3	MGT201, HRM401
Life Career Development	HRM453	3	MGT201, HRM401
Executive Leadership	HRM455	3	MGT201, HRM401
Fraining and Development	HRM456	3	MGT201, HRM401
HR and Information System	HRM457	3	MGT201, HRM401





Course Title	Course Code	Credit Hours	Pre-Requisite
Leading the Change Process	HRM458	3	MGT201, HRM401
Performance and Compensation Management	HRM462	3	MGT201, HRM401
Ethics in a Corporate Society	MGT301	3	MGT201, ACC201, MKT201
Management Theory and Practice	MGT400	3	-
Comparative Management	MGT411	3	MGT201, MKT201, MGT221
Entrepreneurship	MGT421	3	MGT201, FIN201, MKT201
Advertising	MKT451	3	MKT201
Consumer Behavior	MKT452	3	MKT201, MKT301
Sales Management	MKT453	3	MKT201, MKT401
Personal Selling	MKT454	3	MKT201, MKT401
Retail Management	MKT455	3	MKT201
Export Marketing	MKT456	3	MKT201
Dynamics of Distribution and Logistics	MKT457	3	MKT201
Public Relations	MKT458	3	MKT201
Direct Marketing	MKT460	3	MKT201
Brand Management	MKT461	3	MKT201
Essentials of Demand & Supply	MKT462	3	MKT201

#### Important Note:

- All BBA Students are permits to substitute of upto two Social Science and Liberal Arts Electives for Business Electives.





D. Non - Specialization					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Introduction to Computer Applications	MIS103	3	-		
Calculus with Applications-I	MTS104	3	-		
Calculus with Applications-II	MTS106	3	MTS101 / MTS104		
Introduction to Statistics	MTS102	3	MTS105		
Statistical Inference (with econometrics lab)	MTS202	3	MTS101 / MTS104		
Business Mathematics and Linear Algebra	MTS212	3	MTS101 / MTS104		
Non - Specialization Elective Courses					
One Social Sciences Elective from the following:					
Major Themes in World History	SSC121	3	-		
Culture, Media & Society	SSC216	3	-		
Research Methods in Social Sciences	SSC154	3	-		
History of Ideas - I	SSC239	3	-		
Fundamentals of Sociology	SSC231	3	-		
Introduction to Social & Cultural Anthropology	SSC233	3	-		
Creative Writing	HUM360	3	-		
History of Ideas - II	HUM238	3	HUM239		
Introduction to Historical Methods	SSC232	3	-		
South Asian History	SSC221	3			
Introduction to Political Sciences	SSC217	3	-		
Introduction to Urban Studies	SSC234	3	-		





	Semester-wise Seq	uence of Courses		
FRESHMAN	Semester - 1	Course Code	Credit Hours	Pre-Requisite
1	Principles of Microeconomics	ECO201	3	-
2	English Grammar & Composition	SSC101	3	-
3	Foundations of Human Behavior or International Relations	SSC102 / SSC111	3	-
4	Introduction to Computer Applications	MIS103	3	-
5	Calculus with Applications-I	MTS104	3	-
6	Philosophy, Logic & Ethics	HUM357	3	_
	Semester - 2	Course Code	Credit Hours	Pre-Requisite
1	Principles of Accounting	ACC111	3	-
2	Principles of Macroeconomics	ECO202	3	-
3	Principles of Management	MGT201	3	-
4	Calculus with Applications - II	MTS106	3	MTS101 / MTS104
5	Introduction to Statistics	MTS102	3	-
6	Foundation of Human Behavior or International Relations	SSC102 / SSC111	3	-
7	Speech Communication	HUM201	1+2	-
SOPHOMORE	Semester - 3	Course Code	Credit Hours	Pre-Requisite
1	Financial Accounting	ACC201	3	ACC111
2	Organizational Behavior	MGT221	3	SSC102, MGT201
3	Statistical Inference (with econometrics lab)	MTS202	3	MTS101, MTS102
4	Principles of Marketing	MKT201	3	
5	Pakistan History or Socioeconomic Philosophy of Islam	SSC151/SSC301	3	ECO103, ECO201, ECO104, ECO202
6	Introduction to Business Finance	FIN201	3	
	Semester - 4	Course Code	Credit Hours	Pre-Requisite
1	Pakistan History or Socioeconomic Philosophy of Islam	SSC301 / SSC151	3	-
2	Financial Institutions and Markets	FIN301	3	FIN201
3	Business Communication (2+1 CH)	MGT211	3	MGT201, SSC102
4	Financial Management	FIN401	3	FIN201
5	Business Mathematics and Linear Algebra	MTS212	3	MTS101 / MTS104
6	Analysis of Pakistani Industries	ECO211	3	ECO103, ECO201, ECO104, ECO202

#### Important Note:

- Non Muslims students must take an additional Social Science & Liberal Arts Elective.

	Semester-wise Sequ	ence of Courses		
JUNIOR	Semester - 5	Course Code	Credit Hours	Pre-Requisite
1	Management Accounting	CC381	3	ACC11(,C201
2	Business Law	LAW205	3	-
3	Production and Operations Management	MGT311	3	MKT201, MTS202
4	Human Resource Management	HRM401	3	MGT201, MKT201
5	Development Economics	ECO301	3	ECO 103, ECO201, ECO104, ECO202
6	Personal Effectiveness	SSC240	3	SSC201
7	Social Science & Liberal Arts Elective	SSCXXX	3	-
	Semester - 6	Course Code	Credit Hours	Pre-Requisite
1	Production and Operations Management	MGT311	3	FIN201, MGT201, MKT201
2	Marketing Issues in Pakistan	MKT401	3	MKT201
3	Small Business Management	MGT401	3	FIN201, MGT201, MKT201
4	Language-I	SSCXXX	3	-
5	BE*	-	3	-
6	BE*	-	3	-
SENIOR	Semester - 7	Course Code	Credit Hours	Pre-Requisite
1	Managerial Policy	MGT430	3	ECO103, ECO201, FIN201, HRM401, MGT201, MGT211, MGT221, MKT201
2	Language-II	SSCXXX	3	-
3	BE*	-	3	-
4	BE*	-	3	-
5	BE*	-	3	-
6	BE*	-	3	-
	Semester - 8	Course Code	Credit Hours	Pre-Requisite
1	Experiential Knowledge	PRJ490	12	Equivalent to 4 courses
2	BE*	-	3	-
3	BE*	-	3	-

#### Important Note:

- Students are eligible to carry out their Responsible Citizen Initiative (RCI)/Social Internships right after their first year of studies/2nd semester and should complete this mandatory graduation requirement by the end of their third year of studies/6th semester.
- Corporate Internship can only be carried out in the sixth semester (.i.e. after completion of all the courses till sixth semester; mentioned in semester break up above). However, students from Spring intake batch can be provided with a special provision to carry out their corporate internships during the subse quent summer after their fifth semester studies i.e. by the end of Spring semester every year.

# Bachelor of Business Administration (Entrepreneurship) Program

The Entrepreneurship Program at IBA AMAN Center for Entrepreneurial Development provides activity-based learning for undergraduate students in the Business Administration Program. Established in collaboration with Babson College of Entrepreneurship, Boston (USA); the program is spread over a span of 4 years, which includes 8 semesters and 147 credit hours. The curriculum is designed to integrate core business 8 entrepreneurship courses along with practical activities throughout the program's tenure.

The first and second semester of the BBA (Entrepreneurship) program comprises of various entrepreneurial activities, visits to entrepreneurs and guest speaker sessions. This stimulates an entrepreneurial spirit in students while exposing them to the real life businesses. In the third and fourth semester, the students are enrolled in the

Foundation for Management and Entrepreneurship (FME) Course I and II respectively in order to complete their specialization in entrepreneurship. During the two FME courses, each student is required to launch a business. IBA AMAN CED provides students with business training/ mentorship and financial assistance. Students are entitled to take 39 core courses and 8 business electives apart from FME I and II. By the end of second year students are required to do a 'Social Internship'.

By the end of third year, the students are required to do a 'Shadow an Entrepreneur' internship. They work with an entrepreneur and are required to carry out designated tasks assigned to them by the entrepreneur. Students working with entrepreneurs get an edge by gaining experience of running and managing a company from an entrepreneurial perspective. In fourth year students are required to do 'experiential learning program' either by doing an extended 'Shadow an

Entrepreneur' for about 4-6 months or by launching their own businesses.

Entrepreneurship students also get the opportunity to complete a summer semester at Babson, either through CED's competitive annual scholarship or through their own funding. Students get a great opportunity to learn from the best entrepreneurial faculty thereby enhancing their skills and knowledge to start their own enterprises.

IBA AMAN Center for Entrepreneurial Development encourages students to go for startups. It has its incubation space with currently over 40 running businesses, which are being promoted using various channels. The AMAN CED has opened new avenues of growth and economic development for the country where employment opportunities have miserably shrunk over the past few years.





### **CED's External Linkages**

































Curriculum Structure		
Duration	4 years	
Semesters	8	
Courses	49	
Total Credit Hours	147	

Require	d Courses	
Section	Knowledge Area	Courses
А	University Core Courses	4
В	Entrepreneurship Core Courses	2
С	Business Core Courses	25
D	Business Electives	7
E	Non - Specialization Courses	11
	Total Courses	49

A. University Core Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
English Grammar & Composition	SSC101	3	-
Speech Communication	HUM201	3	-
*Socioeconomic Philosophy of Islam (SEPI) <b>or</b> Philosophy, Logic & Ethics (PLE)	SSC301 / HUM357	3	-
Pakistan History	SSC151	3	-

<sup>\*</sup>All Muslim students are required to register for SEPI. Non-Mulsim students may take either SEPI or PLE.

B. Entrepreneurship Core Courses						
Course Title	Course Code	Credit Hours	Pre-Requisite			
Foundation for Management & Entrepreneurship( FME) - I	MGT102	3	-			
Foundation for Management & Entrepreneurship (FME) - II	MGT103	3	-			



Course Title	Course Code	Credit Hours	Pre-Requisite
Intermediate Microeconomics	ECO201	3	-
Principles of Accounting	ACC111	3	-
Intermediate Macroeconomics	ECO202	3	-
Principles of Management	MGT201	3	-
Financial Accounting	ACC201	3	ACC111
Organizational Behavior	MGT221	3	SSC102, MGT201
Principles of Marketing	MKT201	3	-
Introduction to Business Finance	FIN201	3	-
Financial Institutions and Markets	FIN301	3	FIN201
Business Communication (2+1 CH)	MGT211	3	MGT201, SSC102
Financial Management	FIN401	3	FIN201
Analysis of Pakistani Industries	ECO211	3	ECO103 / ECO201 & ECO104 / ECO202
Management Accounting	ACC381	3	ACC111, ACC201
Business Law	LAW205	3	-
Methods of Business Research	MKT301	3	MKT201,MTS202
Human Resource Management	HRM401	3	MGT201, MKT201
Development Economics	ECO301	3	ECO103 / ECO201 & 104 / ECO202
Production and Operations Management	MGT311	3	FIN201, MGT201, MKT201
Marketing Issues in Pakistan	MKT401	3	MKT201
Small Business Management	MGT401	3	FIN201, MGT201, MKT201
Managerial Policy	MGT430	3	ECO103, ECO201, FIN201, HRM401, MGT201, MGT211, MGT221, MKT20
Experiential Knowledge*	RJ490	12	Equivalent to 4 courses
Philosophy, Logic & Ethics	HUM357	3	-
Foundation of Human Behavior	SSC102	3	-

#### \*BBA Entrepreneurship Students have three options:

- 1. Start own business
- 2. Shadow an Entrepreneur (at a local firm or corporate)
- 3. Internship with an Entrepreneur or a corporation

D. Business Electives								
Course Title	Course Code	Credit Hours	Pre-Requisite					
Marketing for Entrepreneurs	ENT451	3	-					
Entrepreneurial Finance	ENT452	3	-					
Business Law for Entrepreneurs	ENT453	3	-					
Entrepreneurial Management	ENT454	3	-					
Family Business Management	ENT455	3	-					
Developing Entrepreneurial Opportunities	ENT456	3	-					
Financing Entrepreneurial Ventures	ENT459	3	-					
New Technology Ventures	ENT460	3	-					
Women's Entrepreneurship & Leadership	ENT457	3	-					
Sustainable Entrepreneurship Strategies	ENT461	3	-					
Creativity and Innovation	ENT463	3	-					
Social Entrepreneurship	ENT458	3	-					
Entrepreneurial Sales Strategy	ENT 464	3	-					
Corporate Entrepreneurship	ENT462	3	-					
Co-Curricular Activities	ENT465	3	-					
Accounting Information System with SAP*	ACC507*	3	-					
Analysis of Financial Statements*	ACC561*	3	ACC201					
Corporate Governance & Practices in Pakistan*	LAW553*	3	LAW501					
Microeconomics	ECO312	3	ECO201					
Intermediate Microeconomics	ECO201	3	ECO202					
Introduction to Econometrics	FC0244	3	ECO103 / ECO201, ECO104 /					
introduction to Economietrics	ECO341		ECO202 & MTS202					
Applied Econometrics	ECO342	3	ECO341					
International Trade	ECO512	3	ECO103 / ECO201					
Major Issues in Pakistan Economy	ECO403	3	ECO103 / ECO201 & ECO104 / ECO202					
Research Methods in Economics	ECO411	3	ECO103 / ECO201, ECO104 /					
	ECO411		ECO104 & MTS202					
Public Finance	ECO451	3	ECO103 / ECO201, ECO104 / ECO202					
Islamic Economic System	ECO452	3	ECO103 / ECO201, ECO104 / ECO202					
Labor Economics	ECO654	3	ECO103 / ECO201, ECO104 / ECO202					
Population Economics	ECO454	3	ECO103 / ECO201, ECO104 / ECO202					
Comparative Economic System	ECO455	3	ECO103 / ECO201, ECO104 / ECO202					

<sup>\*</sup> Subject to availability & required good average grade point

Course Title	Course Code	Credit Hours	Pre-Requisite
Economics and Strategy	ECO456	3	ECO103 / ECO201, ECO104 / ECO202
Natural Resource and Environmental Economics	ECO461	3	ECO103 / ECO201, ECO104 / ECO202
Rural Development	ECO462	3	ECO103 / ECO201, ECO104 / ECO202
Financial Economics	ECO562	3	ECO103 / ECO201, ECO104 / ECO202
Game Theory	ECO464	3	ECO103 / ECO201, & MTS101
nternational Poli tical Economy	ECO465	3	ECO103 / ECO201, ECO104 / ECO20
Monetary Economics	ECO566	3	ECO103 / ECO201, ECO104 / ECO20
History of Economic Thought	ECO467	3	ECO103 / ECO201, ECO104 / ECO20
Agriculture Economics	ECO468	3	ECO103 / ECO201, ECO104 / ECO20
Regional Economics	ECO469	3	ECO103 / ECO201, ECO104 / ECO20
Health Economics	ECO471	3	ECO103 / ECO201, ECO104 / ECO20
Jrban Economics	ECO472	3	ECO103 / ECO201, ECO104 / ECO20
Welfare Economics	ECO473	3	ECO103 / ECO201
Resource Economics	ECO474	3	ECO103 / ECO201, ECO104 / ECO20
nvestment Banking	FIN451	3	ECO103 / ECO201, ECO104 / ECO202 & FIN401
nternational Finance	FIN452	3	ECO104 / ECO202 & FIN401
Security Analysis	FIN453	3	FIN401
Corporate Finance	FIN454	3	FIN401
Portfolio Management	FIN455	3	FIN401
Financial Risk Management	FIN456	3	FIN401
Derivatives	FIN457	3	FIN401
Fundamentals of Treasury and Fund Management	FIN458	3	FIN401
Recruitment and Selection Techniques	HRM430	3	MGT201, HRM401
Occupational Health and Safety	HRM445	3	MGT201, HRM401
ndustrial Relations Management	HRM451	3	MGT201, HRM401
Organizational Analysis and Research	HRM452	3	MGT201, HRM401
ife Career Development	HRM453	3	MGT201, HRM401
xecutive Leadership	HRM455	3	MGT201, HRM401
raining and Development	HRM456	3	MGT201, HRM401
HR and Information System.	HRM457	3	MGT201, HRM401
eading the Change Process	HRM458	3	MGT201, HRM401
Performance and Compensation Management	HRM462	3	MGT201, HRM401
Ethics in a Corporate Society	MGT301	3	MGT201, ACC201, MKT201

D. Business Electives (Contd)				
Course Title	Course Code	Credit Hours	Pre-Requisite	
Management Theory and Practice	MGT400	3	-	
Comparative Management	MGT411	3	MGT201, MKT201, MGT221	
Entrepreneurship	MGT421	3	MGT201, FIN201, MKT201	
Advertising	MKT451	3	MKT201	
Consumer Behavior	MKT452	3	MKT201, MKT301	
Sales Management	MKT453	3	MKT201, MKT401	
Personal Selling	MKT454	3	MKT201, MKT401	
Retail Management	MKT455	3	MKT201	
Export Marketing	MKT456	3	MKT201	
Dynamics of Distribution and Logistics	MKT457	3	MKT201	
Public Relations	MKT458	3	MKT201	
Direct Marketing	MKT460	3	MKT201	
Brand Management	MKT461	3	MKT201	
Essentials of Demand & Supply	MKT462	3	MKT201	





Course Title	Course Code	Credit Hours	Pre-Requisite
Introduction to Computer Applications	MIS103	3	-
Calculus with Applications - I	MTS104	3	-
Calculus with Applications - II	MTS106	3	MTS101 / MTS104
Introduction to Statistics	MTS102	3	-
Statistical Inference (with econometrics lab)	MTS202	3	MTS101 / MTS104
Business Mathematics and Linear Algebra	MTS212	3	MTS101 / MTS104
Corporate Social Responsibility	SSC253	3	-
Language-l	SSCXXX	3	-
Language-II	SSCXXX	3	-
Non - Specialization Elective Courses			
One Social Sciences Elective from the following:			
Major Themes in World History	SSC121	3	-
Culture, Media & Society	SSC216	3	-
Research Methods in Social Sciences	SSC154	3	-
History of Ideas - I	SSC239	3	-
Fundamentals of Sociology	SSC231	3	-
Introduction to Social & Cultural Anthropology	SSC233	3	-
Creative Writing	HUM360	3	-
History of Ideas - II	HUM238	3	HUM239
Introduction to Historical Methods	SSC232	3	-
South Asian History	SSC221	3	-
Introduction to Political Sciences	SSC217	3	-
Introduction to Urban Studies	SSC234	3	-
International Relations	SSC111	3	-

	Semester-wise Sequence of Courses				
FRESHMAN	Semester - 1	Course Code	Credit Hours	Pre-Requisite	
1	Principles of Microeconomics	ECO201	3	-	
2	English Grammar & Composition	SSC101	3	-	
3	Foundations of Human Behavior	SSC102	3	-	
4	Calculus with Applications - I	MTS104	3	-	
5	Philosophy, Logic & Ethics	HUM357	3	-	
l J					
	Semester - 2	Course Code	Credit Hours	Pre-Requisite	
1	Principles of Accounting	ACC111	3	-	
2	Principles of Macroeconomics	ECO202	3	-	
3	Principles of Management	MGT201	3	-	
4	Calculus with Applications - II	MTS106	3	MTS101 / MTS104	
5	Introduction to Statistics	MTS102	3	MTS105	
6	Socioeconomic Philosophy of Islam	SSC301	3	-	
7	Speech Communication	HUM201	1+2	SSC101	
SOPHOMORE	Semester - 3	Course Code	Credit Hours	Pre-Requisite	
1	Foundations of Management & Entrepreneurship - I	MGT102	3	-	
2	Principles of Accounting - II	ACC201	3	ACC111	
3	Organizational Behavior	MGT221	3	SSC102, MGT201	
4	Statistical Inference (with econometrics lab)	MTS202	3	MTS101 / MTS104	
5	Principles of Marketing	MKT201	3	-	
6	Introduction to Business Finance	FIN201	3	-	
	Semester - 4	Course Code	Credit Hours	Pre-Requisite	
1	Foundations of Management & Entrepreneurship - II	MGT103	3	FME I	
2	Financial Institutions & Markets	FIN301	3	FIN201	
3	Business Communication (2+1 CH)	MGT211	3	MGT201, SSC102	
4	Financial Management	FIN401	3	FIN201	
5	Business Mathematics & Linear Algebra	MTS212	3	MTS101	
6	Analysis of Pakistani Industries	ECO211	3	ECO103 / ECO201 & ECO104 / ECO202	
7	Pakistan History	SSC151	3	-	

	Semester-wise Sequence of Courses				
JUNIOR	Semester - 5	Course Code	Credit Hours	Pre-Requisite	
1	Managerial Accounting	CC381	3	ACC201	
2	Business Law	LAW205	3	-	
3	Production and Operations Management	MGT311	3	MKT201, MTS202	
4	Human Resource Management	HRM401	3	MGT201, MKT201	
5	De velopment Economics	ECO301	3	ECO 103 / ECO201 & ECO104 / ECO202	
6	Social Science & Liberal Arts Elective	SSCXXX	3	-	
	Semester - 6	Course Code	Credit Hours	Pre-Requisite	
1	Methods of Business Research	MKT301	3	FIN201, MGT201, MKT201	
2	Marketing Issues in Pakistan	MKT401	3	MKT201	
3	Small Business Management	MGT401	3	FIN201, MGT201,MKT201	
4	Language-I	SSCXXX	3		
5	BE	-	3		
6	BE	-	3		
SENIOR	Semester - 7	Course Code	Credit Hours	Pre-Requisite	
1	Managerial Policy	MGT430	3	ECO103, ECO201, FIN201, HRM401, MGT201, MGT211, MGT221, MKT201	
2	Language-II	SSCXXX	3	-	
3	BE	-	3	-	
4	BE	-	3	-	
5	BE	-	3	-	
6	BE	-	3	-	
	Semester - 8	Course Code	Credit Hours	Pre-Requisite	
1	Experiential Knowledge	PRJ490	12	Equivalent to 4 courses	
2	BE	-	-	-	
3	BE	-	-	-	

### Important Note:

- Students are eligible to carry out their Responsible Citizen Initiative (RCI)/Social Internships right after their first year of studies/2nd semester and should complete this mandatory graduation requirement by the end of their third year of studies/6th semester.
- Corporate Internship can only be carried out in the sixth semester (.i.e. after completion of all the courses till sixth semester; mentioned in semester break up above). However, students from Spring intake batch can be provided with a special provision to carry out their corporate internships during the subse quent summer after their fifth semester studies i.e. by the end of Spring semester every year.

# Bachelor of Science (Accounting & Finance) Program

This is a 4-year degree program introduced in 2013. It has been developed jointly by the Institute of Chartered Accountants of Pakistan (ICAP), Association of Chartered certified Accountants (ACCA) and Institute of Bankers Pakistan (IBP) in collaboration with IBA Karachi. The program provides an exclusive opportunity for students to receive an academic degree that leads to a professional qualification. A summary of institution wise exemptions that applicants to the program would benefit from, is as under:

# Institute of Chartered Accountants of Pakistan (ICAP):

An exemption of 12 Exams of AFC & CAF (old Module A to D) will be granted to the prospective CA students, who complete their BS (Accounting & Finance) degree from IBA. The Students of BS (Accounting & Finance) after graduating from IBA Karachi would avail the

following advantages:

- Exemption from AFC & CAF (old Module A to D)
- Complete training for 3 years & save 6 months
- Pass CFAP & MSA (old Module E & F)
- Become a Chartered Accountant

# Chartered Institute of Management Accountants (CIMA):

CIMA has exempted SEVEN examinations

# Association of Chartered Certified Accountants (ACCA):

ACCA has exempted NINE examinations (F1 to F9)

### Institute of Bankers Pakistan (IBP):

IBP has waived off appearances at all three levels of examinations & replaced it with only ONE comprehensive examination.

### Chartered Financial Analyst (CFA):

CFA does not grant, as a principle, any exemptions but close mapping has been done in Finance courses that facilitates qualifying CFA examinations.

Curriculum Structure			
Duration	4 years		
Semesters	8		
Courses	44		
Total Credit Hours	133		

Required	Required Courses				
Section	Knowledge Area	Courses			
Α	University Core Courses	4			
В	Accounting	14			
С	Finance	14			
D	Non - Specialization Courses	12			
	Total Courses	44			

A. University Core Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
English Grammar & Composition	SSC101	3	-
Speech Communication	HUM201	3	-
Pakistan History	SSC151	3	-
*Socioeconomic Philosophy of Islam or Philosophy, Logic & Ethics	SSC301 / HUM357	3	-

<sup>\*</sup>All Muslim students are required to register for SEPI. Non-Muslim students may take either SEPI or PLE.

B. Accounting Core Courses				
Course Title	Course Code	Credit Hours	Pre-Requisite	
Principles of Accounting	ACC111	3	-	
Management Accounting	ACC381	3	ACC201	
Financial Accounting	ACC201	3	ACC111	
Taxation	LAW303	3	ACC201	
Business Law	LAW205	3	-	
Accounting Information System with SAP	ACC330	3	ACC111	
Auditing	ACC320	3	-	

C. Finance Core Courses					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Introduction to Business Finance	FIN201	3	-		
Financial Institutions & Markets	FIN301	3	FIN201		
Regulations & Financial Markets	FIN558	3	FIN401		
Financial Management	FIN401	3	FIN201		
Financial Modeling	FIN574	4	FIN401		

D. Non-Specialization Core Courses  Course Title	Course Code	Credit Hours	Pre-Requisite
Introduction to Statistics	MTS102	3	MTS105
Statistical Inference	MTS202	3	MTS102 / MTS101
Introduction to Computer Applications	MIS103	3	-
Introduction to Economics	ECO105	3	-
Management & Organizational Behavior	MGT231	3	-
Principles of Marketing	MKT201	3	-
Calculus with Applications - I	MTS104	3	-
Select ONE from below:			
One Social Sciences Elective from the following:			
Major Themes in World History	SSC121	3	-
Culture, Media & Society	SSC216	3	-
Research Methods in Social Sciences	SSC154	3	-
History of Ideas - I	SSC239	3	-
Fundamentals of Sociology	SSC231	3	-
Introduction to Social & Cultural Anthropology	SSC233	3	-
Creative Writing	HUM360	3	-
History of Ideas - II	HUM238	3	HUM239
Introduction to Historical Methods	SSC232	3	-
South Asian History	SSC221	3	-
Introduction to Political Sciences	SSC217	3	-
Introduction to Urban Studies	SSC234	3	
Foundations of Human Behavior	SSC102	3	-

Accounting Electives (7 to be selected from the following list)					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Advanced Managerial Accounting	ACC310	3	ACC381		
Financial Reporting	ACC315	3	ACC201		
Corporate Governance or Code & Practice in Pakistan	LAW315	3	LAW305		
Business Analysis & Decision Making	ACC312	3	-		
Legal and Regulatory Environment (only for BSAF)	LAW310	3	LAW305		
Strategic Management	MGT552	3	-		
Corporate Law	LAW305	3	LAW205		
Advanced Financial Reporting	ACC401	3	ACC315		
Essential Software	MIS150	3	-		
Data Warehousing	MIS343	3	-		
Database System	CSE341	3	-		
Advanced Taxation	LAW401	3	ACC315, LAW303		
Actuarial Courses	ACC415	3	MTS102, MTS202, MTS101, MTS101		
FCS basic Programming related courses	ACC416	3	-		
Accounting Tools I	MIS3XX	1.5	MIS103		
Accounting Tools II	ACC3XX	1.5	MIS3XX		
Advanced Auditing	ACC325	3	LAW305, ACC320		





Course Title	Course Code	Credit Hours	Pre-Requisite
nvestment Banking	FIN451	3	FIN401
Treasury and Funds Management	FIN565	3	FIN401
Financial Risk Management	FIN456	3	FIN401
Advance Portfolio Management and Wealth Planning	FIN563	3	FIN401
Corporate Finance	FIN454	3	FIN401
Financial Econometrics	FIN569	3	MTS202, FIN401
Public Finance	ECO451	3	ECO105
Alternative Investments	FIN305	3	FIN401
Real Estate Investments: Analysis & Financing	FIN308	3	FIN401
International Banking	FIN310	3	FIN401
Behavioral Finance (with lab- 4 credit)	FIN312	4	FIN401
Venture Capital & the Finance of Innovation	FIN405	3	FIN401
Buyouts and Acquisitions	FIN410	3	FIN401
Corporate Restructuring	FIN315	3	FIN401
Empirical Research in Finance	FIN320	3	FIN401
Fixed Income Investments	FIN424	3	FIN401
Branch Banking	FIN425	3	FIN401
Lending- Products, Operations & Risk Management	FIN426	3	FIN401
Finance of International Trade & Related Treasury Operations	FIN427	3	FIN401
Marketing of Financial services	FIN428	3	FIN401
Information Technology in Financial services	FIN429	3	FIN401
Financial Information System	FIN430	3	FIN401
International Finance	FIN452	3	FIN401, ECO105
Security Analysis (4 credit-lab)	FIN453	4	FIN401
Derivatives	FIN457	3	FIN401
Portfolio Management (4 credit-lab)	FIN455	4	FIN401
Advanced Corporate Finance	FIN560	3	FIN401

Course Title	Course Code	Credit Hours	Pre-Requisite
Mathematical Methods	MTS110	3	-
oundations of Human Behavior	SSC102	3	-
Calculus with Applications - II	MTS106	3	MTS101 / MTS104
nternational Relations	SSC111	3	-
Principles of Management	MGT201	3	-
Human Resource Management	HRM401	3	MKT201, MGT201
Development Economics	ECO301	3	ECO105
Executive Leadership	HRM455	3	MGT201, HRM401
Applied Probability	MTS112	3	-
Introduction to Econometrics	ECO341	3	MTS202, ECO105
International Trade	ECO512	3	ECO105
Global Economic and Political Environment	ECO517	3	-
Marketing Management	MKT501	3	-
Politics & Law	LAW105	3	-
Business Mathematics & Linear Algebra	MTS212	3	MTS101 / MTS104
Research Methods in Social Sciences	SSC154	3	-





Accounting Electives compulsory for CA & ACCA exemption				
Advanced Managerial Accounting	ACC310			
Financial Reporting	ACC315			
Advanced Auditing	ACC325			
Corporate Law	LAW305			
Advanced Financial Reporting	ACC401			
Advanced Taxation	LAW401			
Finance Electives courses conducive for CFA preparation				
Corporate Governance or Code & Practice in Pakistan	LAW315			
Treasury and Funds Management	FIN565			
Advance Portfolio Management and Wealth Planning	FIN563			
Corporate Finance	FIN454			
Alternative Investments	FIN305			
Behavioral Finance (with lab- 4 credit)	FIN312			
Fixed Income Investments	FIN425			
Security Analysis (4 credit-lab)	FIN453			
Derivatives	FIN457			
Portfolio Management (4 credit-lab)	FIN455			
Finance Electives courses compulsory for IBP exemption				
Branch banking	FIN425			
Lending- Products, operations & risk management	FIN426			
Finance of international trade & related treasury operations	FIN427			
Marketing of financial service	FIN428			
Information technology in Financial services	FIN429			





	Semester-wise Sequence of Courses				
Semester - 1	Courses	Course Code	Credit Hours	Pre-Requisite	
1	Introduction to Economics	ECO105	3	-	
2	English Grammar & Composition	SSC101	3	-	
3	Introduction to Computer Applications	MIS103	3	-	
4	Introduction to Statistics	MTS102	3	-	
5	Calculus with Applications - I	MTS104	3	-	
6	Pakistan History/Socio Economic Philosophy of Islam	SSC151/SSC 301	3	-	
Semester - 2 & 3	Courses	Course Code	Credit Hours	Pre-Requisite	
1	Principles of Accounting	ACC111	3	-	
2	Speech Communication (1+2 Ch)	HUM201	3	-	
3	Management & Organizational Behavior	-	3	-	
4	Pakistan History/Socio Economic Philosophy of Islam	SSC151/SSC 301	3	-	
5	Principles of Marketing	MKT201	3	-	
6	Statistical Inference	MTS202	3	MTS102	
7	Financial Accounting	ACC201	3	ACC111	
8	Introduction to Business Finance	FIN201	3	-	
9	Business Law	LAW205	3	-	
10	NS Elective	-	3	-	
11	NS Elective	-	3	-	
12	NS Elective	-	3	-	



	Semester-wise Sequence of Courses				
Semester - 4 & 5	Courses	Course Code	Credit Hours	Pre-Requisite	
1	Management Accounting	ACC381	3	ACC201	
2	Financial Institutions and Markets	FIN301	3	FIN201	
3	Financial Management	FIN401	3	FIN201	
4	Corporate Law	LAW305	3	LAW205	
5	Accounting Information System with SAP	ACC330	3	ACC111	
6	Personal Effectiveness	SSC240	3	SSC240	
7	Regulations & Financial Markets	FIN558	3	FIN401	
8	Financial Modeling	FIN574	4	FIN401	
9	Social Science & Liberal Arts Course	SSCXXX	3	-	
10	Financial Reporting	ACC315	3	ACC201	
11	Advanced Managerial Accounting	ACC310	3	ACC381	
12	Taxation	LAW303	3	ACC201	
Semester - 6, 7 & 8	Courses	Course Code	Credit Hours	Pre-Requisite	
1	Advanced Financial Reporting	ACC401	3	ACC315	
2	Accounting Tools I	MIS3XX	3	MIS103	
3	Accounting Tools II	ACC3XX	3	MIS3XX	
4	Auditing	ACC320	3	-	
5	Electives - Fin/Acc	-	3	-	
6	Electives - Fin/Acc	-	3	-	
7	Electives - Fin/Acc	-	3	-	
8	Corporate Governance or Code & Practice in Pakistan	LAW315	3	LAW305	
9	Electives - Fin/Acc	-	3	-	
10	Electives - Fin/Acc	-	3	-	
11	Electives - Fin/Acc	-	3	-	
12	Electives - Fin/Acc	-	3	-	
13	Electives - Fin/Acc	-	3		

### Important Note:

- Students are eligible to carry out their Responsible Citizen Initiative (RCI)/Social Internships right after their first year of studies/2nd semester and should complete this mandatory graduation requirement by the end of their third year of studies/6th semester.
- Corporate Internship can only be carried out in the sixth semester (.i.e. after completion of all the courses till sixth semester; mentioned in semester break up above). However, students from Spring intake batch can be provided with a special provision to carry out their corporate internships during the subsequent summer after their fifth semester studies i.e. by the end of Spring semester every year.

### Bachelor of Science (Computer Science) Program

BS (Computer Science) is a four-year standard degree program that includes courses from theoretical Computer Science, technology, social sciences, and other areas. The aim is to educate students to become skilled Computer Science professionals with good problem solving capability in CS and allied areas as well enhance their social worth, and their potential of contribution to society. Students will also fit profiles required for research and development roles.

The program comprises courses that amount to a total of 147 credit hours. These are divided into University core, CS core, CS elective, Non-specialization core, and Non-specialization elective with 12, 63, 24, 30, and 18 credit hours respectively. The non-specialization course and electives are from supporting disciplines of Mathematics, Physics, and Communication. The program core courses and general electives are from supporting disciplines of Mathematics, Physics, and Communication, Accounting, Economics, Physics, and Communication, Accounting, Economics, Finance, Human Resource Management, Marketing, Management, and Social Sciences. A wide range of core and elective courses is engineered to provide the students with enough flexibility to choose a professional career path of their interest.

To ensure that computer science students get groomed into well-rounded personalities, IBA has a large number of co-curricular and extra-curricular societies catering to a diverse range of activities. Office positions for student-led societies are contested via formal elections. Students can opt for membership of these societies, and nurture their various interests such as management, public speaking, various sports, adventure, photography, etc. These engagements allow them to build a holistic understanding of the real world. IBA CS graduates have successfully developed their careers both with entrepreneurial start-ups of their own as well as getting placed in good software houses, ICT companies, financial institutions, business solution providers, and multinational companies. All this makes IBA's BS-CS program attractive for aspiring students.

Curriculum Structure			
Duration	4 years		
Semesters	8		
Courses	46		
Total Credit Hours	147		

Require	l Courses		
Section	Knowledge Area	Courses	Credit Hours
Α	University Core	4	12
В	Computer Science Core	18	63
С	Computer Science Electives	8	24
D	Program Core	10	30
E	General Electives	6	18
	Total	46	147

Please note that these are minimum credit requirements. Further credit requirements may be added in due course of the program.

A. University Core Courses		
Course Title	Course Code	Credit Hours
Speech Communication	HUM201	3
English Grammar & Composition	SSC103	3
Pakistan History	SSC151	3
*Socioeconomic Philosophy of Islam or Philosophy, Logic & Ethics	SSC301 / HUM357	3

<sup>\*</sup>All Muslim students are required to register for SEPI. Non-Mulsim students may take either SEPI or PLE.

B. Computer Science Core Courses					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Introduction to Programming	CSE141	4	-		
Object Oriented Programming Techniques	CSE142	4	CSE141		
Introduction to Computing	CSE145	4	-		
Digital Logic Design	CSE241	4	CSE145, MTS211		
Data Structures	CSE247	4	CSE142, MTS211		
Computer Communications & Networks	CSE248	4	CSE142, CSE145		

B. Computer Science Core (Contd)			
Course Title	Course Code	Credit Hours	Pre-Requisite
Theory of Automata	CSE309	3	CSE141, MTS211
Software Engineering	CSE312	3	CSE247
Design and Analysis of Algorithms	CSE317	3	CSE247
Operating Systems	CSE331	3	CSE345
Database Systems	CSE341	4	CSE247
Computer Architecture and Assembly Language	CSE345	4	CSE247 & CSE241
Human Computer Interaction	CSE407	3	CSE312
Systems Programming	CSE441	4	CSE331
Computer Science Project - I	CSE491	3	CSE312, CSE341
Computer Science Project - II	CSE492	3	CSE491
Introduction to Artificial Intelligence	CSE307	3	CSE247
Audit, Ethics & IS Issues	MIS454	3	MGT211

C. Computer Science Elective	Common Control	Continue	Dec Dec Silve
Course Title	Course Code	Credit Hours	Pre-Requisite
Web Based Application Development	CSE308	3	CSE341
Design Patterns	CSE318	3	CSE247
Compiler Design	CSE344	4	CSE309,CSE345
System Modeling and Simulation	CSE403	3	
Microprocessor Interfacing	CSE448	4	CSE345
Application Development for Mobile Devices	CSE450	3	CSE142, CSE 312
Network Security	CSE455	3	CSE248
Business Intelligence	CSE459	3	CSE341, MIS 343
Introduction to Game Programming and Robotics	CSE460	3	CSE307
Mathematics for Games	CSE461	3	
Data Warehousing	MIS343	4	CSE341
Social Computing	MIS406	3	CSE341
Technopreneurship	MIS450	3	-
E-Commerce	MIS456	3	-
IS Security	MIS457	3	
Enterprise Resource Planning	MIS458	4	ACC111
Mobile Marketing - A Technological Perspective	MIS463	3	
Financial Services T echnologies	MIS464	3	

C. Computer Science Elective (Contd)				
Course Title	Course Code	Credit Hours	Pre-Requisite	
Introduction to Data Science	CSE568	3	-	
Introduction to Image Processing	CSE462	3	-	
Customer Relationship Management	MIS451	3	-	
Cloud Computing	CS351	3	CSE248, CSE331, CSE341	

D. Program Core			
Course Title	Course Code	Credit Hours	Pre-Requisite
Business Communications	MGT211	3	HUM201
Discrete Mathematics	MTS211	3	MGT101
Calculus - I with Plane Geometry	MTS101	3	-
Introduction to Statistics	MTS102	3	-
Linear Algebra	MTS203	3	MTS101
Calculus - II with Solid Geometry	MTS232	3	MTS101
Numerical Analysis	MTS306	3	MTS232
Differential Equations	MTS401	3	MTS232
Physics - I	SCI105	3	-
Physics - II	SCI205	3	SCI105

E. General Elective			
Course Title	Course Code	Credit Hours	Pre-Requisite
Principles of Accounting I	ACC111	3	-
Principles of Accounting II	ACC201	3	ACC111
AIS with SAP	ACC507	3	ACC111
Introduction to Micro Economics	ECO103	3	-
Introduction to Macro Economics	ECO104	3	-
Introduction to Business Finance	FIN201	3	-
Human Resource Management	HRM401	3	-
Business Law	LAW205	3	-
Principles of Management	MTS202	3	MTS102

Course Title	Course Code	Credit Hours	Pre-Requisite
Statistical Inference	MTS301	3	MTS232
Real Analysis	MTS303	3	MTS401
Advanced Differential Equations	MIS 459	3	-
Foundation of Human Behavior	SSC102	3	-
International Relations	SSC111	3	-
Fundamentals of Sociology	SSC231	3	-
History of Ideas II	SSC238	3	-
History of Ideas I	SSC239	3	-
Principles of Marketing	MKT201	3	-
Advertising	MKT451	3	MKT201
Retail Management	MKT455	3	MKT201
Brand Management	MKT461	3	MKT201
Language Elective			
Arabic Language - I	SSC 201	3	-
Arabic Language - II	SSC202	3	SSC 201
French Language - I	SSC205	3	-
French Language - II	SSC206	3	SSC 205
Mandarin Language - I	SSC209	3	-
Mandarin Language - II	SSC210	3	SSC 209
Non - Specialization Elective Courses			
One Social Sciences Elective from the following:			
Major Themes in World History	SSC121	3	-
Culture, Media & Society	SSC216	3	-
Research Methods in Social Sciences	SSC154	3	-
History of Ideas - I	SSC239	3	-
Fundamentals of Sociology	SSC231	3	-
ntroduction to Social & Cultural Anthropology	SSC233	3	-
Creative Writing	HUM360	3	-
History of Ideas - II	HUM238	3	HUM239
ntroduction to Historical Methods	SSC232	3	-
South Asian History	SSC221	3	-
ntroduction to Political Sciences	SSC217	3	-
Introduction to Urban Studies	SSC234	3	_

	Semester-wise Sequence of Courses				
FRESHMAN	Semester - 1	Course Code	Credit Hours	Pre-Requisite	
1	Introduction to Programming	CSE141	4	-	
2	Introduction to Computing	CSE145	4	-	
3	Calculus-I with Plane Geometry	MTS101	3	-	
4	English Grammar & Composition	SSC103	3	-	
5	Pakistan History or Socioeconomic Philosophy of Islam	SSC151/SSC301	3	-	
	Semester - 2				
1	Object Oriented Programming Techniques	CSE142	4	CSE141	
2	Speech Communication	HUM201	3	SSC103	
3	Calculus - II with Solid Geometry	MTS232	3	MTS101	
4	Introduction to Statistics	MTS102	3	-	
5	Physics-I	SCI105	3	-	
6	Discrete Mathematics	MTS211	3	MTS101	
SOPHOMORE	Semester - 3				
1	Digital Logic Design	CSE241	4	CSE145, MTS211	
2	Data Structures	CSE247	4	CSE142, MTS211	
3	Physics-II	SCI205	3	SCI105	
4	Linear Algebra	MTS203	3	MTS101	
5	Numerical Analysis	MTS306	3	MTS232	
6	General Elective-I	XXXXX	3		
	Semester - 4				
1	Computer Architecture & Assembly Language	CSE345	4	CSE241, CSE247	
2	Theory of Automata	CSE309	3	CSE141, CSE211	
3	Computer Communication & Networking	CSE248	4	CSE142, CSE145	
4	Socioeconomy Philosophy of Islam or Pakistan History	SSC301/SSC151	3	-	
5	Differential Equations	MTS401	3	MTS232	
6	CS Elective-I	CSExxx	3	-	

	Semester-wise Sequence of Courses				
JUNIOR	Semester - 5	Course Code	Credit Hours	Pre-Requisite	
1	Database Systems	CSE341	4	CSE 247	
2	Operating Systems	CSE331	3	CSE 345	
3	Software Engineering	CSE312	3	CSE 247	
4	Business Communication	MGT211	3	HUM201	
5	CS Elective-II	CSExxx	3	-	
6	CS Elective-III	CSExxx	3	-	
	Semester - 6				
1	Systems Programming	CSE441	4	CSE331	
2	Introduction to Artificial Intelligence	CSE307	3	CSE 247	
3	Design & Analysis of Algorithm	CSE317	3	CSE 247	
4	CS Elective-IV	CSExxx	3	-	
5	CS Elective-V	CSExxx	3	-	
6	General Elective-II	xxxxx	3	-	
SENIOR	Semester - 7				
1	Human Computer Interaction	CSE407	3	CSE312	
2	Computer Science Project - I	CSE491	3	CSE 312, CSE 341	
3	CS Elective-VI	CSExxx	3	-	
4	CS Elective-VII	CSExxx	3	-	
5	General Elective-III	xxxxx	3	-	
6	General Elective-IV	xxxxx	3	-	
	Semester - 8				
1	Computer Science Project - II	CSE492	3	CSE491	
2	Audit, Ethics & IS Issues	MIS454	3	MGT211	
3	CS Elective-VIII	CSExxx	3	-	
4	General Elective-V	xxxxx	3	-	
5	General Elective-VI	XXXXX	3	-	

### Important Note:

- Students are eligible to carry out their Responsible Citizen Initiative (RCI)/Social Internships right after their first year of studies/2nd semester and should complete this mandatory graduation requirement by the end of their third year of studies/6th semester.
- Corporate Internship can only be carried out in the sixth semester (.i.e. after completion of all the courses till sixth semester; mentioned in semester break up above). However, students from Spring intake batch can be provided with a special provision to carry out their corporate internships during the subse quent summer after their fifth semester studies i.e. by the end of Spring semester every year.

# Bachelor of Science (Economics & Mathematics) Program

BS (Economics and Mathematics) is a 4-year degree program with double majors in economics and mathematics and is designed to give students a solid foundation in both economics and mathematics. The program provides a well-coordinated curriculum for students interested in pursuing masters or PhD in economics and mathematics. It prepares the students for entry level positions in private and public sector corporations, banks, insurance companies, investment companies, education and research organizations. The program consists of 150 credit hours. Major disciplines of economics and mathematics have 54 credit hours each.

The remaining 42 credits are for university core courses and courses from other disciplines like social sciences, management and accounting. The wide range of courses offered in this program give students ample opportunity to broaden their knowledge base. The economics research project in the fourth year enables students to apply the quantitative tools learnt in the program to real economics and financial problems in the public and private sectors.



Curriculum Structure	
Duration	4 years
Semesters	8
Courses	48
Research Project	1
Total Credit Hours	150

Required Courses				
Section	Knowledge Area	Courses		
А	University Core Courses	4		
В	Economics	16		
С	Mathematics	19		
D	Non - Specialization	9		
	Total Credit Hours	48		

A. University Core Courses						
Course Title	Course Code	Credit Hours	Pre-Requisite			
English Grammar & Composition	SSC101	3	-			
Pakistan History	SSC151	3	-			
Speech Communication	HUM357	3	-			
*Socioeconomic Philosophy of Islam or	SSC301/	2				
Philosophy, Logic and Ethics	HUM357	5				

<sup>\*</sup>All Muslim students are required to register for SEPI. Non-Mulsim students may take either SEPI or PLE.

B. Economics					
Course Title		Course Code	Credit Hours	Pre-Requisite	
Principles of Microeconomics		ECO103	3	-	
Principles of Macroeconomics		ECO104	3	-	
Intermediate Microeconomics		ECO201	3	ECO103, MTS101	
Intermediate Macroeconomics		ECO202	3	ECO104, MTS101	
Development Economics		ECO301	3	ECO103, ECO104, MTS112	
Microeconomics		ECO312	3	ECO201, MTS112, MTS201	
Macroeconomics		ECO313	3	ECO202, MTS112, MTS201	

B. Economics (Contd)			
Course Title	Course Code	Credit Hours	Pre-Requisite
Introduction to Econometrics	ECO341	4	ECO103, ECO 104 & MTS202
Applied Econometrics	ECO342	4	ECO341
Major Issues in Pakistan's Economy	ECO403	3	ECO301
Research Methods in Economics	ECO411	3	ECO342
International Trade	ECO511	3	ECO201, ECO202
Economics Elective-I	ECO×××	3	-
Economics Elective-II	ECO×××	3	
Economics Elective-III	ECO×××	3	-
Economics Elective-IV	ECO×××	3	-
Economics Research Project	ECO441	4	ECO342

C. Mathematics					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Calculus-I with Plane Geometry	MTS101	3	MTS105		
Mathematical Methods	MTS110	3	-		
Linear Algebra	MTS203	3	-		
Discrete Mathematics	MTS211	3	MTS101		
Calculus - II with Analytical Geometry	MTS232	3	MTS101/MTS104		
Calculus-III	MTS204	3	MTS110		
Real Analysis	MTS301	3	MTS204		
Complex Analysis	MTS302	3	MTS301		
Advanced Differential Equations	MTS303	3	MTS241		
Stochastic Processes-I	MTS304	3	MTS210		
Abstract Algebra-I	MTS305	3	MTS110		
Numerical Analysis	MTS306	3	MTS232		
Introduction to Differential Equations	MTS241	3	MTS232		
Functional Analysis-I	MTS411	3	MTS106		
Functional Analysis-II	MTS412	3	MTS411		
Abstract Algebra-II	MTS413	3	MTS306		
Topology-l	MTS451	3	MTS301		
Mathematics Elective-I	MTSXXX	3	-		
Mathematics Elective-II	MTSXXX	3			

D. Non-Specialization					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Introduction to Computer Applications	MIS103	3	-		
Introduction to Statistics	MTS102	3	MTS105		
Statistical Inference	MTS202	3	MTS101/MTS102		
Applied Probability	MTS112	3	MTS202		
Regression Analysis & Experiment Design	MTS210	3	MTS112		
Non-Specialization Elective-I	xxxxxx	3	-		
Non-Specialization Elective-II	xxxxx	3	-		
Non-Specialization Elective-III	xxxxx	3	-		
Non-Specialization Elective-IV	xxxxx	3	-		

Economics Electives (2 to be selected from the following list)				
Course Title	Course Code	Credit Hours	Pre-Requisite	
Public Finance	ECO451	3	ECO103, ECO104	
Islamic Economic System	ECO452	3	ECO103, ECO104	
Population Economics	ECO454	3	ECO103, ECO104	
Comparative Economic System	ECO455	3	ECO103, ECO104	
Economics and Strategy	ECO456	3	ECO103, ECO104	
Natural Resource and Environmental Economics	ECO461	3	ECO103, ECO104	
Rural Development	ECO462	3	ECO103, ECO104	
Financial Economics	ECO562	3	ECO103, ECO104	
Game Theory	ECO464	3	ECO103, ECO104, MTS101	
International Political Economy	ECO465	3	ECO103, ECO104	
Monetary Economics	ECO566	3	ECO103, ECO104	
History of Economic Thought	ECO467	3	ECO103, ECO104	
Agricultural Economics	ECO468	3	ECO103, ECO104	
Regional Economics	ECO469	3	ECO103, ECO104	
Health Economics	ECO471	3	ECO103, ECO104	
Urban Economics	ECO472	3	ECO103, ECO104	
Welfare Economics	ECO473	3	ECO103	
Resource Economics	ECO474	3	ECO103, ECO104	
Labor Economics	ECO654	3	ECO103, ECO104	

Course Title	Course Code	Credit Hours	Pre-Requisite
Numerical Solutions of PDE*	MTS431	3	MTS414
Integral Equations	MTS432	3	MTS303
Advanced Numerical Analysis I	MTS433	3	MTS414
Advanced Numerical Analysis II	MTS434	3	-
Differential Geometry	MTS435	3	-
Fluid Dynamics I	MTS437	3	-
Fluid Dynamics II	MTS438	3	-
Financial Mathematics with a computational approach	MTS441	3	-
Computational Finance	MTS442	3	-
Modern Algebra I (Galios Theory & Applications)	MTS443	3	-
Modern Algebra II (Commutative Rings & Fields)	MTS444	3	-
Measure Theory I	MTS445	3	-
Measure Theory II	MTS446	3	-
Operations Research I	MTS447	3	-
Operations Research II	MTS448	3	-
Scientific Computing for Linear PDE's.	MTS414	3	MTS413
Topology II (Differential Topology)	MTS452	3	-
Non Linear Dynamic Chaos	MTS461	3	MTS203, MTS241

<sup>\*</sup>PDE = Partial Differential Equation

### Non-Specialization Electives

Four courses are to be chosen from courses other than Mathematics and Economics. These non-specialization electives may be from different subject areas including Accounting, Finance, Marketing, Management and Social Science.

	Semester-wise Sequence of Courses				
FRESHMAN	Semester - 1	Course Code	Credit Hours	Pre-Requisite	
1	Calculus-I with Plane Geometry	MTS101	3	MTS105	
2	Principles of Microeconomics-I	ECO103	3	-	
3	Introduction to Statistics	MTS102	3	MTS105	
4	English Grammar and Composition	SSC101	3	-	
5	Pakistan History or Socioeconomic Philosophy of Islam	SSC151/SSC301	3		
6	Introduction to Computer Applications	MIS103	3	-	
Semester - 2	Course Code	Credit Hours	Pre-Requisite	1	
1	Mathematical Methods	MTS110	3	-	
2	Principles of Macroeconomics	ECO104	3	-	
3	Statistical Inference	MTS 202	3	MTS102	
4	Calculus - II with Solid Geometry	MTS232	3	MTS101	
5	Speech Communication	HUM201	3	-	
6	Non-specialization area Elective-I	-	3	-	
SOPHOMORE	Semester - 3	Course Code	Credit Hours	Pre-Requisite	
1	Calculus-III	MTS204	3	MTS110	
2	Discrete Mathematics	MTS211	3	MTS103 / MTS104	
3	Intermediate Microeconomics	ECO201	3	ECO103, MTS101	
4	Pakistan History or Socioeconomic Philosophy of Islam	SSC151/SSC301	3	-	
5	Applied Probability	MTS112	3	MTS207	
6	Non-specialization area Elective-II	-	3	-	
JUNIOR	Semester - 4	Course Code	Credit Hours	Pre-Requisite	
1	Linear Algebra	MTS203	3	MTS202	
2	Introduction to Differential Equations	MTS241	3	MTS204	
3	Regression Analysis and Experiment Design	MTS210	3	MTS112	
4	Intermediate Macroeconomics	ECO202	3	ECO103, MTS101	
5	Development Economics	ECO301	3	ECO103, ECO104	
6	Non-specialization area Elective-III	-	-	-	

	Semester-wise Sequence of Courses				
JUNIOR	Semester - 5	Course Code	Credit Hours	Pre-Requisite	
1	Real Analysis	MTS301	3	MTS204	
2	Advanced Differential Equation	MTS303	3	MTS241	
3	Abstract Algebra-l	MTS305	3	MTS110	
4	Microeconomics	ECO312	3	ECO201, MTS112, MTS201	
5	Introduction to Econometrics	ECO341	4	ECO103, ECO104 & MTS202	
6	Non-specialization Elective-IV	-	-	-	
	Semester - 6	Course Code	Credit Hours	Pre-Requisite	
1	Complex Analysis	MTS302	3	MTS301	
2	Stochastic Processes	MTS304	3	MTS210	
3	Numerical Analysis	MTS413	3	MTS301	
4	Macroeconomics	ECO313	3	ECO201, MTS112, MTS201	
5	Applied Econometrics	ECO342	3	ECO341	
6	Abstract Algebra-II	MTS306	3	MTS305	
7	Economics Elective-I	ECOXXX	3	MTS306	
SENIOR	Semester - 7	Course Code	Credit Hours	Pre-Requisite	
1	Functional Analysis-l	MTS411	3	MTS302	
2	Abstract Algebra-II	MTS412	3	-	
3	Mathematics Elective-I	MTSXXX	3	-	
4	Research Methods for Economics	ECO411	3	ECO342	
5	Major Issues in Pakistan's Economy	ECO403	3	ECO301	
6	Numerical Analysis	MTS413	3	MTS323	
7	Economics Elective - II	ECOXXX	3	-	
	Semester - 8	Course Code	Credit Hours	Pre-Requisite	
1	Topology-l	MTS451	3	MTS301	
2	Functional Analysis - I	MTS412	3	MTS411	
3	Mathematics Elective - II	MTSXXX	3	-	
4	International Trade	ECO512	3	ECO201, ECO202	
5	Economics Elective-III	-	3	-	
6	Economics Elective-IV	-	3	-	

### Important Note:

- Students are eligible to carry out their Responsible Citizen Initiative (RCI)/Social Internships right after their first year of studies/2nd semester and should complete this mandatory graduation requirement by the end of their third year of studies/6th semester.

### Bachelor of Science (Social Sciences & Liberal Arts) Program

The BS in Social Sciences and Liberal Arts is a four-year multidisciplinary undergraduate program with major offerings in Psychology, Political Science, and Media & Communication Studies. The program is designed to develop in students the theoretical, historical, and experiential knowledge they will need to engage with our social and cultural world. We recognize that studying the social sciences today requires both disciplinary and interdisciplinary thinking, and that training in discipline-specific methods of research and analysis should always be grounded in a complex understanding of the communities, cities, and nations we inhabit. To accomplish these goals, we focus on how students can use strategies and frames of analysis to understand and critique our increasingly interrelated economic, political, communal, cultural, and mediated lives.

Courses that comprise the liberal arts and sciences component of the program, taken across all four years, introduce students to a range of academic disciplines including physics, the visual arts, philosophy, literature, history, mathematics, religion, and the environmental sciences. Through these course, students will develop comprehensive foundational skills in both qualitative and quantitative thinking that will inform and enhance the research and analysis they conduct in their chosen field of study.



Curriculum Structure	
Duration	4 years
Semesters	8
Courses	45
Research Project	1
Total Credit Hours	144

Required	l Courses		
Section	Knowledge Area	Courses	Credit Hours
А	University Core Courses	4	12
В	Non-Specialization Courses	11	33
С	Supporting Courses	11	33
D	Social Science Core	9	27
E	Major Core + Electives	10	30
F	Culminating Experience		9
	Total Courses	45	144

A. University Core Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
English Grammar & Composition	SSC101	3	-
Pakistan History	SSC151	3	-
Speech Communication	HUM201	3	-
*Socioeconomic Philosophy of Islam (SEPI) or Philosophy, Logic and Ethics (PLE)	SSC301/ HUM357	3	-

<sup>\*</sup>All Muslim students are required to register for SEPI. Non-Mulsim students may take either SEPI or PLE.

B. Non-Specialization Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
Core (7)			
Calculus-I & Plane Geometry	MTS101	3	-
Introduction to Statistics	MTS102	3	-
Intermediate English Composition	SSC106	3	-
Foreign Language I	SSC201 / 205 / 209	3	-
Foreign Language II	SSC202 / 206 / 210	3	-

B. Non-Specialization Courses (Contd)			
Course Title	Course Code	Credit Hours	Pre-Requisite
Foreign Language III	SSC203 / 207 /211	3	-
Foreign Language IV	SSC204 / 208 / 212	3	-
Electives (4)			
Non-Specialization Elective 1	-	3	-
Non-Specialization Elective 2	-	3	-
Non-Specialization Elective 3	-	3	-
Non-Specialization Elective 4	-	3	-

C. Supporting Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
History of Ideas I	SSC239	3	-
History of Ideas II	SSC238	3	-
South Asian History	SSC221	3	-
Statistical Inference	MTS202	3	-
Computational Research Methods	SSC302	3	-
Natural Science (2 from the following list)**			
History of Science	NSC351	3	-
Ideas of Physics	NSC352	3	-
Space, Time, and Space-Time	NSC353	3	-
Introduction to Environmental Sciences	NSC354	3	-
Principles of Ecology and Conservation	NSC355	3	
History of Evolution	NSC356	3	
Introduction to Geology	NSC357	3	-
Visual Studies (2 from the following list)**			
Introduction to Visual Culture	HUM363	3	-
History of Art I: Classical Antiquity to the Middle Ages	HUM364	3	-
History of Art II: Renaissance to the Present	HUM365	3	-
Art of the Islamic World	HUM366	3	-
Theories of Design	HUM367	3	-
Colonial and Postcolonial Visual Cultures	HUM368	3	-
The Rhetoric of Architecture	HUM369	3	-
Race, Class, and Gender in Film and Television	MCS353	3	SSC216
Watching Films	MCS359	3	SSC216
1947/1971: Interrogating 'Partitions', Narrative 'Selves'	HUM371	3	-

Course Title	Course Code	Credit Hours	Pre-Requisite
Humanities Electives (2 from the following list)**		Ī	
Great Books	HUM351	3	-
Reading Poetry	HUM352	3	-
Introduction to Drama	HUM353	3	-
Introduction to Urdu Literature	HUM354	3	-
Anglo-Indian Narrative and the Postcolonial Subject	HUM355	3	-
Foundation of Philosophical Thought	HUM356	3	-
Philosophy, Logic & Ethics	HUM357	3	-
Comparative Classical Philosophy	HUM358	3	-
Introduction to Comparative Religions	HUM359	3	-
Creative Writing	HUM360	3	-
Theater Project: The Living Newspaper	HUM361	3	-
From Ghalib to Bollywood	HUM370	3	-
History of Anthropological Thought	HUM372	3	-
Intellectual and Cultural History of Muslim Spain	HUM368	3	-
Introduction to Literary Modernism	HUM369	3	-
Borders and Boundaries: South Asian and Middle Eastern Feminist Fiction	HUM367	3	-

<sup>\*\*</sup>Not all electives listed will be offered in any given academic year.





Course Title	Course Code	Credit Hours	Pre-Requisite
Fundamentals of Sociology	SSC131	3	-
Introduction to Historical Methods	SSC232	3	-
History of Economic Thought	ECO105	3	-
Introduction to Social and Cultural Anthropology	SSC233	3	-
Introduction to Urban Studies	SSC234	3	-
Culture, Media, & Society	SSC216	3	_
Introduction to Political Science	SSC217	3	_
Introduction to Psychology	SSC218	3	-
Interdisciplinary Social Science Seminar	SSC219	3	_
Psychology Core Courses			
Research Methods in Psychology	PS Y301	3	SSC218
Human Development	PS Y302	3	SSC218
Introduction to Social Psychology	PSY351	3	SSC218
History and Systems of Psychology	PSY 304	3	SSC218
Culminating Experience	PSY 491/492	9	-
Psychology Electives (6 from the following list)***			
Industrial and Organizational Psychology	PSY 352	3	-
Media Psychology	PSY 353	3	-
Introduction to Cognitive Psychology	PSY 359	3	-
Abnormal Psychology	PSY 362	3	-
Cyber Psychology	PSY 366	3	-
Personality Psychology	PSYXXX	3	-
Cross-Cultural Psychology	PSYXXX	3	-
Gender Psychology	PSY364	3	-
Experimental Psychology	PSYXXX	3	-
Criminal and Forensic Psychology	PSYXXX	3	-
Counseling Psychology	PSYXXX	3	-
Clinical Psychology	PSYXXX	3	-

D. Social Science Core Courses (Contd)					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Political Science Core Courses					
Research Methods in Political Science	POL301	3	SSC217		
History of Political Thought	POL302	3	SSC217		
Introduction to Comparative Politics	POL303	3	SSC217		
International Politics	POL401	3	SSC217		
Culminating Experience	POL 491/492	9	-		
Political Science Electives (6 from the following list)***			-		
Political Psychology	POL351	3	-		
Foreign Policy in China	POL352	3	-		
State and Society	POL353	3	-		
War: Conceptual Underpinnings	POL354	3	-		
Human Rights	POL355	3	-		
Environment and Politics	POL356	3	-		
Diplomacy in a Globalized World	POL357	3	-		
Islam and International Relations	POL358	3	-		
The Modern Middle East	POL359	3	-		
Theories of Democratic Transition	POL360	3			
Democracy and Difference	POL361	3	-		
Pakistan's Foreign Policy	POL362	3	-		
Filthy Lucre: A Political History of Money	POL363	3	-		
Political Philosophy	POL 364	3	-		
Introduction to Foreign Policy Analysis	POL365	3	-		
Culture and Power in Human Societies	POL366	3	-		





D. Social Science Core Courses (Contd)				
Course Title	Course Code	Credit Hours	Pre-Requisite	
Media and Communication Studies Core Courses				
Research Methods in Media and Communications	MCS301	3	SSC216	
Gutenberg to Google: A Social History of Media	MCS302	3	SSC216	
Theories of Media and Communications	MCS303	3	SSC216	
Communication for Social Change	MCS401	3	SSC216	
Culminating Experience	MCS 491/492	9	-	
Media & Communication Studies Electives (6 from the following list)***			-	
Media and Post-colonialism	MCS351	3	-	
Media, Law, and Ethics	MCS352	3	-	
Race, Class, and Gender in Film and Television	MCS353	3	-	
The International Newsroom	MCS354	3	-	
Analyzing the News	MCS355	3	-	
Introduction to Visual Communication	MCS356	3	-	
History of Commercial Art	MCS357	3	-	
Communication in Advertising	MCS358	3	-	
Watching Films	MCS359	3	-	
History of Film	MCS360	3	-	
The Non-Fiction Film	MCS361	3	-	
Introduction to Television Studies	MCS362	3	-	
Television Newsmagazines and Documentaries	MCS363	3	-	
Theories of Film and Television	MCS364	3	-	
Narratives Across Media	MCS365	3	-	
Digital Activism and Democracy	MCS366	3	-	
Media Convergence and the Virtual Public Sphere	MCS367	3	-	
Media Anthropology	MCS368	3	-	

<sup>\*\*\*</sup>Not all electives listed will be offered in any given academic year.

	Semester-wise Sequence of Courses				
FRESHMAN	Semester - 1	Course Code	Credit Hours	Pre-Requisite	
1	English Grammar and Composition	SSC101	3	-	
2	Foreign Language - I	SSC201 / 205 / 209	3	-	
3	Calculus-I with Plane Geometry	MTS101	3	-	
4	History of Ideas - I	SSC239	3	-	
5	Fundamentals of Sociology	SSC231	3	-	
6	Introduction to Historical Methods	SSC232	3	-	
	Semester - 2	Course Code	Credit Hours	Pre-Requisite	
1	Intermediate English Grammar and Composition	SSC106	3	-	
2	Foreign Language II	SS202 / 203 / 210	3	-	
3	Introduction to Statistics	MTS102	3	-	
4	History of Ideas - II	SSC238	3	-	
5	History of Economic Thought	SSCXXX	3	-	
6	South Asian History	SSC221	3	-	
SOPHOMORE	Semester - 3	Course Code	Credit Hours	Pre-Requisite	
1	Speech Communication	HUM201	3	-	
2	Foreign Language - III	SSC2023 / 207 / 211	3	-	
3	Statistical Inference	MTS202	3	MTS102	
4	Introduction to Psychology	PS Y351	3	-	
5	Introduction to Social and Cultural Anthropology	SSC233	3	-	
6	Socioecomic Philosophy of Islam or Philosophy, Logic & Ethics	SSC301/HUM357	3	-	
	Semester - 4	Course Code	Credit Hours	Pre-Requisite	
1	Interdisciplinary Social Science Seminar	SSC219	3	-	
2	Foreign Language - IV	SSC204 / 208 / 212	3	-	
3	Pakistan History	SSC151 / 222	3	-	
4	Introduction to Political Science	SSC217	3	-	
5	Culture, Media, Society	SSC216	3	-	
6	Introduction to Urban Studies	SSC234	3	-	
SUMMER	6-Week Responsible Citizen Initiative - No Credit				

JUNIOR	Semester - 5	Course Code	Credit Hours	Pre-Requisite
1	Major Core I: Research Methods	-	3	-
2	Major Core - II	-	3	-
3	Humanities Elective - I	HUMXXX	3	-
4	Non-Specialization Elective -I	HUMXXX	3	-
5	Natural Science Elective - I	NSCXXX	3	-
6	Computational Research Methods	SSC302	3	-
	Semester - 6	Course Code	Credit Hours	Pre-Requisite
1	Major Core - III	-	3	-
2	Major Elective - I	-	3	-
3	Major Elective - II	-	3	-
4	Non-Specialization Elective -II	HUMXXX	3	
5	Non-Specialization Elective -III	HUMXXX	3	-
6	Visual Studies Elective - I	HUMXXX	3	-
SUMMER	6-Week Summer Internship	-	3	-
SENIOR	Semester - 7	Course Code	Credit Hours	Pre-Requisite
1	Major Elective - III	-	3	-
2	Major Elective - IV	-	3	-
3	Natural Science Elective - II	NSCXXX	3	-
4	Visual Studies Elective - II	HUMXXX	3	-
5	Humanities Elective - II	HUMXXX	3	-
6	Culminating Experience - I	-	3	-
	Semester - 8	Course Code	Credit Hours	Pre-Requisite
1	Major Core IV: Senior Seminar	-	3	-
2	Major Elective - V	-	3	-
3	Major Elective - VI	-	3	-
4	Visual Studies Elective - IV	-	3	-
5	Culminating Experience - II		6	

### Important Note:

- Students should complete their Responsible Citizen Initiative after completing their 4th semester at IBA, and must fulfill this graduation requirement before the end of their 6th semester.
- Students should engage their social science research internships during their third summer of enrollment, i.e. after completing their 6th semester of course work.

## **Students Impressions**



For me, IBA has always been a door of opportunities. It's multi-cultural environment provides an opportunity to groom. It also open our ways for International Scholarship. I remained a part of one such scholarship and spent a semester in United States. Academically, it trains us by offering courses fully embedded with corporate knowledge and non-academically its student societies provide us the chance to better manage events.

**Zohaib Anwar** Ac&F Batch of 2017



I am a student of BBA at IBA and so far it has been a roller coaster ride. The best part about this program is the vast variety of courses that touch upon every field. When I selected this program I had no idea about the amount of exposure I would get and the countless skills I would learn but looking bad, it was the best decision of my life.

Rahmeen Fazal BBA Batch of 2017



BBA at IBA is one of the most amazing thing that ever happened to me and definitely not what I expected. It has expanded my intellectual capacity and shaped the way I now look at life. It is challenging. It makes me push myself to my limits and even beyond that. The diversity of courses in this program has exposed me to a plethora of subject areas and the fact that I'm doing my BBA from IBA is a cherry on the top.

Maheen Yaseen Ali BBA Batch of 2017





- Master of Business Administration (MBA)
- Master of Science (Computer Science)
- Master of Science (Economics)
- Master of Science (Mathematics)
- Executive MBA (EMBA)



## Master of Business Administration Program

#### **Vision Statement**

"To become a leading MBA program of choice in the region shaping businesses and societies."

#### Mission Statement

The mission of the MBA program at IBA is to contribute to business and socioeconomic development nationally, regionally, and globally.

The program will help students develop a range of analytical, conceptual, and operational skills that address the many challenges industries face. We attract talented students through a competitive process and facilitate their transformation into responsible business leaders. Our MBA graduates are trained to think critically and independently, and to work ethically and with integrity. Our MBA faculty, using state-of-theart technologies and pedagogies, foster this learning environment through the creation, acquisition, dissemination, and application of new knowledge related to business administration.

#### **Objectives:**

- 1. Building business acumen and technical skills.
- 2. Developing qualitative and quantitative analytical abilities that lead to effective decision making.
- 3. Developing management and leadership competencies and behaviors, including teamwork, communication, drive for success, hard work, discipline and creativity.
- 4. Developing strategies for global thinking while remaining anchored in local socioeconomic and cultural realities, through the pedagogical use of local and international cases, experiential projects, international exchanges, and study tours.
- 5. Nurturing and fostering the spirit of enterprise.
- 6. Developing ethical and socially responsible business leaders.
- 7. Developing general management skills. Outcomes:

#### **Outcomes:**

#### Our graduates should have demonstrated abilities to:

- Make well-informed decisions in various business and managerial situations that lead to ethically sound and profitable results.
- 2. Consider social and environmental issues and dilemmas when addressing business problems.
- 3. Exhibit strong interpersonal and teamwork skills.
- 4. Demonstrate excellent communication and computing skills to prepare and present reports for a range of purposes.
- 5. Use the knowledge they have gained to understand and resolve real-world business problems.
- Understand complexities of strategic and operational level processes and organizational systems.
- 7. Plan and implement different business and functional proposals and agendas within the business organization.
- 8. Recognize and encourage social and cultural sensitivity and diversity within an organization.
- Identify challenges and execute opportunities related to internationalization, globalization, emerging technologies and social media.
- 10. Consistently establish professional development and personal effectiveness goals to demonstrate creativity and innovation.

### **MBA Learning Goals**

## **Communication Skills**

- · Speech: Coherent and clear delivery, time management and logical flow of ideas
- Presentation: Effective use of presentation tools and IT equipments
- · Written: Logical and clear presentation of ideas
- Technical Writing Skills: Use of correct English Grammar and language
- · Listening Skills: Ability to accurately receive and interpret messages in the communication process

## **Knowledge of Business Discipline**

- · Demonstrate an in depth knowledge and understanding of multiple business disciplines for e.g Accounting, Finance, HR etc
- · Understand and analyze the internal and external dynamics influencing business functions and ethical decision making
- · Apply integrated knowledge of all business disciplines for problem solving and decision making.
- Demonstrate knowledge of basic leadership skills and competencies

## **Team Skills**

- Understand and demonstrate ability to manage team building processes
- · Sustains a committed working relationship with colleagues
- · Question 8 challenge team members' assumptions constructively and productively with mutual respect
- Contributes workable ideas and research analysis to each other to enhance the quality of the final deliverable

## **Critical Thinking**

- · Demonstrate work ethics, intellectual curiosity, show alertness for anomalies and seek clarity and formulate questions
- Interpret data, to appraise evidence and evaluate arguments
- Reconstruct ones thought process through reflection
- · Alertness to complex and systemic situations to generate alternate solutions

## **Glocal Mindset**

- · Ability of students to understand the influence of local business and political environment, culture, practices and economics
- Ability to recognize global values, norms, attitude, practices, trends, legal environment and behavior for business decision processes
- Recognizing host location's values, practices, constraints and cultural norms when making business decisions

## **MBA Morning**

The MBA Morning Program is offered at Main Campus. Specializations include Marketing, Finance, Human Resource Management and Supply Chain Management.

### Minimum Duration / Credit Hours:

24 months / 72 Credit Hours

#### **Pre-Requisites:**

A minimum of 16 years of education out of which 4 years should have been spent in an HEC recognized university / degree awarding institute with:

A minimum of 60% aggregate marks OR A minimum of 2.50 CGPA on a scale of 4.00 (as applicable)

8 A minimum of 2 years of relevant work experience gained after graduation / completion of 16 years of education with 2.5 CGPA or 60% whichever is applicable

### **Program Structure:**

72 credit hours including MBA Project. Summer Internship is mandatory.

## **MBA** Evening

The MBA Evening Program is offered at City and Main Campuses. Specialization include Marketing, Finance, Human Resource Management and Supply Chain Management.

The duration of this program may vary depending on the capacity of the student to complete the course load during each semester.

Minimum Duration / Credit Hours: 42 months / 72 Credit Hours

### **Pre-Requisites:**

A minimum of 16 years of education out of which 4 years should have been spent in an HEC recognized university / degree awarding institute with:

A minimum of 60% aggregate marks OR A minimum of 2.50 CGPA on a scale of 4.00 (as applicable)

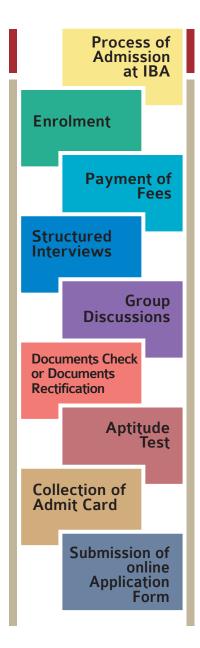
& A minimum of 2 years of relevant work experience gained after graduation / completion of 16 years of education with 2.5 CGPA or 60% whichever is applicable

## Program Structure:

72 credit hours including MBA Project.

IBA BBA Students with the CGPA of 2.5 and two years of work experience after BBA will no longer be required to appear in IBA's written entry test for MBA. They will directly be qualified for the next rounds i.e. Group discussion, Interview and Essay submission.

Program Structure					
		Course	Credit Hours		
А	Summer Orientation Program	-	-		
В	Core Courses	16	36		
С	Capstone Course (Corporate Strategy)	1	3		
D	Experiential Learning MBA Project	2	6		
Е	Electives	9	27		
	Total Credit Hours	28	72		



#### **MBA Morning & Evening Curriculum** Summer/Winter Orientation Program\* **Business Accounting Business Math and Statistics Business Economics Business Finance Business Communication** 8 Weeks Program Introduction to Marketing Excel & Access for Business Managers Business Management and Introduction to Case Method Personal Effectiveness and Communication Library Usage and Online Resources Utilization Workshops Credit Hours Semester I Credit Hours Semester II Course Code Course Code Business Finance I FIN506 3 Accounting for Decision Making ACC505 LAW502 1.5 Financial Accounting and Information Systems ACC506 3 Legal and Regulatory Environment Managerial Economics ECO501 3 Business, Government and Society ECO 505 1.5 3 MGT510 3 MKT501 Operations and Production Management Marketing Management 1.5 Organizational Behavior and Leadership MGT557 3 Applied Business Research MKT503 **Business Statistics** BUS502 2 Marketing Analytics MKT507 1.5 Business Finance II Business Intelligence BUS503 1 FIN507 3 **Total Credit Hours** 18 Macroeconomics ECO 507 1.5 International Political Economy ECO 508 1.5 **Total Credit Hours** 18

Summer Internship (6-8 Weeks)***						
Semester III	Course Code	Credit Hours	Semester IV	Course Code	Credit Hours	
Corporate Strategy **	MGT506	3	MBA Project (Core Course)	PRJ701	3	
MBA Project (Core Course)	PRJ701	3	A minimum of five courses from Electives		15	
A minimum of four courses from Electives		12	Total Credit Hours		18	
Total Credit Hours		18				

<sup>\*</sup>Mandatory for all students

#### Note:

MBA Morning students are required to complete their core courses in morning program.

<sup>\*\*</sup>Corporate Strategy can only be taken after completion of all Core Courses

<sup>\*\*\*</sup> Mandatory for Non BBA background students

## Pedagogy. MBA Project

Students in the second year are required to undertake a group project. The aim is to enable students to execute a challenging assignment within the real life business environment. The execution of the project not only helps students to develop problem-solving, interviewing and report writing skills, but also provides an opportunity for them to enhance their decision making, leadership and team building skills. The MBA Project also helps students in developing job-related networks that are important for their future. The outcome of the MBA Project is a detailed implementation plan on some managerial and organizational problems. It also enhances the final year students' sense of contribution and achievement.

The IBA - MBA Project gives organizations the opportunity to take advantage of the expertise and academic knowledge of bright and dynamic students of a premier business school in Pakistan for conducting primary and field research, analyzing the issue(s) organizations want to investigate, and coming up with cost-effective implementable solutions at no or barely minimal cost to the client organizations.







## Assurance of Learning and Feedback System:

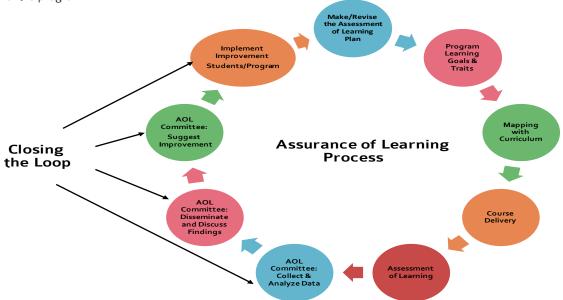
From Fall 2015, Assurance of Learning and Feedback System has been implemented in the MBA program to enhance the performance of the students and quality of the program. Assurances of Learning Standards evaluate how well the school accomplishes the educational aims at the core of its activities. It is the systematic collection, review and use of information about the education program for the purpose of improving students learning and development. It is a Systematic process for determining and revising degree program learning goals; designing, delivering, and improving degree program curricula to achieve learning goals

#### **AOL** - Assessment Process:

- Step 1: Establish learning goals and objectives
- Step 2: Alignment of curricula with adopted goals
- Step 3: Identification of assessment instruments and measures:
  - During Selection of MBA students: MBA Test, GD, Interviews
  - Course-Embedded Measures: Rubrics
  - Demonstration through stand-alone testing or performance: Comprehensive Exam and Final Year MBA Project
- Step 4: Collection, analyzing and dissemination of assessment information
- Step 5: Using assessment information for continuous improvement including documentation that the process is being carried out on an ongoing, systematic basis

## **AOL** - Feedback System:

Based on the findings of AOL data, individual student's performance assessment and feedback system has been developed to provide feedback on the individual student's performance in each course and semester. This system helps in identifying the weak areas and suggesting corrective measures to improve the performance of the student and quality of the program.



	Our MBA students have successfully completed projects for following client organizations				
S.No.	Title	Client Organization			
1	Image Repositioning of Aladin Park (A. A. Joyland Pvt. Ltd.)	A. A. Joyland			
2	Re-Launching Strategy for Similac Mom	Abbott Pharma			
3	Business Feasibilities on Dates, Banana, Mango, Wheat & Livestock	Abraaj Group			
4	Feasibility Report on Healthcare for Abraaj	Abraaj Group			
5	Impact Investment in Primary Healthcare Karachi	Abraaj Group			
6	Business Plan for Abudawood in Foods Industry	Abudawood			
7	Development of Business Strategy for Adamjee Automotive (Pvt.) Ltd.	Adamjee Automotive			
8	Optimization of Aga Khan University Hospital's MRI and CT Scan Procedures	Aga Khan University Hospital			
9	Feasibility Study for the Aga Khan University Hospital (AKUH)	Aga Khan University Hospital			
10	Strategic Analysis for the Underutilization of Cold Storage at Agility	Agility Logistics			
11	Agility Logistic Pakistan Benchmarking Project	Agility Logistics			
12	Alternative Distribution Channels for Al Meezan Investment Management Limited	Al Meezan Investment			
13	An Analysis of the Mutual Fund Industry of Pakistan - Potential & Challenges	Al Meezan Investment			
14	Amreli Steels: Brand Assessment	Amreli Steels			
15	Implementing Sustainable Marketing Strategies (for New Product Launch at AMS Pakistan)	AMS Pakistan			
16	Feasibility Study for Revenue Generation Avari Xpress Hotels	Avari Hotels			
17	Bank Islami - Customer Awareness & Satisfaction	Bank Islami			
18	Beam School Business Plan	Beam Dubai			
19	C&M Management: Launching a new sub-division	C&M Management			
20	Chevron Pakistan - Commercial & Industrial Sales Strategy	Chevron Pakistan			
21	Solar Energy for Telecom Sector	CMPak ZONG			
22	TUC - Feasibility Analysis for Launch of new Flavor of Crackers	Continental Biscuits Ltd			
23	Human Resource Restructuring Dolmen Group	Dolmen Group			
24	Market Research on New Ventures in Growing Up Powder Milk Category	Engro Foods Limited			
25	Live Case on Engro Foods Retail Distribution	Engro Foods Limited			
26	Domestic Polyethylene Pipe Market Analysis (Engro)	Engro Chemicals			
27	Engro Fertilizers Limited Supply Chain Process Re-Engineering	Engro Fertilizers			
28	International Grain Market Study for Engro Foods Limited	Engro Foods Limited			
29	Engro Foods Limited Project MENA	Engro Foods Limited			
30	Pre - Feasibility Study for Engro Foods Limited in the Waste to Energy Sector	Engro Foods Limited			
31	Logistics Optimization and Supply Chain Feasibility of Engro Foods Limited	Engro Foods Limited			
32	Exploratory Study of Halal Meat Processing Plant Engro Foods Ltd.	Engro Foods Limited			
33	Hospital Waste Management: A Study of the Current Scenario in Karachi	Engro Polymer & Chemicals			
34	Understanding the Evolving Men Shaving Habits	Gillette Pakistan Limited			
35	International Textile Limited: Lead Time Reduction of MJS Division	International Textile Limited			
36	JS Bank: A Study of Consumer Preferences	JS Bank			
37	Business Strategy for Junaid Jamshed's Kid's Apparel Brands Chotu & Kaliyaan	Junaid Jamshed			
38	Junaid Jamshed (Pvt) Limited Brand Strategies for J.Ladies, Clothes	Junaid Jamshed			

	Our MBA students have successfully completed projects for following client organizations				
S.No.	Title	Client Organization			
39	Marketing Strategy for Junaid Jamshed (J. Kurta)	Junaid Jamshed			
40	JWT Brand's Contribution Towards Change	JWT			
41	KESC - Study for Improvement	KESC (K-Electric)			
42	KGM Textile Feasibility Report	KGM Textile			
43	Research Analysis for Freight Cost Reduction of LOTTE Pakistan	LOTTE Pakistan			
44	Comprehensive Marketing Strategy for Lucky Cement	Lucky Cement			
45	Marketing Strategy for Marie Stopes Society Pakistan	Marie Stopes Society Pakistan			
46	Market Potential Analysis of Nutraceutical Market (Martin Dow)	Martin Dow			
47	Market Feasibility Report for Rice Bran Oil	Matco Rice Processing			
48	Devising Marketing Strategy - Capturing Maximum Market Share for MSC	Mediterranean Shipping Company			
49	Memon Medical Institute Hospital: Marketing Strategy	Memon Medical Institute Hospital			
50	Consumer Behavior of Cough Syrup (Merck)	MERCK			
51	Employer Branding at Mobilink	Mobilink			
52	Marketing Plan of CMFC for Sidat Hyder Morshed Associates	Morshed Associates			
53	Mughal Foods	Mughal Foods			
54	Business Plan for Split ACs at Orient Energy Systems (Private) Ltd.	Orient Energy Systems (Private) Ltd.			
55	Marketing Communication Strategy for Ariel	P&G			
56	Communication Strategy for P&G Hair Care Category	P&G			
57	Pak Suzuki Motors Co. Ltd.	Pak Suzuki Motors Co. Ltd.			
58	Brand Audit & Marketing Strategy for Pakistan Cables Limited	Pakistan Cables Limited			
59	Report on Market Research of Soft Grade PVC in Pakistan (Pakistan Cables)	Pakistan Cables Limited			
60	Pak-Kuwait Investment Company Comparative Study on Sources of Power Generation in Pakistan	Pak-Kuwait Investment Company			
61	Marketing Strategy for PARCO in Lubricants Industry	PARCO			
62	Wind Power in Pakistan (Pak-Arab Refinery PARCO)	Parco			
63	Understanding Snack Food Consumption and Preferences of School Students in Karachi, Pakistan	Peak Freans EBM			
64	Princely Jets - Aerial Firefighting	Princely Jets			
65	Comprehensive Distribution Strategy for PSO in Lubricants	PSO			
66	Retail Business Plan Reckitt Benckiser Pakistan	Reckitt Benckiser Pakistan			
67	Branding of Fresh Fruits in Pakistan	Roshan Enterprises			
68	Shan Foods (Pvt) Ltd - Feasibility Study of Alternate Warehouse Location	Shan Foods			
69	Silk Bank	Silk Bank			
70	Market Research & Strategy for Easy Paisa	Telenor - Easy Paisa			
71	Up Selling Telenor Data Services to SME Clients	Telenor Pakistan			
72	Marketing Strategy for Thal Engineering	Thal Engineering			
73	Feasibility Study for Online Grocery Shopping	Tohfay			
74	Strategic Turnaround Business Model-Transfood Industries	Transfood Industries			
75	Business Strategy for TRG: Market research, Recommendations and Critical Success Factors	TRG			
76	Assisting with the Pre-Launch Campaign of UBL Foreign Currency Prepaid Visa Card	UBL			

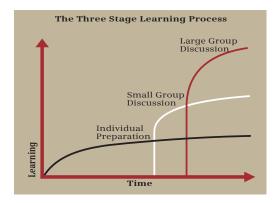
#### Case Method

Cases are one of the popular and effective tools used in learning all around the world, especially at graduate level. The case method allows students to experience real life situations, pressures and challenges, preparing them to become truly professional in their respective field of work. It is the best way to apply theory to practice and develop analytical, decision-making, application, writing, time management and creative skills. The illustration (right) shows the growth in learning when cases are discussed in large groups in a short span of time. At IBA, we believe in maximizing the learning process.

## **Advising Role**

MBA Program Office is the MBA student's help center and advisor. It will counsel the students on academic issues such as selection of courses and teachers. It also provides an opportunity to students to discuss their personal issues (such as managing stress related to academic and other problems). Its advising role includes:

- Academic and program reviews
- Tutor referrals
- Course selection
- Information about other resources



# Some of the other roles of MBA office include:

#### Role in Student Activities

Students who actively engage in IBA activities will experience a first-hand sense of community service aimed at promoting a richer overall IBA experience. The office facilitates student involvement through their work with:

- Distinguished Guest Lecture Series
- Seminars & Conferences
- IBA-wide social events
- IBA club activities

# Facilitating Student and Faculty Involvement

To become directly involved with the MBA Program Office, students can join the (MBAPO) Advisory Board. Advisory Board members will include both students and faculty, who will work to improve MBAPO services and provide critical input in shaping processes and policies and managing office tasks.

## **Career Counseling**

IBA.s educational approach is designed to help the students identify a field of interest, acquire the knowledge, skills and experience to excel in that field. The officer is to help the students find the right job in the right field with the right employer through:

- Supporting the students in their career development
- Aligning the needs of employers with the competencies of our graduates
- Organizing professional lectures, seminars, panel discussions and workshops on career development and related skills.

## **Required Documents**

The following documents must be submitted at the

time of Group Discussion/Interview failing which enrolment will be liable to cancellation and fee shall not be refunded.

## **Attested Copies**

- a. Secondary School Certificate / O Level Certificate
- b. Higher Secondary School Certificate / A Level Certificate
- c. Bachelor Degree & Transcript
- d. Master Degree & Transcript
- e. CNIC or Birth Certificate

## **Original Documents**

- f. Migration Certificate: Issued by a Pakistani University / Board last attended other than IBA (Original Migration Certificate will not be returned back)
- g. Two recent Passport size photographs duly attested by the concerned Program Office
- h. Work Experience Letters (post qualification)

## **Grading & Evaluation**

The rules pertaining to grading and evaluation of courses in the MBA program are appended as under:

- The matrix on the right identifies in a comparative manner the particulars of the 'fixed' and 'relative' grading systems that are in use in the MBA program.
- The final percentage or final scores are not applicable in the relative grading system. A student's final score will determine his / her position and ranking in the class i.e. top 10% to 20%, middle 65% to 75%, lower middle 10% to 20%, and low 0% to 10% of the class. In a class size of 30 or less, relative grading will not be applicable. In the relative grading system, approximately 10% to 20% top

60% to 75% will receive B(+) or B grades, 10% to 20% will receive B(-), C (+), C, C(-) grades, and about 0% to 10% students will end up with an F grade. However, in the fixed grading system the grades assigned will depend on actual marks obtained by the student.

- A student with GPA 2.0 to 2.2 will be put on probation for the next semester. A student having less than 2.0 GPA is dropped from the rolls of the Institute forthwith. Probation rules will apply to students on probation. Students with 50% of all their semester results in the lowest grade will require special mentoring and feedback sessions with the faculty, MBA director and faculty mentors.
- Students can withdraw from the course according to IBA's withdrawal policy and will get a 'W' grade (however, it will not be counted as a deficiency). It is the choice of the faculty to decide which grading system they would like to apply. Any changes from normal bands (relative grading system) will need prior approval from Dean and Director. MBA students performing extremely poor in MBA project can be assigned an "I" (incomplete grade). Such students will be assigned extra work by the MBA Program Office and the Director MBA program to overcome the incomplete grade. After completing the assigned extra work (small project or case study writing), a maximum "C-" grade can be assigned by the project or case writing supervisor. If a student fails to pass certain courses and yet manages to maintain a CGPA equal to or above 2.2, he / she will be allowed to repeat and clear the course(s) or substitute(s) wherever permissible, before the degree is awarded to him / her. The CGPA is computed at the end of each semester, including a summer term that a student might have enrolled in.

# **GPA** Requirement for Award of MBA Degrees

An MBA Program student whose CGPA in the final semester is less than 2.2 but not below 2.0 shall also be required to repeat one semester of the lowest academic standing or certain courses in order to be eligible for the award of MBA degree. If the student improves the CGPA (minimum 2.2), degree shall be awarded (other conditions applicable), otherwise only a transcript of credits shall be issued.

#### **Summer Semester**

Students doing an internship during the summer semester are not allowed to register for an advanced credit or additional course. However, such students are allowed to remove deficiency in one course during the summer semester. Students not doing an internship can clear up to two deficiencies, or enroll for two advanced courses in the summer semester. Students may withdraw from one course during the summer semester. Withdrawal should be sought within a week after the announcement of the mid-term examination result.

## New Elective - International Field Project Course

International field trips and study tours are popular forms of teaching and learning across the globe in the MBA Program. To give our MBA students exposure about nature of globalization and Global Mindset, a new elective 'International Field Project Course' has been offered from Fall 2015. Comprised of faculty-led foreign and local trips, this course has been designed to enrich the curriculum and pedagogy at IBA. Both students and faculty advisors would add value in academics by bringing with them enhanced knowledge of best business practices followed around the world through visiting different international and

multinational corporations, top universities, international organizations, factories, industries and cultural sites located in US, China, India, Malaysia, Singapore, UAE and Turkey; by participating in different cultural activities, conferences and seminars; and meeting leading business executives, managers, government officials and IBA alumni. Local field trips and study tours to

### **Grading Matrix**

Fixed Grading					
Grade	Percentage	GPA			
А	93-100	4.00 Grade Points			
А	87 - 92	3.67 grade points			
B+	82 - 86	3.33 grade points			
В	77 - 81	3.00 grade points			
B-	72 - 76	2.67 grade points			
C+	68 - 71	2.33 grade points			
С	64 - 67	2.00 grade points			
C-	60 - 63	1.67 grade points			
F	0 - 59	0.00 grade points			

Relative Grading					
Grade	Percentage	GPA			
А	4.00 grade points	Approx. 10% - 20%			
Α-	3.67 grade points	Students			
B+	3.33 grade points	Approx. 65% - 75%			
В	3.00 grade points	Students			
B-	2.67 grade points				
C+	2.33 grade points	Approx. 10% - 20%			
С	2.00 grade points	Students			
C-	1.67 grade points				
F	0.00 grade points	Approx. 0% - 10% Students			
W	Withdraw from the course	Students			
1	Incomplete grade				

various industrial sites, including Karachi, Hub, Nooriabad, Jamshoro , Lahore, Multan, Gujranwala, Sialkot, Faisalabad, Gujrat, Attock and Gadoon Amazai, would also be part of this course to give students understanding of different businesses and functioning of different organizations across Pakistan. meetings and visits, the internship report and the company's evaluation.

# Work Experience Requirement for Admission

Work requirement for admission to IBA.s MBA program will comprise of 2 years of post qualification work experience in multinationals, large domestic corporations, and large family businesses. For self employed and smaller family businesses the 'Work Evaluation Committee' will decide if the experience is acceptable for admission to IBA. The work evaluation committee will comprise of a member of the Admission Committee, Director MBA Program and an IBA alumnus with at least 10 years of work experience. This work requirement will only be considered, provided it has been achieved after applicants have obtained 16 years of education with 2.5 CGPA or 60% (whichever is applicable) and satisfy the minimum eligibility requirement for admission in the MBA Program. The education requirement should meet the criteria established by HEC. Work experience gained during CA, ACCA (Affiliate). Pharm-D and MBBS will not be considered a relevant work experience for admission to the MBA Program.

## Comprehensive Examination

Every student is required to pass a comprehensive examination on completion of all MBA courses. This examination tests the students' grasp of the total course offerings and provides them with an opportunity to recapitulate and integrate their knowledge prior to earning the MBA degree. The student is eligible for a transcript / degree only after passing the comprehensive examination. However,

he may obtain a provisional certificate on completion of the course requirement. The MBA Director is responsible for providing the comprehensive exam, evaluation of the exam copies and the final results. The controller of examination is responsible for conducting this exam. The six-hour examination is held after every regular semester. A maximum of three attempts are allowed to clear the examination. Students who fail to pass the comprehensive examination are eligible only for the individual course certificates.

# Summer & Winter Orientation Programs

Summer & Winter Orientation Programs

Summer Orientation Program (SOP) for Fall intake and Winter Orientation Program (WOP) for Spring intake have been introduced for all newly admitted students of MBA. Summer/Winter Orientation Program will set the tone and level of rigor for the entire MBA program. These Programs are to make students familiar with the business courses, case method, team building and ethics, norms and values of IBA. Spread on seven weeks, this program is mandatory for all MBA students, irrespective of their undergrad degree, to prepare them for the intensive and rigorous IBA MBA program. Attendance and successful completion of Summer/Winter Orientation Program is prerequisite for admission in MBA program. If a student fails in exam or gets short of attendance in any course, that student will not be allowed to take respective MBA first semester course, instead he/she will be asked to take undergrad level course in that field or defer his/her admission and join Summer/Winter Orientation Program next semester.

## **International Exchange Students**

This is a new effort of IBA to provide international exposure to its students in a foreign university. Under this program, a few students will be selected and exchanged with a well-known foreign university for one whole semester. This will help them to achieve the experience of learning in a foreign university

environment, interact with people of different cultures and also learn about a different setup and system. This exercise will improve students' personal growth and will be helpful once they enter their professional lives.

#### General

Both campuses of the IBA have spaces dedicated to the management of its various programs. The MBA offices at main campus are located in the Tabba Block. The staff of the MBA Program Office is dedicated to providing students with the best possible educational environment. To this end, we strive to ensure that our students have the assistance that is essential to the MBA Program through timely information flows, the establishment of a strong support network, and the encouragement of student involvement in IBA's life.

### **MBA Program Office**

The MBA Program Office is committed to being the best service unit of its kind, providing the highest levels of courtesy, responsiveness, and professionalism.

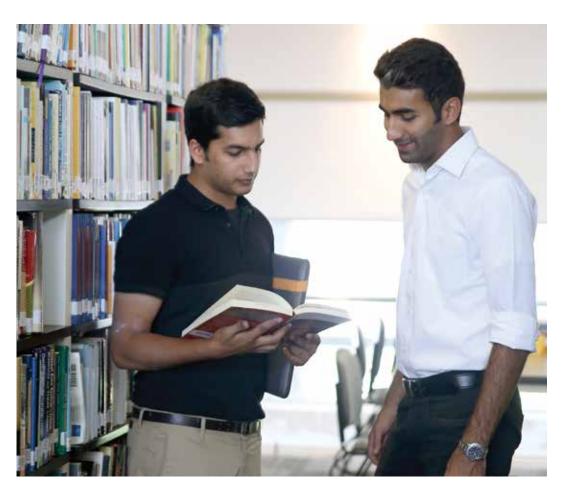
Its major responsibilities include:

- Organizing Pre-Term
- Managing course registration
- Course scheduling
- Setting the academic calendar
- Maintaining student records
- Monitoring of students. Program requirements, majors, and waivers
- Course audits for degrees and graduation requirements
- Directing international programs
- Publishing primary sources of information
- Nominating resource persons and information guides
- Issuing class bulletins
- Maintaining Program Office website
- Issuing class bulletins
- Maintaining Program Office website

Course Title	Course Code	Credit Hours	Pre-Requisite
tg. Info. System with SAP	ACC507	3	-
iditing Theory & Practice	ACC557	3	-
RS & Financial Reporting in Pakistan	ACC559	3	-
nalysis of Financial Statements	ACC561	3	ACC501
oject Evaluation & Financing	ACC589	3	ACC501
usiness Analytics	BUS501	1.5	-
ternational Field Project Course	BUS-XXX	1.5	-
orporate Governance & Practices in Pakistan	LAW553	3	-
evelopment Economics and Issues in			
akistan Economy	ECO530	3	ECO531, ECO532
ternational Trade	ECO539	3	ECO531
ublic Policy Analysis: Theory and Practice	ECO560	3	ECO531 / ECO501 /
nvironmental and Resource Economics	ECO561	3	ECO501 /
nancial Economics	ECO562	3	-
Ionetary Economics	ECO566	3	-
later Economics and Policy	ECO57 4	3	ECO501 / ECO531 /
he Microeconomics of Policy Analysis	ECO575	3	ECO501 / ECO531 /
abor Economics	ECO654	3	-
nancial Intermediation	FIN531	3	-
dvance Credit Management	FIN532	3	-
nancial system – process, players, status and prognosis	FIN533	3	-
ne Strategic Management of Banks	FIN541	3	-
ternational Financial Management	FIN552	3	ECO501 / FIN507
vestment Banking & Financial Services	FIN554	3	FIN507
ecurity Analysis & Capital Markets	FIN556	3	FIN507
egulation & Financial Markets	FIN558	3	FIN507
lamic Banking & Finance	FIN570	3	-
dvanced Corporate Finance	FIN560	3	FIN507
dvanced Portfolio Management	FIN563	3	FIN 507
reasury and Fund Management	FIN565	3	FIN507
sk Management	FIN567	3	FIN507
erivatives & Risk Hedging	FIN568	3	FIN507
nancial Econometrics	FIN569	3	MTS506 / FIN507
inancial Modeling	FIN574	3	FIN507

Course Title	Course Code	Credit Hours	Pre-Requisite
Seminar in Finance	FIN577	3	FIN507
Fixed Income Securities	FIN594	3	-
Financial Analytics	FINXXX	1.5	-
Entrepreneurial Management	MGT507	3	-
Strategic Human Resource Management	MGT512	3	_
Business Strategy	MGT513	3	-
Strategic Management	MGT552	3	_
Project Management	MGT555	3	-
Competitive Strategy From a Customer's Perspective	MGT556	1.5	-
nternational Market Entry Strategies	MGT558	3	-
Recruitment and Selection Techniques	HRM530	3	_
Organizational Development	HRM552	3	
eam Management	HRM557	3	_
eading the Change Process	HRM558	3	-
Performance and Compensation Management	HRM562	3	
raining and Development	HRM571	3	-
Branding and Creative Corporate Communication	MKT506	1.5	
Advertising	MKT551	3	MKT 501
Consumer Behavior	MKT552	3	
Social Marketing	MKT556	3	MKT501
Customer Ascendancy	MKT558	3	MKT 501
Supply Chain Management	MKT559	3	MKT501
Brand Management	MKT561	3	MKT501
Media Management	MKT566	3	MKT 501
Social Media Marketing	MKT569	3	-
Markstrat	MKT573	1.5	
Retailing	MKT586	3	MKT 501
Personal Selling	MKT651	3	MKT501
Sales Management	MKT653	3	MKT501
Services Marketing	MKT656	3	MKT501
Strategic Marketing	MKT656	3	MKT501
Business to Business Marketing	MKT658	3	MKT501

List of Electives (Contd)						
Course Title	Course Code	Credit Hours	Pre-Requisite			
Global Marketing Management	MKT659	3	MKT 501			
Strategic Sourcing & Negotiation Skills	MKT571	3	-			
Dynamic Distribution & Logistics	MKT557	3	-			
Strategic Sourcing & Procurement	MKT570	1.5				





# MS (Computer Science)

Required Courses							
MS Computer Science has 6 track, with a different set of Pre-req (Foundation) Courses							
	MS with Thesis MS without Thesis						
	Courses Credit Hours Courses Credit Hours						
А	CS Electives*	8	24	9	27		
В	Research Survey	Equivalent to 1 course	3	Equivalent to 1 course	3		
С	Research work	Equivalent to 1 course	3	0	0		
	Total	10	30	10	30		

<sup>\*</sup> Each CS Elective is of 3 Credit Hours

The Faculty of Computer Science (FCS) is an exciting place to learn about the latest developments in the area of Computer Science as well as to perform research with a high social impact. The MS program at the FCS enjoys the advantages of a rich set of courses available at both the MS as well as PhD level. From 2014 the MS Program is being offered as a Full Time Morning Program along with existing evening counterpart. The MS program comprises 6 tracks, each completely aimed at a particular field of specialization. The diverse backgrounds of students that come from various fields of study into this MS program, require a customized and tailored approach towards building the relevant fundamentals for each track. Moreover, the curriculum has been designed so that it is on a par with IEEE / ACM guidelines. This ensures that the tracks do not lose relevance in the wake of the rapidly changing landscape of computing technologies. The potential of this program, in terms of imparting useful advanced computing skills and professional growth, is measured by the readiness of the job market and advanced learning schools, in absorbing our graduates. This measure has always been quite high; amongst other factors, the curriculum design ensures that the graduates can creatively find technology-based solutions, think critically and

analyze systems and emerging problems independently. The MS program has two basic categories, MS with thesis, and MS without thesis.

The MS (Computer Science) program is of 30 credit hours with a thesis or research survey option. For those students who opt for thesis, 24 credit hours of course work, 3 credit hours of Research Survey and 3 credit hours of thesis work are required. For students opting for course work only, 27 credit hours of course work along with 3 credit hours of Research Survey is required. The Research Survey course must be taken after students have completed 18 credits and must be supervised by an approved faculty member. The course work may be taken from multiple specialization tracks and a student would be required to take courses from at least two tracks. Specialization tracks include Net-Centric Computing, Human Computer Interaction, Software Engineering, Intelligent Systems, Information Management, and Theoretical Computer Science. Within a specialization track a minimum of 2 to a maximum of 4 courses may be taken. Each track has their own set of prerequisites which are usually BS level Computer Science courses. MS students may also take courses at the PhD (600) level for credit.



#### The Key-Objectives of the MS-CS program are:

- Offer maximum curriculum flexibility in order to enable students to engineer their graduate education towards their ambitions and goals in their computing professions.
- Facilitate job promotion for students, from mid-level IT positions to senior level positions, by adding to their skills and academic qualifications.
- Empower students with skills required to address modern computing challenges of their respective organizations.
- Expose students to qualified faculty with international recognition, and encourage them to undertake research that may potentially lead to doctoral work.

# MS (Computer Science)

	List of Specialization Tracks (Courses and Pre-Requisites)					
Track	Specialization	Course Title	Course Code	Credit Hours	Pre-Req	
		Advanced Computer Networks	ICT511	3		
	Net-Centric	Mobile Computing	ICT558	3	"Operating Systems,	
1	Computing	Wireless Communication	ICT553	3	Data Communications & Networks,	
	(Track-NCC)	Information Security	ICT554	3	Introduction to Statistics"	
		Distributed Systems	ICT555	3		
		Advanced Human Computer Interaction	CSE575	3		
	Human	Usability Engineering	CSE576	3		
	Computer	Interactive Design	CSE577	3	"Software Engineering,	
2	Interaction	GUI Design	CSE578	3	Visual Programming"	
	(Track-HCI)	Multimedia and Multi-modal Systems	CSE579	3		
		Advanced Web Technologies	ICT512	3		
		Software Quality Assurance	CSE566	3		
	Software	Requirements Engineering	CSE567	3	Object-Oriented Programming,	
3	Engineering	Software Project Management	CSE503	3	Introduction to Software	
	(Track-SE)	(Track-SE) Web Engineering	CSE569	3	Engineering	
		Advanced Web Technologies	ICT512	3		
		Knowledge Discovery & Data Mining	CSE652	3		
	Intelligent	Computational Intelligence	CSE659	3	"Artificial Intelligence,	
4	Systems	Probabilistic Reasoning	CSE565	3	Object-Oriented Programming,	
	(Track-IS)	Computer Vision	CSE660	3	Introduction to Statistics"	
		Big Data Analytics	CSE668	3		
		Operations & Technology Management	MIS502	3		
		Enterprise Integration	MIS503	3		
		Social Computing Applications	MIS564	3		
	Information	Information Industry Structure & Competitive Strategy	MIS513	3	"Database Systems,	
5	Management	SAP ABAP Programming I	MIS541	3	Software Engineering"	
	(Track-IM)	SAP ABAP Programming II	MIS542	3		
		Advanced Data Warehousing	MIS552	3		
		Knowledge Discovery and Data Mining	CSE652	3		
	"Theoretical	Formal Methods (CSE572)	CSE572	3	"Operating Systems	
6	Computer	Advanced Analysis of Algorithms (CSE651)	CSE651	3	"Operating Systems, Computer Architecture,	
б	Science	Scientific Computing & Software Calculus-III	MTS551	3	Algorithms"	
	(Track-TCS)"	Combinatorial Optimizations	CSE654	3	Aiguritiiris	

# MS (Computer Science)

List of CS-Electives					
Course Title	Course Code	Credit Hours	Pre-Requisite		
Enterprise Integration	MIS503	3	Track-IM		
Logistics and Supply Chain Management	MIS 550	3	CSE 341		
Advanced Data Warehousing	MIS 552	3	Track-IM		
Mobile Marketing Strategies	MIS 553	3	-		
Auditing IT Infrastructures	MIS 555	3	Track-IM		
Advance E-Commerce	MIS 565	3	MIS 456		
Fundamentals of SAP-ABAP Programming I	MIS 566	3	CSE 341		
Simulated Approach to SCM	MIS 567	3	MKT 201, MGT 311		
Theoretical Foundations of IS	MIS 651	3	Track-IM		
Advanced Theoretical Concepts in IS	MIS 653	3	MIS 651		
Software Project Management	CSE 503	3	CSE 312		
Image Processing for Recognition	CSE 556	3	CSE 559		
Image Processing	CSE 559	3	Track-IS		
Software Systems Engineering	CSE 564	3	CSE 141, CSE 142		
Software Quality Assurance	CSE566	3	Track-SE		
Requirements Engineering	CSE 567	3	Track-SE		
Advanced Human Computer Interaction	CSE 575	3	Track-HCI		
Knowledge Discovery and Data Mining	CSE 652	3	Track-IM		
Combinatorial Optimization	CSE 654	3	Track-IS		
Probabilistic Reason	CSE 655	3	Track-IS		
Essentials of Theoretical Computer Science	CSE 657	3	Track-TCS		
Knowledge Management and E-Learning Systems	CSE 658	3	Track-IM		
Computational Intelligence	CSE 659	3	Track-IS		
Computer Vision	CSE 660	3	Track-IS		
Semantic Web	CSE 661	3	Track-IS		
Parallel Processing	CSE 662	3	Track-TCS		
Information Retrieval and Web Search - I	CSE 665	3	Track-IM		
Information Retrieval and Web Search - II	CSE666	3	CSE 665		
Big Data Analytics Advanced Web Technologies	CSE 668 ICT 512	3	CSE 652 CSE 308		
-		3			
Distributed Systems	ICT 555		CSE 341		
Information Security	ICT 554	3	Track-IM		
RFID Technologies	ICT 556	3	Track-NCC		
Computer Communication Networks & Simulation - I	ICT 651	3	CSE 248, MTS 102		
Computer Communication Networks & Simulation - II	ICT 654	3	ICT 651		
Wireless Sensor Networks	ICT 659	3	CSE 248, CSE 141, MTS 102		
Advanced Topics in Wireless Sensor Networks	ICT 660	3	ICT659		
Applications of Mathematical and Computational Techniques to Networking	ICT 661	3	Track-NCC		
WSN Protocols and Applications	ICT 662	3	CSE 248		
WSW Frogocois and Applications	ICT 002	3	CSE 248		

Required Courses for MS Economics					
	Course Load				
		Course	Credit Hours		
Α	Foundation Courses	5	15		
В	Core Courses	7	21		
C	Elective Courses	4	12		
D	Thesis	1	9		
	Total	17	57		

## Master of Science (Economics)

The MS (Economics) program is designed to provide a solid background in theory, quantitative methods, and applications appropriate to the needs of economists involved in policy planning, analysis, and forecasting of public and private sectors. The curriculum of this program has been designed to meet the international standards. We hope the students will find the program to be intellectually challenging and personally rewarding.

This program emphasizes on applied economics, and caters to the growing market for economic analysts. Graduates from this program will be able to teach and conduct quality research in the fields of their interest, and will be prepared for careers in universities, research organizations, business enterprises, government organizations, and multinational companies.

## Eligibility:

Candidates must have a minimum of 16 years of education / equivalent degree in any discipline recognized by HEC with minimum 2.5 out of 4.0 CGPA or 60% marks in the last degree. All equivalency claims shall be evaluated by HEC.

Experience is not a mandatory requirement for admission to this program. Candidates awaiting results may apply for admission. In such cases the admission will be conditional pending submission of the required results before the date of commencement of classes.

### **Admission Criteria:**

Admissions to all programs at the IBA are granted on merit, and there are no reserved seats of any category. The criterion for admission is the performance of the applicant in aptitude test and interview. The aptitude test is a written test of three subjects: English, Mathematics and Economics.

Candidates who have a minimum 650 score in quantitative section of GRE (International) or 160 score in quantitative section of Revised GRE (International) are exempted from the IBA admission test.

The candidates who pass the aptitude test qualify for the interview.

#### **Duration:**

MS (Economics) 2 years

Maximum time allowed 5 years

## Financial Assistance:

All full time MS students will be provided financial support (Rs. 30,000 / - per month for maximum of two years) through teaching and research assistantship programs at IBA. Students seeking financial assistance, must register in four courses in each semester in Fall and Spring semesters. After the first semester in the program, eligibility for financial support is 3.0 CGPA in courses taken in MS (Economics) program at IBA.

## Master of Science (Economics)



## Requirements for MS (Economics)

Course requirements are given as:

MS Courses: 48 Credit Hours (16 Courses)

MS Thesis: 9 Credit Hours

# MS (Economics)

	Semester-wise Sequence of Courses			
First Year	Semester – 1 (Fall)	Course Code	Credit Hours	Pre-Requisite
1	Microeconomic Theory I	ECO531	3	ECO533
2	Macroeconomic Theory I	ECO532	3	-
3	Mathematics for Economists	ECO533	3	-
4	Mathematical Statistics and Linear Algebra	MTS536	3	-
	Semester – 2 (Spring)	Course Code	Credit Hours	Pre-Requisite
1	Microeconomic Theory II	EC0631	3	ECO531
2	Macroeconomic Theory II	EC0632	3	ECO532
3	Econometrics I	ECO537	3	MTS536
4	Issues in Pakistan Economy	ECO530a	3	ECO531,ECO532
	Semester – 3 (Summer)	Course Code	Credit Hours	Pre-Requisite
1	Mandatory Field Internships			
Second Year	Semester – 4 (Fall)	Course Code	Credit Hours	Pre-Requisite
1	Econometrics II	ECO538	3	MTS536,ECO537
2	International Trade	ECO539	3	ECO531
3	Development Economics	ECO530b	3	ECO531,ECO532
4	Elective I	-	3	-
	Semester – 5 (Spring)	Course Code	Credit Hours	Pre-Requisite
1	Research Methodology	ECO591	3	ECO53816318 632
2	Elective II	-	3	-
3	Elective III	-	3	-
4	Elective IV	-	3	-
	Semester – 6 & 7 (Summer & Fall)	Course Code	Credit Hours	Pre-Requisite
	MS Thesis	EC0699	9	-

Course Title	Course Code	Credit Hours	Pre-Requisite
Economic Forecasting	ECO555	3	ECO537, ECO570
Environmental and Resource Economics	ECO561	3	EC0631, ECO533
Financial Economics	ECO562	3	EC0531, ECO533
Health Economics	ECO563	3	EC0631
History of Economic Thought	ECO564	3	-
Islamic Economics	ECO565	3	ECO531, ECO532
Monetary Economics	ECO566	3	EC0632
Public Economics	ECO567	3	ECO531, 532 & 533
Transport Economics	ECO568	3	ECO531, ECO533
Time Series Modeling	ECO570	3	ECO537
Industrial Economics	ECO571	3	EC0631
General Equilibrium and Welfare Economics	ECO572	3	EC0631, ECO533
Game theory and Competitive Strategy	ECO573	3	EC0631
Combinatorial Optimization	CSE654	3	ECO533 & ECO531
Labor Economics	EC0654	3	EC0631, ECO538
Public Policy Analysis: Theory and Practice	ECO560	3	ECO531/501/102 /104 /103/113
The Microeconomics of Public Policy Analysis	ECO575	3	ECO301/312/501/531
Environmental and Resource Economics	ECO561	3	ECO301/312/501 531

#### Dissertation Defense:

Students are expected to submit and defend their dissertation within next six months after the successful completion of their course work

For further details Visit:economics.iba.edu.pk

## Master of Science (Mathematics)

In order to be eligible to apply for admission in MS leading to PhD in Mathematical Sciences, a candidate should:

- a. Possess a BS / MSc (16 year education) degree from a recognized university in Mathematics.
- b. Have passed the last examination with at least 60% marks (or CGPA 2.5 whatever applies)

(Experience is not mandatory for admission to MS Mathematics program).

#### **Admission Process:**

(Only Applicants with Majors in Mathematics (in BS or MSc) allowed for 2013 admissions)

All eligible candidates would be required to:

- a. Appear in and qualify an aptitude test (equivalent to GRE general / GAT general of NTS), and if successful appear in an interview / presentation before a selection panel.
- b. Candidates, who have a minimum 650 score in quantitative section of GRE (International) or 160 score in quantitative section of Revised GRE (International) are exempted from the IBA aptitude test, but not from the interview.

#### **Duration:**

MS: 2 - 4 years.

MS - PhD:4- 6 years. (Max possible is 8 years)

#### **Financial Assistance:**

Full time MS students can opt for financial support which is provided in the form of assisting duties for teaching and research. This support is upto a

Required Courses for MS Mathematics						
		MS wit	h Thesis	MS with	out Thesis	
		Courses	Credit Hours	Courses	Credit Hours	
А	Found / Pre-req (Str. dela)	0	0	0	0	
В	Core units	6	18	6	18	
С	Elective units	2	6	4	12	
D	Literature Survey	1	3	0	0	
Е	Research Work units	1	3	0	0	
	Total	10	30	10	30	

maximum of Rs. 25,000 per month. This facility is only extended to those students who maintain a cumulative CPA of 3.0 and register in 4 courses each semester in the MS (Mathematics) program. In addition to this, the students availing financial support MUST not work elsewhere. In the PhD phase of the program the stipend amount would be raised to Rs. 45,000 per month, in addition to a full tuition fee waiver.

The fee-structure in the MS (Mathematics) morning program matches that of the BS morning program.

# Minimum Time Policy for MS Mathematics

Students who undertake the MS program of study on a part-time basis (i.e. those students who are not offered or do not willfully avail / opt-for financial assistance), may complete the program in no Less than 1.5 years

Requirements for the Award of MS (and Subsequently PhD) Degree

For award of an MS in Mathematical Science a candidate should:

- a) Complete 30 credit hours that include 24 credit hours (8 courses) of course work and 6 credit hours of thesis.
- b) Six courses (listed above) at 500 level are core courses that every student must do.
- c) In addition, a student has to do two electives to be chosen from the list given below at 500 level.
- d) The eligibility for doing an MS thesis is a CGPA of 3.5.
- e) Students who do not qualify the eligibility criterion for doing an MS thesis, will be required to do two additional courses (6 credit hours in addition) and graduate with an MS degree only. Such MS graduates would lose the eligibility of doing a PhD in future from IBA.
- f) Public defense of the MS thesis and completion of the degree will be governed as per IBA.s policy.

For further details Visit: mathematics.iba.edu.pk

# MS (Mathematics)

Core Courses*				
Course Title	Course Code	Credit Hours	Pre-Requisite	
Semester: 1				
Advanced Real Analysis	MTS511	3	-	
Topics in Algebra	MTS513	3	-	
Advanced Numerical Analysis	MTS515	3	-	
Topology	MTS516	3	-	
Semester: 2				
Measure Theory & Integration	MTS512	3	MTS511	
Topics in Commutative Algebra	MTS514	3	MTS513	
Elective I	MTSXXX	3		
Elective II	MTS XXX	3	-	



# MS (Mathematics)

List of Electives (Contd)			
Course Title	Course Code	Credit Hours	Pre-Requisite
Quantitative Methods for Decision-Making	MTS506	3	-
Adv anced Real Analysis	MTS511	3	-
Measure Theory & Integration	MTS512	3	MTS512
Topics in Algebra	MTS513	3	-
Topics in Commutative Algebra	MTS514	3	MTS513
Adv anced Numerical Analysis	MTS515	3	-
Topology	MTS516	3	-
Scientific Computing	MTS521	3	MTS515
Stochastic Processes II	MTS525	3	MTS304
Stochastic Differential Equations	MTS529	3	MTS304
Integral Equations-I	MTS533	3	-
Mathematical Astronomy	MTS537	3	-
Homological Algebra	MTS539	3	MTS513
Smooth Manifolds	MTS581	3	MTS510





t of Electives (Contd)			
Course Title	Course Code	Credit Hours	Pre-Requisite
Computational Algebraic Geometry	MTS541	3	MTS513
Applicable Modern Geometry I	MTS545	3	MTS511,MTS513, MTS516
Algebraic Geometry I	MTS549	3	MTS513, MTS516
Scientific Computing & Software Calculus-III	MTS551	3	MTS521
Algebraic Cycles I	MTS553	3	MTS513
Arithmetic Algebraic Geometry	MTS557	3	MTS513
Exploratory Data Analysis	MTS561	3	-
Mathematical Physics I	MTS565	3	-
Statistical Data Mining & Knowledge Discovery	MTS569	3	-
Statistical Machine Learning	MTS573	3	-
Galois Theory	MTS577	3	MTS513
Numerical Treatment of P.D.E	MTS621	3	MTS515
Financial Mathematics I	MTS625	3	-
Financial Mathematics II	MTS629	3	MTS515
Computational Astronomy	MTS637	3	MTS537
Applicable Modern Geometry II	MTS645	3	MTS545
Algebraic Geometry II	MTS649	3	MTS549
Algebraic Cycles II	MTS653	3	MTS549
Polylogarithms	MTS657	3	-
Multivariate Statistical Analysis	MTS661	3	MTS525
Mathematical Physics II	MTS665	3	MTS565
Monomial Algebra	MTS671	3	MTS514

<sup>\*</sup>The Departmental Research committee is authorized to introduce any new course added to the above list as and when required.





# **Executive MBA Program**

## **Executive MBA Program**

This flagship program offers a unique opportunity for the in-service professionals to enrich their knowledge and skills without sacrificing their job commitment and earning stream. This weekend program presents a fast track route to the Masters in Business Administration from the prestigious IBA. Executive MBA program is more suitable for the professionals aiming at acquiring leadership role and moving towards the highest levels of the corporate ladder especially under C-suite (CEO, CFO, COO etc.) or an entrepreneurial role. The program format, courses, methodology and contents are developed in consultation with leading experts and worthy faculty members.

## IBA Corporate Leaders Advisory Board (ICLAB)

At IBA we believe in creating meaningful collaboration between the industry and academia, so that all our programs are reflective of their aspiration and needs. In order to ensure regular interaction with the corporate leaders a high level Advisory Board has been formed. The ICLAB members list is given below:

S.No.	Name	Position	Organization
1	Dr. Ishrat Husain	Dean & Director	IBA, Karachi
2	Mr. Asad S. Jafar	Chairman & CEO	Philips Pakistan Limited
3	Ms. Ayesha Aziz	Chief Executive Officer	Pak Brunei Investment
4	Mr. Khalid Rahman	Managing Director	Sui Southern Gas Company
5	Mr. Ruhail Mohammed	Chief Executive Officer	Engro Fertilizers
6	Mr. Tariq Wajid	Managing Director	Martin Dow
7	Mr. Farid Ahmed Khan	Chief Executive Officer	ABL Asset Management
8	Mr. Javed Ahmed	Chief Executive Officer	Jubilee life Insurance
9	Mr. Waqar A Malik	Chairman	Pakistan Petroleium
10	Mr. Najam Ali	Chief Executive Officer	Next Capital
11	Mr. Nadeem Elahi	Senior Vice President	IBEX Global
12	Mr. Nadeem Hussain	President	Tameer Micro Finance Bank
13	Mr. Abrar Hasan	Chief Executive Officer	National Foods Limited
14	Mr. Salman Burney	Chief Executive Officer	Glaxo Smithkelin
15	Dr. Zeelaf Munir	Managing Director & CEO	English Biscuit Manufacturers
16	Mr. Sohail P Ahmed	Vice Chairman	House of Habib
17	Mr. Hasan A. Bilgrami	Chief Executive Officer	Bank Islami Pakistan
18	Shaikh Imran ul Haque	CEO & Chairman	PSO
19	Mr. Saleem Umer	Program Director, EMBA	IBA, Karachi



## Preparing leaders for the Corporate World

Intermediate & Advanced Business Theory, Skills
 To create a solid technical and theoretical background,
 22 courses covering key disciplines of business administration have been offered, including leadership and business strategy courses.

#### - Course Curriculum

The course curriculum is responsive to the needs of the industry and is endorsed by an Advisory Board drawn from among the expert practitioners of the industry and academia

#### - Project Reports

Each participant will be required to develop 1 project on a subject of critical importance duly approved by the Subject Advisory Committee / Director Executive MBA Program.

#### Format

Learning sessions are scheduled on: Saturdays -2:00 pm to 9:15 pm Sundays -10:00 am to 5:15 pm

#### - Degree

(Executive) MBA degree from IBA Karachi shall be awarded on qualifying: Course work with minimum 2.2 CGPA Comprehensive exam Completion of research project [s]

## Eligibility Criteria

In-service professionals with:

- 16 years of education with three years of post qualification work experience; OR Qualified Chartered Accountants with 2 years of post- qualification work experience; OR Qualified ACCA upon completion of three years post ACCA work experience.
- Satisfactory performance in the IBA admission test and interview.

Required Courses				
Section	Knowledge Area	Courses	Credit Hours	
А	Core Courses	13	39	
В	Capstone Course (Corporate Strategy)	1	3	
С	Experiential Learning EMBA Project Report	1	6	
D	Electives	8	24	
	Total Credit Hours	22	72	

A. University Core Courses	
Course Title	
Semester 1	Course Code
Managerial Communication	MGT503
Quantitative Methods for Decision Making	MTS506
Managerial Economics	ECO501
Semester 2	Course Code
Marketing Management	MKT501
Financial Accounting & Information System	ACC506
Legal & Regulatory Environment of Business	LAW501
Elective-I	
Semester 3	Course Code
Applied Business Research	MKT503
Marketing Analytics	MKT507
Business Finance I	FIN506
Operation and Production Management	MGT510
Elective - II	
Semester 4	Course Code
Business Finance II	FIN507
Organizational Behavior and Leadership	MGT557
Global Economics & Political Environment	ECO517
Elective - III	

For further details, see the IBA Admission Policy



Semester 5	Course Code
Accounting for Decision Making	ACC505
Corporate Strategy	MGT541
Elective - IV	-
Semester 6	Course Code
Elective V	-
Elective VI	-
Elective VII	-
Elective VIII	-



List of Electives	
Course Title	Course Code
Advertising	MKT551
B2B Marketing	MKT658
Brand Management	MKT561
Supply Chain Management	MKT559
Entrepreneurial Management	MKT553
Global Marketing Management	MKT659
Advance Corporate Finance	FIN501
Islamic Finance	FIN559
Risk Management	FIN567
Treasury and Financial Derivatives	FIN535
Corporate Investment Banking	FIN536
Financial Modeling	FIN574
Accounting Information System with SAP	ACC507
Project Evaluation & Management	MGT531
Training & Development	HRM571
Recruitment & Selection Techniques	HRM530
Corporate Governance	LAW55
Integrated Marketing Management	MKT564
Strategic Sourcing & Negotiation Skills	MKT571

Summer Semester 2016 (April – August 2016)						
Month	Sessions	Saturday	Sunday			
April	1	Apr-23	Apr-24			
Дріп	2	Apr-30	May-01			
	3	May-07	May-08			
May	4	May-14	May-15			
,	5	May-21	May-22			
	6	May-28	May-29			
	Midterm Exams	Jun-04	Jun-05			
June	7-a	Jun-11	Jun-12			
June	7-b	Jun-18	Jun-19			
	8-a	Jun-25	Jun-26			
	8b	Jul-02	Jul-03			
to to	9	Jul-16	Jul-17			
July	10	Jul-23	Jul-24			
	11	Jul-30	Jul-31			
August	12	Aug-06	Aug-07			
,gus(	Final Exams	Aug. 1	3 – 28			

Month	Sessions	Saturday	Sunday
	1	Dec-31	Jan-01
	2	Jan-07	Jan-08
January	3	Jan-14	Jan-15
	4	Jan-21	Jan-22
	5	Jan-28	Jan-29
	6	Feb-04	Feb-05
February	Midterm Exams	Feb-11	Feb-12
i ebi dai y	7	Feb-18	Feb-19
	8	Feb-25	Feb-26
	9	Mar-04	Mar-05
	10	Mar-11	Mar-12
March	11	Mar-18	Mar-19
	12	Mar-25	Mar-26
April	Final Exams	Aug.	1 – 16

Fall Semester 20	Fall Semester 2016 (Sept Dec. 2016)						
Month	Sessions	Saturday	Sunday				
i i	1	Sep-03	Sep-04				
September	2	Sep-17	Sep-18				
	3	Sep-24	Sep-25				
	4	Oct-01	Oct-02				
	5	Oct-08	Oct-09				
October	6	Oct-15	Oct-16				
	Midterm Exams	Oct-22	Oct-23				
	7	Oct-29	Oct-30				
	8	Nov-05	Nov-06				
November	9	Nov-12	Nov-13				
	10	Nov-19	Nov-20				
	11	Nov-26	Nov-27				
December	12	Dec-03	Dec-04				
December	Final Exams	Dec. 1	0 – 25				

Summer Semeste	Summer Semester 2017 (April - August 2017)						
Month	Sessions	Saturday	Sunday				
April	April 1		Apr-23				
Дріп	2	Apr-29	Apr-30				
	3	May-06	May-07				
May	4	May-13	May-14				
, i	5	May-20	May-21				
	6-a	May-27	May-28				
	6-b	Jun-03	Jun-04				
June	Midterm Exams	Jun-10	Jun-11				
June	7-a	Jun-17	Jun-18				
	7-b	Jun-24	Jun-25				
	8	Jul-01	Jul-02				
t. de	9	Jul-08	Jul-09				
July	10	Jul-15	Jul-16				
	11	Jul-22	Jul-23				
August	12	Jul-29	Jul-30				
, 18802	Final Exams	Aug. 1	12 - 27				

# EMBA participants are serving in following organizations

S No.	Orginization		S No.	Orginization		S No.	Orginization
1	A.F.Ferguson & Company - PWC Pakistan		37	DP World - Qasim Int   Container Terminal		73	International Steels Limited
2	Abbott Pakistan	ш	38	Dubai Islamic Bank Pakistan Ltd	Ш	74	ITIMS Systems (Pvt.) Limited
3	Abudawood Trading Co. Pakistan (Pvt) Ltd		39	Elli Lilly and Company	Ш	75	JS Global Capital Limited
4	Access Group		40	Emirates Pakistan	Ш	76	Juiblee Life Insurance Company
5	ACE Insurance Limited		41	EMPACT Activation Services (Pvt.) Limited	Ш	77	KALSOFT Limited
6	Aga Khan University		42	English Biscuit Manufacturers	Ш	78	Karachi Shipyard & Engineering works
7	AGP Pharma (Pvt.) Limited		43	Engro Corporation	Ш	79	Karachi Stock Exchange
8	Agri Auto Industry Limited		44	Engro Foods Limited	Ш	80	KASB Group
9	Air Weapons Complex		45	Engro Polymer & Chemical Limited	Ш	81	K-Electric Limited
10	AKD Securities Limited		46	ENI Pakistan Limited	Ш	82	Lakson Tobacco Company Limited
11	Akzonobel Pakistan Limited	ш	47	Ernst & Young	Ш	83	Lotte - Pakistan PTA Limited
12	Al Meezan Investment Management Ltd.	ш	48	Fauji Fertilizer Company Limited	Ш	84	Marie Stopes Society
13	Allied Bank Limited		49	Fauji Oil Terminal and Distribution Co. Ltd	Ш	85	Mazik Global
14	Almas Jewelers		50	Faysal Bank Limited	Ш	86	MCB Bank Limited
15	AL-NOOR MDFB Division	ш	51	Federal Board of Revenue	Ш	87	Meezan Bank Limited
16	Apparel Manufacturing (Pvt.) Limited	ш	52	Federal Urdu University of Arts, Sci. & Tech.	Ш	88	Midas Safety
17	Armtech Business Solutions	ш	53	First Women Bank Limited	Ш	89	Minsitry of Education
18	Artistic Milliners (Pvt.) Limited		54	GASCO Engineering (Pvt) Limited	Ш	90	Mobilink
19	Asia Petroleum Limited	ш	55	Gatroon Industries Limited	Ш	91	NADRA
20	Atlas Honda Limited		56	Geo Group	Ш	92	National Accountability Bureau
21	Attock Petroleum Limited	ш	57	Getz Pharma	Ш	93	National Foods
22	Augere Pakistan (Pvt) Limited		58	Ghandhara Nissan Limited	Ш	94	National Insurance Company
23	Bank Al Habib Limited		59	Glaxosmithkline Pakistan	Ш	95	National Refinery Limited
24	Bank Alfalah Limited		60	Government of Pakistan	Ш	96	NED University of Engineering & Technology.
25	Bank Islami Limited		61	Government of Sindh	Ш	97	NIB Bank
26	Barclays Bank Plc	ш	62	Gul Ahmed Textile Mills	Ш	98	Novartis Pharma Pakistan Limited
27	Barrett Hodgson Pakistan (Pvt.) Limited	ш	63	Habib Bank Limited	Ш	99	Pak Oman Investment Company
28	Bayer Pakistan (Pvt) Ltd	ш	64	Habib Metro Pakistan (Pvt.) Limited	Ш	100	Pak Suzuki Motor Company Limited
29	Burj Bank Limited	ш	65	Habib Metropolitan Bank Limited	Ш	101	Pakistan Air Force
30	CIBE, CANADA	ш	66	Habib Modaraba	Ш	102	Pakistan Army
31	Cisco Systems, Inc. Middle East	ш	67	House of Habib	Ш	103	Pakistan Gems & Jewellery Development Co.
32	Civil Aviation Authority	ш	68	HSBC	Ш	104	Pakistan International Airlines
33	Coats Pakistan		69	Huawei		105	Pakistan Navy
34	Crack & Grow (Pvt) Limited		70	IFFCO Pakistan (Pvt.) Limited		106	Pakistan Petroleum Limited
35	DHL Pakistan Express		71	Indus Motor Company Limited		107	Pakistan State Oil
36	Dow University of Health Sciences.		72	International Industries Limited		108	Pakistan Telecommunication Company Ltd.

# EMBA participants are serving in following organizations

S No.	Orginization
109	PARCO
110	Pakistan Refinery Limited
111	Paxar Pakistan (Pvt.) Ltd An Avery Dennison Co.
112	Philips Morris (Pakistan) Limited
113	Proctor & Gamble Pakistan
114	Red Line Communications - Canada
115	Repharm Services
116	RIAA LAW - Advocates & Corporate Counsellors
117	Roche Pakistan Limited
118	Sanofi Aventis Pakistan Limited
119	Securities & Exchange Commission of Pakistan
120	Shaheen Engineering & Aircraft Maint. Service
121	Shan Foods (Pvt) Limited
122	Shell Pakistan Limited

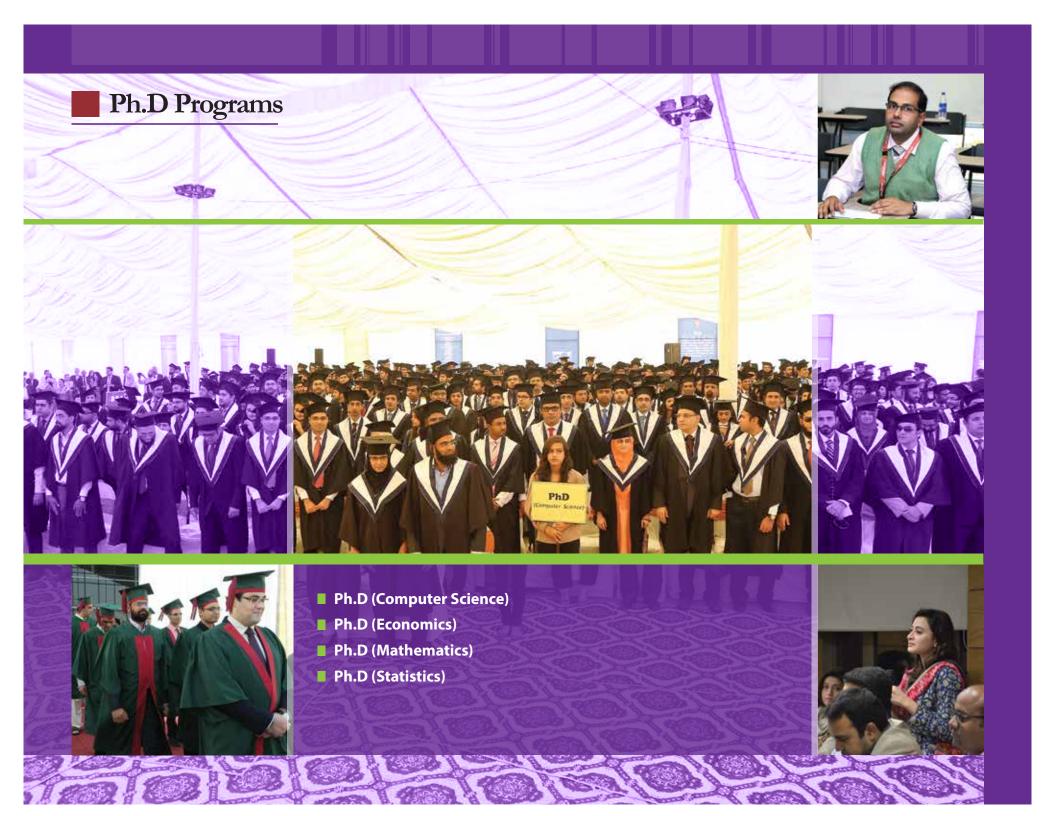
S No.	Orginization	
123	SIEMENS Pakistan Engineering Limited	
124	Silkbank Limited	
125	Sir Syed University of Engineering & Tech.	
126	Standard Chartered Bank	
127	State Bank of Pakistan	
128	Sui Southern Gas Company Limited	
129	SUPARC	
130	Tameer Microfinance	
131	Telenor Pakistan Limited	
132	Tetra Pak Pakistan	
133	The Bank of Khyber	
134	The Education Enrichment Foundation	
135	The Hubco Power Company Limited	
136	The Indus Hospital	

S No.	Orginization
137	Tradekey (Pvt) Limited
138	Tripack Films Limited
139	Tuwairqi Steel Mills Limited
140	UBL Funds Managers
141	Ufone
142	Unilever Pakistan Limited
143	United Bank Limited
144	United Energy Pakistan
145	University of Karachi.
146	URIL ( Dawlance Group Of Companies )
147	Wi-Tribe Pakistan
148	Young's Foods (Pvt.) Limited
149	Yunus Textile Mills Limited
150	Ziauddin University
151	Zong Telecom



# List of Guest Speakers during 2015

S. No.	Guest Speaker	Topic
1	Mr. Kamran Hafeez, Group Managing Director, Jang Group & Geo TV	Important of Information Management
2	Mr. Imran Ahmed Mirza, CFO, Pakistan Refinery Limited	Financing Challenges in Pakistan
3	Mr. Majyed Hussain, Ex-Chairman, Karachi Chamber of Commerce & Industry	Entrepreneurship
4	Mr. Faheem Akhtar, CEO, Invest Beyond Boundaries	Finance / Stock Exchange / Securities
5	Ms. Shazaf Fatima Haider, Author	Role of Humor
6	Mr Sadiq Sayeed, Chairman, Metage Capital Limited, London	World Economy / Finance
7	Mr. Amin Ganny, Chief Operating Office, Lucky Cement	Lucky Cement Success Story and Personal Success
8	Mr. Rizwan Dalia, Director Finance & Company Secretary, K-Electric	Change Management
9	Mr. Shahid Mahmood, Director Projects, Siddiq Sons	Strategy for Life
10	Mr. Fawad ul Haq, Director Huwai Technology	Entrepreneurship
11	Syed Hussain Haider, Director Project, Akhwad University	Value Based Leadership
12	Mr. Mansoor Alam, CEO, Worlwide Mover	Entrepreneurship
13	Mr. Munawar Hameed, Head of Marketing & Public Relations, OCMT, Oman	Career Opportunities in Oman
14	Mr. Mutahir Muhammad	Entrepreneurship
15	Mr Eram Hasan, Chief of Supply Chain K - Electric	Supply Chain Management
16	Mr. Adeel Raza, GM Media Plus	Advertising
17	Mr. Manzar Naqvi - Associate Media Director, Starcom Mediavest Group Pakistan.	Advertising
18	Mr. Usman Rashid, Director / Controller, Siemens	Finance
19	Mr. Usman Abid, Country HR Manager, Mondelez International	Human Resource
20	Mr. Jami, Oscar Nominated Film Director.	Integrated Marketing
21	Dr. Shahzad Khan, Director Marketing & Sales, Getz Pharma	Marketing
22	Syed Haris Raza, Vice President Pakistan, Gerrys dnata	Global Economics
23	Mr Saeed Ahmed, Head of Media, Interflow Communication	Advertising
24	Mr. M. A. Mannan, Chief Executive, TCS Holdings	Entrepreneurship/Leadership
25	Dr Zeeshan Ahmed, Associate Professor, KSBL	Islamic Economics & Finance



## Ph.D (Computer Science)

If your ambitions lie in carrying out cutting edge research in the field of Computer Science, gaining recognition for it and maintaining social and corporate networks in your field of study then an excellent option for you is to pursue your graduate studies at the IBA Faculty of Computer Science. The IBA Faculty of Computer Science (FCS) offers PhD programs in the following areas:

- Artificial Intelligence and Cognitive Robotics
- · Wireless and Mobile Communications
- Social Computing
- Operations Research
- Management Information System
- Numerical Analysis and Computing
- · Multimedia and Web
- Human Computer Interaction

The FCS PhD program aims at encouraging those graduate students who can make a significant contribution to their field through original research. The FCS hosts a number of research labs that are actively engaged in cutting-edge research in a number of fields mentioned above. By being a part of this program, you will get an opportunity to establish linkages with international researchers publish scholarly articles and attend reputed conferences worldwide in your chosen discipline. Your quantitative and qualitative research capabilities will be polished and interdisciplinary research, along with interaction with the local industry, will always be encouraged.

The FCS PhD program motivates independence and originality of thought in the research process. The PhD program at IBA expects that not only will the graduates display excellence in their field of research but that the discipline, research and professional competencies they develop from this program will be highly regarded by national and international employers. To achieve this, students are expected to immerse themselves in research in order to develop a strong and vibrant research culture at the institute. The program requires a residency of at least two years, where students are expected to complete a specially

designed program comprising of advanced courses. During the residency program students are expected to attach themselves to a supervisor in their field of specialization. Students also avail a full teaching / research assistantship which comprises of an attractive monthly stipend and full tuition fee waiver.

#### Research Labs at FCS

As one of Pakistan's leading research institutions, Faculty of Computer Science (FCS) at IBA offers the best possible environment in which to undertake postgraduate research. A student conducting Masters or Doctoral research will have the opportunity to be assigned to one of the following labs:

- · Artificial Intelligence Lab
- Telecommunications Research Lab (TRL)
- Web Sciences Lab

#### Web Sciences Lab

A new lab has been established at HBL-FCS Building to help researchers to undertake world class research in the area of Web Information Systems, with a special focus on Interactive Learning applications. The lab aims to conduct cutting edge research in diverse areas of web, including information retrieval, social media, knowledge management, digital libraries, electronic commerce, and Semantic Web.

WWW is now considered a main medium for sharing of data and metadata for knowledge management. Innovative models, frameworks, and methods are required to share, link and integrate data for efficient knowledge discovery and dissemination. WSL researchers are working on exploring new and innovative methods to improve existing web models and frameworks. The lab also aims to establish strong links with local industry to develop effective solutions for problems pertinent to Pakistani context. In the domain of digital interactive learning, WSL researchers are working closely with ICT team of IBA to introduce MOOC (Massive Open Online Course) at IBA. Research is also being carried out to develop modern lifelong learning models.

#### Telecommunications Research Lab

Telecommunications Research Lab (TRL) at the Faculty of Computer Science focuses on research in the areas of wireless and mobile networks. Specific topics under current research include the following: queuing modeling, and analysis for energy, delay and other QoS parameters in Wireless Sensor Networks (WSN); Backhauling technologies in mobile networks; Implementation of WSN in Field for Monitoring, Irrigation; Energy Monitoring & Controlling System / Smart Asset Management using WSN and Hybrid networks; Traffic Congestion Tracking System. The TRL is equipped with state of the art WSN equipment, including those from Memsic and Hanback, with a variety of sensors, including light, temperature, humidity, barometric pressure, seismic, GPS, acoustic, acoustic actuator, magnetometer, 3-Axis Acceleration and RFID readers. WSN Motes include IEEE 802.15.4 / ZigBee Compliant Iris and MICAz (2.4 GHz) Motes, supporting both TinyOS 1.x and 2.x

Simulation tools include Qualnet v5.0, NS2 and LabView. A modern Cisco networking lab is also available for research on core routing issues, network security and VOIP. Faculty, PhD Scholars and students at TRL contribute frequently to publications in international conferences and journals. PhD Scholars attend international workshops and training sessions that contribute to their self-development skills in using simulation tools as well as in gaining hands-on experience with advanced networking devices.

#### Artificial Intelligence Lab

Artificial Intelligence Lab at IBA endeavors to provide a platform for researchers and professionals to manifest their innovative capabilities through development of sophisticated research projects. The lab also aims to foster collaboration with local industry by developing intelligent solutions for problems pertinent to the Pakistani market. Being established in 2008, AI LAB at IBA is a dynamically growing research center focusing in the core areas of AI namely data analytics, machine learning, semantic web,

computational intelligence, probabilistic reasoning, and cognitive robotics. The following list highlights its key activities:

- Al Lab has partnered with the Innovation and Enterprise Research Lab of the University of Technology, Sydney to form a joint RoboCup Soccer team, Karachi Koalas, under 3D simulation league. The team was established in 2010 and has since participated in 2011, 2012 and 2013 World RoboCup held in Turkey, Mexico and the Netherlands, respectively. The team is currently ranked 5th in the World which is a remarkable achievement for a team that is only few years old. The team's performance has been covered on Geo and Samaa ty channels.
- The lab frequently organizes robotics workshop for high school students and teachers. The purpose of these workshops is not only to expose our youth to the exciting field of Robotics / Artificial Intelligence, but to also train the human resource involved in teaching science and related subjects at the high school level.
- In collaboration with our industry partner, Credit-Chex, we have developed an Anti- Money Laundering System (AMLS). It serves as a decision support tool and aids financial institutions and State Bank in identifying suspicious financial transactions and in curbing anti-money laundering activities. The product was developed under a research grant provided by the National ICT R&D Fund
- In the area of data analytics, the lab is maintaining active contacts with industry leaders, such as EMC2 and KNIME.
- The lab also organizes data analytics workshop for professionals. The purpose of this activity is not only to bridge the gap between industry and academia but

- also to train the workforce for the emerging challenge of big data analytics.
- The lab hosts 2 state-of-the-art AldebaranNao robots.
   The robots are amongst the most sophisticated humanoid robots available for public use. They feature 25 degrees of freedom which allows them to produce human like walks and movements. In addition, they contain eight force-sensing resistors and two touch sensors.
- The lab is also a home for TurtleBot and Lego Mindstorms robots which are a great resource for teaching the fundamentals of cognitive robotics.
- A team, Karachi Chotu, for RoboCup @ Home has been established in 2013. A team, Karachi Chotu, for RoboCup @Home has been established in 2013. The team secured 3rd position in IranOpenRoboCup 2014

- Ph.D (Computer Science)
- that was attended by many international teams. With the help of this initiative, the lab aims to develop service and assistive robot technology with high relevance for future personal domestic applications.
- Al Lab has developed and released BNOSA (Bayesian Network and Ontology based Semantic Annotation) which is a framework for semantic annotation of unstructured, ungrammatical, and incoherent data sources using ontology and Bayesian networks.
- Another tool released by the AI Lab is IBAyes which is a probabilistic reasoning tool that allows a user to model uncertain situations and perform inference using Bayesian networks and Influence Nets. It is freely available for download from the lab website.

For a Detailed PhD Prospectus, Please Visit:cs.iba.edu.pk/programs.html



## Ph.D (Economics)

#### Ph.D (Economics)

Ph.D (Economics] program is designed to provide a solid background in theory, quantitative methods, and applications appropriate to the needs of economists involved in policy planning, analysis, and forecasting of public and private sectors. The curriculum of this program has been designed to meet the international standards. We hope the students will find the program intellectually challenging and personally rewarding.

The program emphasizes on applied economics, and caters to the growing market for economic analysts. Graduates from this program will be able to teach and conduct quality research in the fields of their interest, and will be prepared for careers in universities, research organizations, business enterprises, government organizations, and multinational companies.

#### Duration

Duration of the program is 4-5 years. The maximum time allowed is 8 years.

#### Eligibility:

MS / M.Phil / equivalent degree in Economics or related discipline from HEC recognized local and foreign universities with minimum 3 out of 4 CGPA or 60% marks in the last degree. All equivalency claims shall be evaluated by HEC. Experience is not mandatory for admission to the Ph.D program. IBA allows those candidates to apply for admission whose final results have not been announced.

The admission may be conditional pending submission of the required results before the date of commencement of classes.

#### Admission Criteria:

Admissions to all programs at the IBA are granted on merit, and there are no reserved seats for any category. The criterion for admission is the performance of the applicant in

Credit Hours					
	Ph.D Economics Course Load				
		Course	Credit Hours		
А	Core Courses	7	26		
В	Electiv e Courses	4	14		
С	Dissertation	1	27		
	Total Credit Hours	17	67		

admission test and interview. The admission test is a written test from three subjects: English, Mathematics and Economics. Candidates who have a minimum 650 score in quantitative section of GRE (International) or 160 score in quantitative section of Revised GRE (International) are exempted from the IBA admission test. The candidates who pass the admission test qualify for the interview. Candidates are required to submit statement of purpose and two reference letters from the institute / university last attended before the interview.

#### Financial Assistance:

Ph.D program in Economics is a full time morning program. IBA will offer teaching / research fellowship to all students enrolled in the Ph.D program for which they are paid a monthly stipend (Rs.50000 per month) and given a tuition waiver.

#### Comprehensive Examinations:

Students are required to pass comprehensive examinations for Microeconomic Theory, Macroeconomic Theory and one Field Examination. A maximum of three attempts will be allowed for the comprehensive examinations. Students are however required to pass both comprehensive examinations within two years from the commencement of the Ph.D program.

Oral defense of the Ph.D dissertation proposal: At the end of the third year, students are expected to present and defend their Ph.D proposal before the dissertation committee. The dissertation will be examined by two external examiners from academically advanced countries.

#### Dissertation Defense:

Students are expected to submit and defend their dissertation [27 credit hours] within two years after successful completion of their course work.

Major Areas of Specialization (Electives):

Macroeconomics

**Development Economics** 

International Trade

Public Finance

Monetary Economics

**Environmental Economics** 

Industrial Organization

Financial Economics

Labor Economics

For further details visit: economics.iba.edu.pk

# Ph.D (Economics)

Semester-wise sequence of Ph.D courses					
	Semester - 1 (FALL)	Course Code	Credit Hours	Pre-Requisite	
1	Microeconomic Theory II	EC0631	3	ECO531	
2	Macroeconomic Theory II	EC0632	3	ECO532	
3	Elective I	-	3	-	
	Semester - 2 (Spring)	Course Code	Credit Hours	Pre-Requisite	
1	Microeconomic Theory III	EC0641	4	ECO532	
2	Econometric Analysis- I	ECO647	3	MTS536, ECO537	
3	Elective II	-	3	-	
	Semester - 3 (Fall)	Course Code	Credit Hours	Pre-Requisite	
1	Macroeconomic Theory III	EC0642	4	EC0632	
2	Econometric Analysis- II	ECO648	4	EC0641	
3	Elective III	-	4	-	
	Semester - 4 (Spring)	Course Code	Credit Hours	Pre-Requisite	
1	Graduate Research Seminar for Ph.D	ECO791	4	ECO641, 642 & 648	
2	Elective IV	-	4	-	
	Semester - 5 (onward)	Course Code	Credit Hours	Pre-Requisite	
	Ph.D Thesis	EC0799	27	-	





## Ph.D (Mathematics)

#### Ph.D (Mathematics)

This policy governs the Ph.D phase of the MS Ph.D Program.

#### Eligibility:

A candidate may embark on his Ph.D in Mathematical Sciences program at IBA if:

- The applicant has earned an MS (in Mathematics or allied areas) from a foreign / local university of international repute, and in addition to it:
  - Clears IBA's entry test, or scores 650 in GRE Subjective (Mathematics).
  - ii. Goes through a successful interview at IBA.

#### Other rules:

- 1) A Ph.D student would be required to teach under-graduate courses as per IBA's policy.
- 2) A Ph.D student shall be paid a stipend as per IBA's policy.
- 3) Ph.D students will be required to do six courses



#### Courses:

The Departmental Research Committee (DRC) is authorized to introduce any new courses added to the following list as and when required:

/ she may be awarded an MS degree on the recommendation of the supervisor / DC.

Required Courses			
Course Title	Course Code	Credit Hours	Pre-Requisite
Numerical Treatment of P.D.E	MTS621	-	MTS515
Financial Mathematics	MTS625	-	-
Computational Finance	MTS629	-	MTS515
Computational Astronomy	MTS637	-	MTS537
Applicable Modern Geometry II	MTS645	-	MTS545
Algebraic Geometry II	MTS649	-	MTS549
Algebraic Cycles II	MTS653	-	MTS553
Poly logarithms	MTS657	-	MTS557
Multivariate Statistical Analysis	MTS661	-	MTS525
Mathematical Physics II	MTS665	-	MTS565
Monomial Algebra	MTS671	-	MTS514
Topics of Special Interest I	MTS691	-	-
Topics of Special Interest II	MTS692	-	-
Algebric Curves	MTS655	-	-
Analysis on Manifolds	MTS622	-	-

(chosen from the mentioned table) at 600 level as suggested by the research supervisor and / or the DRC, spread over two semester. On successful completion of the course work with CGPA of at least 3.0, the candidate qualifies to work on Ph.D dissertation. Failing to achieve this qualification the candidate would be allowed to improve his / her CGPA by doing two of his courses again. In view of the candidate's request and recommendation of the DRC the candidate may do any other two courses to bring his/her CGPA to the required level.

## Comprehensive Test:

The DRC will decide a Comprehensive Examination on case to case basis.

## Disqualification:

If the candidate fails to qualify for work on Ph.D dissertation he

#### Minimum Time Requirement:

Minimum time required to complete Ph.D thesis is two years.

#### **Graduation Eligibility**

A candidate who accomplishes all the conditions imposed for acquisition of the Ph.D degree, is also, in addition, required to take the GRE / GAT (subjective) before his/her final doctoral diploma.

## Defense of Research Synopsis / Thesis:

The research synopsis would have to be defended against the DRC. Public defense of the Ph.D thesis and completion of the degree will commence after examination of the thesis by two foreign examiners.

For further details Visit: mathematics.iba.edu.pk

## Ph.D (Statistics)

This Ph.D program aims at providing quality opportunities to research in the fascinating area of Statistics. Today there is hardly any field of scientific investigation which does not employ quantification in terms of statistical models. This program will enable candidates to appreciate and make contributions to statistical research especially in demographic, financial, econometric, computational, and business related applications. The candidates are expected to be full time research students and will also have the opportunities to do teaching related activities, for which they will be compensated with a monthly stipend.

### Eligibility:

A candidate may embark on his Ph.D in Mathematical Sciences program at IBA if:

- The applicant has earned an MS (in Mathematics or allied areas) from a foreign / local universty of international repute, and in addition to it:
- i. Clears IBA's entry test, or scores 650 in GRE Subjective (Mathematics).
- ii. Goes through a successful interview at IBA

#### Other rules:

- (1) A Ph.D student would be required to teach under-graduate courses as per IBA's policy.
- (2) A Ph.D student shall be paid a stipend as per IBA's policy.
- (3) Ph.D students will be required to do six courses.

#### Courses:

The Departmental Research Committee (DRC) is authorized to introduce any new courses added to the following list as and when required:

Course Title	Course Code	Credit Hours	Pre-Requisite
Linear Statistical Models	STA601	3	-
Generalized Linear Models	STA 602	3	-
Advanced Probability Theory	STA 603	3	-
Stochastic Processes	STA 604	3	-
Advanced Statistical Inference	STA 605	3	-
Multivariate Statistics	STA 606	3	-
Time Series Analysis and Forecasting	STA 611	3	-
Experimental Design and ANOVA Models	STA 612	3	-
Statistical Machine Learning	STA 621	3	-
Statistical Data Mining and Knowledge Discovery	STA 622	3	-
Classification and Pattern Recognition	STA 631	3	-
Optimization Techniques	STA 632	3	-
Bayesian Statistics	STA 641	3	-
Reliability and Survival Analysis	STA 642	3	-
Non-Parametric and Semi-Parametric Statistics	STA 651	3	-
Simulation and Re-sampling Methods	STA 652	3	-
Advanced Operations Research	STA 661	3	-
Stochastic Financial Models	STA 662	3	-
Financial Time Series	STA 671	3	-
Advanced Econometrics	STA 672	3	-
Econometric Analysis of Time Series	STA 681	3	-
Longitudinal and Panel Data Models	STA 682	3	-
Functional Data Analysis	STA 691	3	-
Functional Time Series Analysis	STA 692	3	-

# Ph.D (Statistics)

#### **Courses:**

The Departmental Research Committee (DRC) is authorized to introduce any new courses added to the following list as and when required (chosen from the mentioned table) at 600 level as suggested by the research supervisor and / or the DRC, spread over two semester. On successful completion of the course work with CGPA of at least 3.0, the candidate qualifies to work on Ph.D dissertation. Failing to achieve this qualification the candidate would be allowed to improve his / her CGPA by doing two of his courses again. In view of candidate's request and recommendation of DRC the candidate may do any other two courses to improve the CGPA to the

required level.

## **Comprehensive Test:**

The DRC will decide a Comprehensive Examination on case to case basis.

#### Disqualification:

If the candidate fails to qualify for work on Ph.D dissertation he / she may be awarded an MS degree on the recommendation of the supervisor / DC.

## Minimum Time Requirement:

Minimum time required to complete Ph.D thesis is two years.

## **Graduation Eligibility**

A candidate who accomplishes all the conditions imposed for acquisition of the Ph.D degree, is also, in addition, required to take the GRE / GAT (subjective) before finally doctoral diploma may be obtained.

## Defense of Research Synopsis / Thesis:

The research synopsis would have to be defended against the DRC. Public defense of the Ph.D thesis and completion of the degree will commence after examination of the thesis by two foreign examiners.





# Nomenclature of Courses

## **Course Coding Scheme**

Course Code Naming Convention Course codes are presently given 6 alpha-numeric codes, e.g. CSE142: (INTRODUCTION TO PROGRAMMING)

#### Some Examples:

CSE142 = Implies, a first year course ('1') with 4 ('4') credit hours CSE211 = Implies, a second (.2.) year course with 3 credit hours (3 credits is default) CSE341 = Implies, a third (.3.) year course with 4 ('4') credit hours etc.

### Details are given below:

First three characters First three characters e.g. 'CSE' indicate the subject (in this case: Computer Science and Engineering) The subjects defined so far (relevant for FCS) are:

CSE = Computer Science and Engineering MIS = Management Information Systems

MTS = Maths and Statistics

SCI = Sciences

ICT = Information and Communication Technology

### The next three digits

The next three digits '142', indicated as 'LMN' below are defined as follows: 'L' Digit

L = The 'L' digit indicates the Level of the course as follows:

1 = 100 level course - First year undergraduate

2 = 200 level course - Second year undergraduate

3 = 300 level course - Third year undergraduate

4 = 400 level course - Fourth year undergraduate

5 = 500 level course - First or Second year graduate

6 = 600 level course - Advanced Ph.D courses

7 = Ph.D Seminars

### 'M' Digit

M = The .M. digit in:

0, 1, 2 or 3 = Indicates core courses

4 = Indicates 4 credit hour core or elective course

5. 6 or 7 = Indicates 3 credit hour elective courses

8 = Used for obsolete courses

9 = Project Courses

### 'N' Digit

N = The 'N' digit is simply a sequence digit assigned to makeeach course code unique.

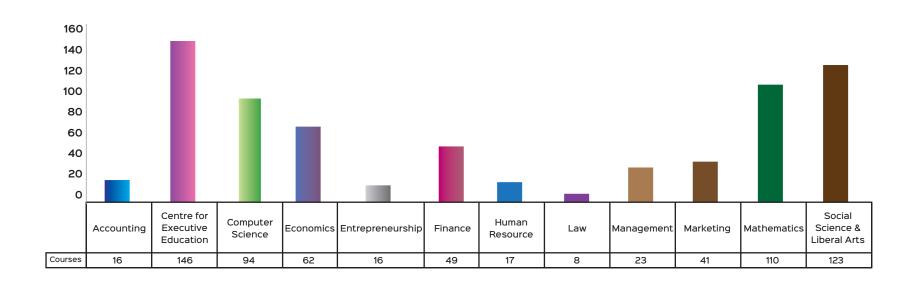
# Procedure for Online Registration of Courses:

Students are to use ERP CMS application, for online course registration of courses to enrol in their desired set of courses for the relevant term. To enable registration the student is to follow the following procedure:

- a. Sign in using his / her login ID and Password for ERP
- b. Go to the Self-Service link, then Enrolment and Add Classes.
- c. Search the relevant course subject, course number or catalogue number of the required course.
- d. Select the class using the option available, and then follow the two step process to finish enrolling in the required course.

All the required courses can be enrolled for one-by-one, or together by first adding them in the shopping cart and then finishing enrollment using the same two step procedure. If a student wants to de-enrol from a course within the given timeline, he/she can easily do so by using the relevant function available in the Self-service.

# Overview of Courses on Offer





# Department of Accounting and Law

## **ACCOUNTING COURSES**

S. No.	Course Code	Course Title
1	ACC111	Principles of Accounting
2	ACC201	Financial Accounting
2	ACC310	Advanced Managerial Accounting
3	ACC312	Business Analysis and Decision making
4	ACC315	Financial Reporting
5	ACC320	Auditing
6	ACC325	Advanced Auditing
7	ACC381	Management Accounting
8	ACC401	Advanced Financial Reporting
9	ACC415	Actuarial Courses
10	ACC505	Accounting for Decision Making
11	ACC506	Financial Accounting and Information Systems
12	ACC507	Accounting Information Systems with SAP
13	ACC557	Accounting Information Systems - For Small & Medium Enterprises
14	ACC559	IFRS & Financial Reporting in Pakistan
15	ACC561	Analysis of Financial Statements
16	ACC589	Project Evaluation & Financing

## LAW COURSES

S. No.	Course Code	Course Title
1	LAW105	Politics and Law
2	LAW205	Business Law
4	LAW303	Taxation
5	LAW305	Corporate Law
6	LAW310	Legal & Regularity Environment
6	LAW401	Advanced Taxation
7	LAW501	Legal and Regulatory Environment of Business
8	LAW553	Corporate Governance & Practices in Pakistan



# Department of Economics & Finance

## **ECONOMICS COURSES**

S. No.	Course Code	Course Title
1	ECO102	Business Economics
2	ECO103	Principles of Microeconomics-I
3	ECO104	Principles of Macroeconomics-I
4	ECO105	Introduction to Economics
5	ECO113	Principles of Microeconomics-II
6	ECO114	Principles of Macroeconomics-II
7	ECO201	Intermediate Microeconomics
8	ECO202	Intermediate Macroeconomics
9	ECO211	Analysis of Pakistan Industry
10	ECO301	Development Economics
11	ECO312	Microeconomics
12	ECO313	Macroeconomics
13	ECO341	Introduction to Econometrics
14	ECO342	Applied Econometrics
15	ECO403	Major Issues in Pakistan Economy
16	ECO411	Research Methods in Economics
17	ECO451	Public Finance
18	ECO452	Islamic Economic System
19	ECO454	Population Economics
20	ECO455	Comparative Economic System
21	ECO456	Economics and Strategy
22	ECO461	Natural Resource and Environmental Economics
23	ECO462	Rular Development
24	ECO464	Game Theory
25	ECO465	International Political Economy
26	ECO467	History of Economic Thought
27	ECO468	Agriculture Economics
28	ECO469	Regional Economics
29	ECO471	Health Economics
30	ECO472	Urban Economics
31	ECO473	Welfare Economics
32	ECO474	Resource Economics
33	ECO501	Managerial Economics

## **ECONOMICS COURSES (Contd...)**

		- ( ( )
S. No.	Course Code	Course Title
34	ECO502	Macroeconomics
35	ECO517	Global Economic and Political Environment
36	ECO530	Development Economics
37	ECO531	Microeconomics Theory - 1
38	ECO532	Macroeconomics Theory - 1
39	ECO533	Mathematics for Economics
40	ECO537	Econometrics - 1
41	ECO538	Econometrics - 2
42	ECO539	International Trade
43	ECO544	Issues in Pakistan Economy
44	ECO555	Economics Forecasting
45	ECO560	Public Policy Analysis: Theory and Practice
46	ECO561	Environmental and Resource Economics
47	ECO562	Financial Economics
48	ECO563	Health Economics
49	ECO564	History of Economics
50	ECO566	Monetary Economics
51	ECO567	Public Economics
52	ECO570	Time Series Modeling
53	ECO571	Industrial Economics
54	ECO572	General Equibilirium & welfare economics
55	ECO573	Game theory and competative strategy
56	ECO574	Water Economics and Policy
57	ECO575	The Microeconomics of Policy Analysis
58	ECO591	Research Methodology
59	ECO631	Microeconomics Theory - II
60	ECO632	Macroeconomics Theory - II
61	ECO648	Econometrics Analysis - II
62	ECO654	Labor Economics

## FINANCE COURSES

S. No.	Course Code	Course Title
1	FIN201	Introduction to Business Finance
2	FIN301	Financial Institutions and Markets
3	FIN305	Alternate Investments
4	FIN308	Real Estate Investments: Analysis and Financing
5	FIN310	International Banking
6	FIN312	Behavioral Finance
7	FIN315	Corporate Restructuring
8	FIN320	Empirical Research in Finance
9	FIN401	Financial Management
10	FIN405	Venture Capital and the Finance of Innovation
11	FIN410	Buyouts and Acquisitions
12	FIN424	Fixed Income Investments
13	FIN425	Branch Banking
14	FIN426	Lending- Products, Operations & Risk Management
15	FIN427	Finance of International Trade and Related Treasury Operations
16	FIN428	Introduction to Marketing of Financial Services
17	FIN429	Information Technology in Financial Services
18	FIN430	Financial Information System
19	FIN451	Investment Banking
20	FIN452	International Finance
21	FIN453	Security Analysis
22	FIN454	Corporate Finance
23	FIN455	Portfolio Management
24	FIN456	Financial Risk Management
25	FIN457	Derivatives
26	FIN458	Fundamentals of Treasury and Fund Management
27	FIN501	Advance Corporate Finance
28	FIN506	Business Finance I
29	FIN507	Business Finance II
30	FIN531	Financial Intermediation
31	FIN532	Advance Credit Management
32	FIN533	Financial system – process, players, status & prognosis
33	FIN535	Treasury and Financial Derivatives
34	FIN536	Corporate Investment Banking

# FINANCE COURSES (Contd...)

S. No.	Course Code	Course Title
35	FIN541	The Strategic Management of Banks
36	FIN552	International Financial Management
37	FIN554	Investment Banking & Financial Services
38	FIN556	Security Analysis & Capital Markets
39	FIN558	Regulation & Financial Markets
40	FIN559	Islamic Finance
41	FIN560	Advanced Corporate Finance
42	FIN563	Advanced Portfolio Management
43	FIN565	Treasury and Fund Management
44	FIN567	Risk Management
45	FIN568	Derivatives & Risk Hedging
46	FIN569	Financial Econometrics
47	FIN570	Islamic Banking & Finance
48	FIN574	Financial Modeling
49	FIN577	Seminar in Finance



# **Department of Management**

## MANAGEMENT COURSES

S. No.	Course Code	Course Title
1	MGT201	Principles of Management
2	MGT211	Business Communication
3	MGT221	Organizational Behavior
4	MGT301	Ethics in a Corporate Society
5	MGT311	Production and Operations Management
6	MGT400	Management Theory and Practice
7	MGT401	Small Business Management
8	MGT411	Comparative Management
9	MGT421	Entrepreneurship
10	MGT430	Managerial Policy
11	MGT503	Managerial Communication
12	MGT506	Corporate Strategy
13	MGT507	Entrepreneurial Management
14	MGT510	Operations and Production Management
15	MGT512	Strategic Human Resource Management
16	MGT513	Business Strategy
17	MGT519	Personal Effectiveness and Communication (Non-Credit)
18	MGT531	Project Evaluation & Management
19	MGT552	Strategic Management
20	MGT555	Project Management
21	MGT556	Competitive Strategy from a Customer's Perspective
22	MGT557	Organizational Behavior and Leadership
23	MGT558	International Market Entry Strategies

## **ENTREPRENEURSHIP COURSES**

S. No.	Course Code	Course Title
1	MGT102 / 103	Foundation for Management & Entrepreneurship (FME)
2	ENT451	Marketing for Entrepreneurs
3	ENT452	Entrepreneurial Finance
4	ENT453	Business Law for Entrepreneurs
5	ENT454	Entrepreneurial Management

## **ENTREPRENEURSHIP COURSES (Contd...)**

S. No.	Course Code	Course Title
6	ENT455	Family Business Management
7	ENT456	Developing Entrepreneurial Opportunities
8	ENT457	Women's Entrepreneurship & Leadership
9	ENT458	Social Entrepreneurship
10	ENT459	Financing Entrepreneurial Ventures
11	ENT460	New Technology Ventures
12	ENT461	Sustainable Entrepreneurship Strategies
13	ENT462	Corporate Entrepreneurship
14	ENT463	Creativity and Innovation
15	ENT464	Entrepreneurial Sales Strategy
16	ENT465	Co-Curricular Activities•

## **HUMAN RESOURCE MANAGEMENT (HRM) COURSES**

S. No.	Course Code	Course Title
1	HRM401	Human Resource Management
2	HRM430	Recruitment and Selection Techniques
3	HRM445	Occupational Health and Safety
4	HRM451	Industrial Relations Management
5	HRM452	Organizational Analysis and Research
6	HRM453	Life Career Development
7	HRM455	Portfolio Management
8	HRM456	Training and Development
9	HRM457	HR and Information System
10	HRM458	Leading the Change Process
11	HRM462	Performance and Compensation Management
12	HRM530	Recruitment and Selection Techniques
13	HRM552	Organizational Development
14	HRM557	Team Management
15	HRM558	Leading the Change Process
16	HRM562	Performance and Compensation Management
17	HRM571	Training and Development

# **Department of Social Sciences & Liberal Arts**

## **SOCIAL SCIENCES & LIBERAL ARTS COURSES**

S. No.	Course Code	Course Title
1	SSC101	English Grammar & Composition
2	SSC102	Foundation of Human Behavior
3	SSC104	Foundations of Human Behavior
4	SSC106	Intermediate English Grammar & Composition
5	SSC111	International Relations
6	SSC121	Major Themes in World History
7	SSC131	Fundamentals of Sociology
8	SSC150	Remedial English
9	SSC151	Pakistan History
10	SSC154	Research Methods in Social Sciences
11	SSC201	Arabic I
12	SSC202	Arabic II
13	SSC203	Arabic III
14	SSC204	Arabic IV
15	SSC205	French I
16	SSC206	French II
17	SSC207	French III
18	SSC208	French IV
19	SSC209	Mandarin I
20	SSC210	Mandarin II
21	SSC211	Mandarin III
22	SSC212	Mandarin IV
23	SSC213	Advanced English Composition
24	SSC216	Culture, Media, Society
25	SSC217	Introduction to Political Science
26	SSC218	Introduction to Psychology
27	SSC221	South Asian History
28	SSC231	Fundamentals of Sociology
29	SSC232	Introduction to Historical Methods
30	SSC233	Introduction to Social and Cultural Anthropology
31	SSC234	Introduction to Urban Studies
32	SSC235	Introduction to Linguistics
33	SSC238	History of Ideas II

## SOCIAL SCIENCES & LIBERAL ARTS COURSES (Contd...)

S. No.	Course Code	Course Title
34	SSC239	History of Ideas I
35	SSC240	Personal Effectiveness
36	SSC253	Corporate Social Responsibility
37	SSC301	Socioeconomic Philosophy of Islam
38	SSC302	Computational Research Methods

#### **NATURAL SCIENCES COURSES**

S. No.	Course Code	Course Title
1	NSC351	History of Science
2	NSC352	Ideas of Physics
3	NSC353	Space, Time, and Space-Time
4	NSC354	Introduction to Environmental Sciences
5	NSC355	Principles of Ecology and Conservation
6	NSC356	History of Evolution
7	NSC357	Introduction to Geology

## **VISUAL STUDIES & HUMANITIES COURSES**

S. No.	Course Code	Course Title
1	HUM201	Speech Communication
2	HUM238	History of Ideas - II
3	HUM351	Great Books
4	HUM352	Reading Poetry
5	HUM353	Introduction to Drama
6	HUM354	Introduction to Urdu Literature
7	HUM355	Anglo-Indian Narratives and the Postcolonial Subject
8	HUM356	Foundations of Philosophical Thought
9	HUM357	Philosophy, Logic, and Ethics
10	HUM358	Comparative Classical Philosophy
11	HUM359	Introduction to Comparative Religions
12	HUM360	Creative Writing
13	HUM361	Theater Project: The Living Newspaper
14	HUM363	Introduction to Visual Culture
15	HUM364	History of Art I: Classical Antiquity to the Middle Ages

## VISUAL STUDIES & HUMANITIES COURSES (Contd...)

S. No.	Course Code	Course Title
16	HUM365	History of Art II: Renaissance to the Present
17	HUM366	Art of the Islamic World
18	HUM367	Theories of Design
19	HUM368	Colonial and Postcolonial Visual Cultures
20	HUM369	The Rhetoric of Architecture

## MEDIA AND COMMUNICATION COURSES

S. No.	Course Code	Course Title
1	MCS301	Research Methods in Media and Communications
2	MCS302	Gutenberg to Google: A Social History of Media
3	MCS303	Theories of Media and Communications
4	MCS351	Media and Post-colonialism
5	MCS352	Media, Law, and Ethics
6	MCS353	Race, Class, and Gender in Film and Television
7	MCS354	The International Newsroom
8	MCS355	Analyzing the News
9	MCS356	Introduction to Visual Communication
10	MCS357	History of Commercial Art
11	MCS358	Communication in Advertising
12	MCS359	Watching Films
13	MCS360	History of Film
14	MCS361	The Non-Fiction Film
15	MCS362	Introduction to Television Studies
16	MCS363	Television Newsmagazines and Documentaries
17	MCS364	Theories of Film and Television
18	MCS365	Narratives Across Media
19	MCS366	Digital Activism and Democracy
20	MCS367	Media Convergence and the Virtual Public Sphere
21	MCS401	Communication for Social Change
22	MCS491 / 492	Culminating Experience

# POLITICAL SCIENCE COURSES

S. No.	Course Code	Course Title
1	POL301	Research Methods in Political Science
2	POL302	History of Political Thought
3	POL303	Introduction to Comparative Politics
4	POL351	Political Psychology
5	POL352	Foreign Policy in China
6	POL353	State and Society
7	POL354	War: Conceptual Underpinnings
8	POL355	Human Rights
9	POL356	Environment and Politics
10	POL357	Diplomacy in a Globalized World
11	POL358	Islam and International Relations
12	POL359	The Modern Middle East
13	POL360	Theories of Democratic Transition
14	POL361	Democracy and Difference
15	POL362	Pakistan's Foreign Policy
16	POL363	Filthy Lucre: A Political History of Money
17	POL401	International Politics
18	POL491 / 492	Culminating Experience



## **PSYCHOLOGY COURSES**

131chologi cooksis		
S. No.	Course Code	Course Title
1	PSY301	Research Methods in Psychology
2	PSY302	Human Development
3	PSY303	Personality, Identity, and the Self
4	PSY351	Introduction to Social Psychology
5	PSY352	Organizational Behavior and Industrial Psychology
6	PSY353	Psychology and the Media
7	PSY354	Psychology of Conflict
8	PSY355	Introduction to Developmental Psychology
9	PSY356	Attachment and Loss
10	PSY357	Child and Adolescent Development
11	PSY358	Psychology of Aging
12	PSY359	Introduction to Cognitive Psychology
13	PSY360	Sensation and Perception
14	PSY361	Human Memory
15	PSY362	Abnormal Psychology
16	PSY363	Psychology of Human Emotion
17	PSY401	Language, Memory, and the Human Mind
18	PSY491 / 492	Culminating Experience

# Department of Marketing

## MARKETING COURSES

S. No.	Course Code	Course Title
1	MKT201	Principles of Marketing
2	MKT301	Methods of Business Research
3	MKT401	Marketing Issues in Pakistan
4	MKT451	Advertising
5	MKT452	Consumer Behavior
6	MKT453	Sales Management
7	MKT454	Personal Selling
8	MKT455	Retail Management
9	MKT456	Export Marketing
10	MKT457	Dynamics of Distribution and Logistics
11	MKT458	Public Relations
12	MKT460	Direct Marketing

# MARKETING COURSES (CONTD...)

S. No.	Course Code	Course Title
13	MKT461	Brand Management
14	MKT462	Essentials of Demand & Supply
15	MKT466	Digital Marketing
16	MKT501	Marketing Management
17	MKT503	Applied Business Research
18	MKT506	Branding and Creative Corporate Communication
19	MKT507	Marketing Analytics
20	MKT551	Advertising
21	MKT552	Consumer Behavior
22	MKT553	Entrepreneurial Management
23	MKT556	Social Marketing
24	MKT557	Dynamic Distribution & Logistics
25	MKT558	Customer Ascendancy
26	MKT559	Supply Chain Management
27	MKT561	Brand Management
28	MKT563	Digital Marketing
29	MKT566	Media Management
30	MKT569	Social Media Marketing
31	MKT570	Strategic Sourcing & Procurement
32	MKT571	Strategic Sourcing & Negotiation Skills
33	MKT573	Markstrat
34	MKT586	Retailing
35	MKT651	Personal Selling
36	MKT653	Sales Management
37	MKT656	Services Marketing
38	MKT657	Strategic Marketing
39	MKT658	Business to Business Marketing
40	MKT659	Global Marketing Management
41	MKT752	Seminar in Marketing

# **Department of Computer Science**

## MIS COURSES

5 C.	JONSES	
S. No.	Course Code	Course Title
1	MIS103	Introduction to Computer Applications (2,1,3)
2	MIS150	Essential Software
3	MIS343	Data Warehousing (3,1,4)
4	MIS405	Excel & Access for Business Managers (2,1,3)
5	MIS406	Social Computing (3,0,3)
6	MIS450	Technopreneurship (3,0,3)
7	MIS454	Audit, Ethics & IS Issues (3,0,3)
8	MIS456	E-Commerce (3,0,3)
9	MIS457	IS Security
10	MIS458	Enterprise Resource Planning (3,0,3)
11	MIS459	Customer Relationship Management (3,0,3)
12	MIS463	Mobile Marketing - A Technological Perspective (3,0,3)
13	MIS464	Financial Services Technologies (3,0,3)
14	MIS502	Operations & Technology Management
15	MIS503	Enterprise Integration (3,0,3)
16	MIS513	Information: Industry Structure & Competitive
		Strategy
17	MIS541	SAP ABAP Programming I
18	MIS542	SAP ABAP Programming II
19	MIS550	Logistics and Supply Chain Management (3,0,3)
20	MIS552	Advanced Data Warehousing (2,1,3)
21	MIS553	Mobile Marketing Strategies (3,0,3)
22	MIS555	Auditing IT Infrastructures (3,0,3)
23	MIS564	Social Computing Applications
24	MIS565	Advance E-Commerce (3,0,3)
25	MIS566	Fundamentals of SAP-ABAP Programming I (2,1,3)
26	MIS567	Simulated Approach to SCM (1,.5,1.5)
27	MIS568	Business Processes Management in ERP using SAP
28	MIS651	Theoretical Foundations of IS (3,0,3)
29	MIS653	Advanced Theoretical Concepts in IS (3,0,3)

## **COMPUTER SCIENCE & ALLIED COURSES**

1	CSE141	Introduction to Programming (3,1,4)
2	CSE142	Object Oriented Programming Techniques (3,1,4)
3	CSE145	Introduction to Computing (3,1,4)
4	CSE241	Digital Logic Design (3,1,4)
5	CSE247	Data Structures (3,1,4)
6	CSE248	Computer Communications and Networks
7	CSE307	Introduction to AI (3,0,3)
8	CSE309	Theory of Automata (3,0,3)
9	CSE312	Software Engineering (3,0,3)
10	CSE317	Design and Analysis of Algorithms (3,0,3)
11	CSE331	Operating Systems (3,0,3)
12	CSE341	Database Systems (3,1,4)
13	CSE344	Compiler Design (3,1,4)
14	CSE345	Computer Architecture and Assembly Language (3,1,4)
15	CSE351	Cloud Computing (3,0,3)
16	CSE403	System Modeling and Simulation (3,0,3)
17	CSE407	Human Computer Interaction (3,0,3)
18	CSE441	Systems Programming (3,1,4)
19	CSE448	Microprocessor Interfacing (3,1,4)
20	CSE450	Application Development for Mobile Devices (3,0,3)
21	CSE455	Network Security (2,1,3)
22	CSE459	Business Intelligence (3,0,3)
23	CSE460	Introduction to Game Programming and Robotics (3,0,3)
24	CSE462	Introduction to image processing (3,0,3)
25	CSE491	Computer Science Project - I (0,3,3)
26	CSE492	Computer Science Project - II (0,3,3)
27	CSE503	Software Project Management (3,0,3)
28	CSE556	Image Processing for Recognition (3,0,3)
29	CSE558	Mobile Computing (3,0,3)
30	CSE559	Image Processing (3,0,3)
31	CSE564	Software Systems Engineering (3,0,3)
32	CSE566	Software Quality Assurance (3,0,3)
33	CSE567	Requirements Engineering (3,0,3)
34	CSE569	Web Engineering

## COMPUTER SCIENCE & ALLIED COURSES (CONTD...)

S. No.	Course Code	Course Title
36	CSE572	Formal Methods
37	CSE575	Advanced Human Computer Interaction (3,0,3)
38	CSE576	Usability Engineering
39	CSE577	Interaction Design
40	CSE578	GUI Design
41	CSE579	Multimedia and Multi-Modal Systems
42	CSE651	Advanced Analysis of Algorithms
43	CSE652	Knowledge Discovery and Data Mining (3,0,3)
44	CSE654	Combinatorial Optimization (3,0,3)
45	CSE655	Probabilistic Reasoning (3,0,3)
46	CSE657	Essentials of Theoretical Computer Science (3,0,3)
47	CSE658	Knowledge Management and E-Learning Systems (3,0,3)
48	CSE659	Computational Intelligence (3,0,3)
49	CSE660	Computer Vision (3,0,3)
50	CSE661	Semantic Web (3,0,3)
51	CSE662	Parallel Processing (3,0,3)
52	CSE665	Information Retrieval and Web Search - I (3,0,3)
53	CSE666	Information Retrieval and Web Search - II (3,0,3)
54	CSE668	Big Data Analytics (3,0,3)
55	CSE669	MS Research Survey (0,3,3)

## ICT & ALLIED COURSES

S. No.	Course Code	Course Title
1	ICT512	Advanced Web Technologies (3,0,3)
2	ICT515	Distributed Systems (3,0,3)
3	ICT554	Information Security (3,0,3)
4	ICT556	RFID Technologies (3,0,3)
5	ICT651	Computer Communication Networks & Simulation - I (2,1,3)
6	ICT654	Computer Communication Networks & Simulation - II (2,1,3)
7	ICT659	Wireless Sensor Networks (1,2,3)
8	ICT660	Advanced Topics in Wireless Sensor Networks (1,2,3)
9	ICT661	Applications of Mathematical and Computational Techniques to Networking (3,0,3)
10	ICT662	WSN Protocols and Applications (3,0,3)

# **Department of Mathematical Sciences**

# MATHEMATICS COURSES

S. No.	Course Code	Course Title
1	MTS101	Calculus - 1 with Plane Geometry
2	MTS102	Introduction to Statistics
3	MTS104	Calculus with Application-I
4	MTS106	Calculus with Application-II
5	MTS110	Mathematical Methods
6	MTS112	Applied Probability Theory
7	MTS201	Logic & Discrete Structures
8	MTS202	Statistical Inference (with econometrics lab)
9	MTS203	Linear Algebra
10	MTS204	Calculus-III
11	MTS210	Regression Analysis and Experimental Design
12	MTS211	Discrete mathematics
13	MTS212	Business Mathematics & Linear Algebra
14	MTS232	Calculus - II with Solid Geometry
15	MTS241	Introduction to Differential Equations
16	MTS301	Real Analysis
17	MTS302	Complex Analysis
18	MTS303	Advanced Differential Equations
19	MTS304	Stochastic Processes-I
20	MTS305	Abstract Algebra-I
21	MTS306	Abstract Algebra-II
22	MTS411	Functional Analysis-I
23	MTS412	Functional Analysis-II
24	MTS413	Numerical Analysis
25	MTS414	Scientific Computing for Linear PDEs.
26	MTS431	Numerical Solutions of PDEs
27	MTS432	Integral Equations-I
28	MTS433	Advanced Numerical Analysis-I
29	MTS434	Advanced Numerical Analysis-II
30	MTS435	Differential Geometry
31	MTS437	Fluid Dynamics-l
32	MTS438	Fluid Dynamics-II
33	MTS441	Financial Mathematics with a Computational approach

# MATHEMATICS COURSES (Contd...)

S. No.	Course Code	Course Title
34	MTS442	Computational Finance-I
35	MTS443	Modern Algebra-I (Galios Theory & Applications)
36	MTS444	Modern Algebra-II (Commutative Rings & Fields)
37	MTS445	Measure Theory-I
38	MTS446	Measure Theory-II
39	MTS447	Operations Research-I
40	MTS448	Operations Research-II
41	MTS451	Topology-I
42	MTS452	Topology II (Differential Topology)
43	MTS461	Non Linear Dynamic Choas
44	MTS506	Quantitative Methods for Decision-Making
45	MTS511	Advanced Real Analysis
46	MTS512	Measure Theory & Integration
47	MTS536	Mathematical Statistics and Linear Algebra
48	MTS513	Topics in Algebra
49	MTS514	Topics in Commutative Algebra
50	MTS515	Advanced Numerical Analysis
51	MTS516	Topology
52	MTS521	Scientific Computing
53	MTS525	Stochastic Processes II
54	MTS529	Stochastic Differential Equations
55	MTS533	Integral Equations-I
56	MTS537	Mathematical Astronomy
57	MTS539	Homological Algebra
58	MTS541	Computational Algebraic Geometry
59	MTS545	Applicable Modern Geometry I
60	MTS549	Algebraic Geometry I
61	MTS551	Scientific Computing & Software Calculus-III
62	MTS553	Algebraic Cycles I
63	MTS557	Arithmetic Algebraic Geometry
64	MTS561	Exploratory Data Analysis
65	MTS565	Mathematical Physics I
66	MTS569	Statistical Data Mining & Knowledge Discovery
67	MTS573	Statistical Machine Learning
68	MTS577	Galois Theory
69	MTS581	Smooth Manifold
70	MTS621	Numerical Treatment of P.D.E
71	MTS622	Analysis on Manifolds
72	MTS625	Financial Mathematics I

# MATHEMATICS COURSES (Contd...)

S. No.	Course Code	Course Title
73	MTS629	Financial Mathematics II
74	MTS637	Computational Astronomy
75	MTS645	Applicable Modern Geometry II
76	MTS649	Algebraic Geometry II
77	MTS653	Algebraic Cycles II
78	MTS655	Algebric Curves
79	MTS657	Polylogarithms
80	MTS661	Multivariate Statistical Analysis
81	MTS665	Mathematical Physics II
82	MTS671	Monomial Algebra
83	MTS691	Topics of Special Interest I
84	MTS692	Topics of Special Interest II
85	SCI105	Physics I (Mechanics)
86	SCI205	Physics II (Electromagnetism)

S. No.	Course Code	Course Title
1	STA601	Linear Statistical Models
2	STA602	Generalized Linear Models
3	STA603	Advanced Probability Theory
4	STA604	Stochastic Processes
5	STA605	Advanced Statistical Inference
6	STA606	Multivariate Statistics
7	STA611	Time Series Analysis and Forecasting
8	STA612	Experimental Design and ANOVA Models
9	STA621	Statistical Machine Learning
10	STA622	Statistical Data Mining and Knowledge Discovery
11	STA631	Classification and Pattern Recognition
12	STA632	Optimization Techniques
13	STA641	Bayesian Statistics
14	STA642	Reliability and Survival Analysis
15	STA651	Non-Parametric and Semi-Parametric Statistics
16	STA652	Simulation and Re-sampling Methods
17	STA661	Advanced Operations Research
18	STA662	Stochastic Financial Models
19	STA671	Financial Time Series
20	STA672	Advanced Econometrics
21	STA681	Econometric Analysis of Time Series
22	STA682	Longitudinal and Panel Data Models
23	STA691	Functional Data Analysis
24	STA692	Functional Time Series Analysis

# Courses offered by the Centre for Executive Education

## PGD Healthcare Management (focus Hospital Management)

S. No.	Course Code	Course Title
1	HMR101	Epidemiology, Demography and Biostatistics
2	HMR191	Research Questionnaire Development
3	HMS101	Human Resource Management
4	HMR291	Research Questionnaire Implementation
5	HME201	Effective Communication-Marketing and Media
6	HMS202	Hospital Design and Architecture
7	HMS203	Aligning Operations and Customer Healthcare
8	HMS204	Hospital Supply Chain Management
9	HMS205	Operation Excellence and Quality Management
10	HMT291	Incidence Writing on One Minute Manager
11	HMR391	Analysis and Report Writing for Publication
12	HME301	Effective Communication-Ethics and Law
13	HME303	Leadership Skills For Hospital Managers
14	HMS307	Healthcare Financial Management
15	HMT391	Submitting Report on One Minute Manager
16	HMR102	Research Methodologies
17	HME101	Effective Communication-Overview
18	HMS101	Organizational Behavior
19	HME302	Strategic Decision Making & Healthcare Landscape
20	HMS306	Healthcare MIS

## PGD in Human Resource Management

S. No.	Course Code	Course Title	
1	HRM520	Organization Structure & Culture	Core
2	HRM530	Selection and recruitment Techniques	Core
3	HRM531	Training (Learning) & devep. & Talent Mgmt.	Core
4	HRM538	Performance Management System	Core
5	HRM536	HR as Strategic Partner	Core
6	HRM539	Compensation & Benefits	Core
7	HRM537	Employee engagement and retention	Core
8	HRM528	HR Operation/MIS/IT/HR info system HRIS	Core
9	HRM559	Ethics, legal and Regul. consideration in HR	Elective
10	HRM556	Leadership in HR	Elective
11	HRM558	Leading the Change Process	Elective
12	HRM560	Coaching and Counseling	Elective
13	HRM551	Industrial Relation Management	Elective
14	HRM555	Occupational Environment, Health & Safety	Elective

# PGD in Supply Chain Management (SCM)

S. No.	Course Code	Course Title	
1	MKT556	Supply Chain Management	Core
2	SCM531	Accounting & Finance For SC Management	Core
3	MGT510	Operation & Production Management	Core
4	MKT571	Strategic Sourcing & Negotiation Skills	Core
5	SCM533	Enterprise Resource Planning (ERP)	Core
6	SCM534	Managing Contracts & Supplier Relationship	Core
7	SCM535	Distribution & Supply Chain Network Design	Core
8	SCM542	Supply Chain Performance Evaluation	Core
9	MGT557	Organizational Behavior & Leadership	Elective
10	SCM532	Logistics: Transportation & Warehousing	Elective
11	SCM548	Quality Management for Supply Chain	Elective
12	MGT555	Project Management	Elective
13	SCM541	Supply Chain Sustainability & Business Continuity	Elective
14	LAW501	Legal & Regulatory Environment of Business	Elective
15	SCM543	Globalization and Import - Export Policy	Elective
16	SCM544	Supply Chain Modeling & Simulation	Elective
17	SCM549	Manufacturing Strategy	Elective
18	SCM545	Customer Relationship Management (CRM)	Elective
19	SCM545	Forecasting and Marketing Management (CRM)	Elective
20	PRJ701	SCM Project (Capstone)	Project



#### LEADERSHIP

LEADERSHIP		
S. No.	Course Title	
1	Entrepreneurial Leadership	
2	Leadership Skills for Top Management	
3	Managing & Leading Education Institutions	
4	Transformational Leadership Program	
5	Women Leadership	
GENER	AL MANAGEMENT & STRATEGY	
1	Acquiring a Business	
2	Business Performance Measurement (BPM)	
3	Customer Centric Quality Management	
4	Doing Wonders with Excel 2010 (Module 1 & 2)	
5	Essential Statistics for Manager	
6	High Impact Train the Trainer	
7	Innovation Quality Management	
8	Issues of Urban Growth Explosion	
9	Leading Innovative Teams	
10	Negotiation & Conflict Resolution Skills	
11	Project Management (Module 1)	
12	Strategic Decision Making	
13	Strategic Project Management (Module 2)	
14	Strategic Thinking & Execution for Top 1Management	
15	Stress Management	
FINAN	CE, ACCOUNTING & LAW	
1	Sustainability Reporting	
2	Activity Based Costing	
3	Alternative Investments	
4	Bank Credit Analysis	
5	Basel III	
6	Business Analytics and Decision Making	
7	Contract Management	
8	Corporate Credit Risk Analysis	
9	Corporate Law	
10	Corporate Reporting: A means for Corporate Governance	
11	Equity Analysis (Module 1 & 2)	

## FINANCE, ACCOUNTING & LAW (Contd...)

FINANCE, ACCOUNTING & LAW (Contd)		
S. No.	Course Title	
12	Finance & Accounting for Non-Finance Executives	
13	Finance for Engineers & Technical Executives	
14	Financial Derivatives (Module 1 & 2)	
15	Financial Engineering	
16	Financial Engineering & Risk Management	
17	Financial Modeling (Module 1 & 2)	
18	Financial Statement Analysis (Module 1 & 2)	
19	Fixed Income Securities	
20	Industry Analysis from Credit Perspective	
21	Operational Risk Management	
22	Risk Analysis of Insurance Companies	
сомм	UNICATION	
1	Business Communication Skills	
2	Effective Presentation Skills	
3	Managerial Communication Strategies for Success	
4	Oral Communication Skills	
5	Presentations Skills: Master class	
6	Writing Techniques: A Strategic Approach	
7	Written & Verbal Communication Skills	
8	Written Communication Skills	
HUMA	N RESOURCE MANAGEMENT	
1	Balanced Scorecard	
2	Compensation & Benefits Management	
3	Finance & Accounting for HR Professionals	
4	HR as Strategic Business Partner	
5	Life Career Development	
INFOR	MATION TECHNOLOGY	
1	Business Analytics	
2	Data Mining	
3	Data Science	
4	PeopleSoft ERP	
5	SAP ERP	
6	SAP ERP ECC 6.0	

## MARKETING & SALES

S. No.	Course Title
1	Brand & Competitive Strategies
2	Brand Communication: The Indigenous Sub-Continent Perspective
3	Branding for Success
4	Building Powerful Brands for Higher Profits
5	Building Strong Pharma Brands
6	Channel Management Dynamics
7	Creativity in Advertisement
8	Cult Branding
9	Customer Services Excellence
10	Effective Participation in Trade Exhibitions
11	Export Marketing: Manufacturing Locally, Competing Globally
12	Finance for Sales & Marketing Executives
13	Integrated Brand Communications
14	Laws of Branding: Application in Pakistan
15	Media Planning Dynamics
16	Mobile Marketing Strategies
17	Neuro Branding
18	Optimal Pricing Strategies
19	Publicity
20	Sales Force Management
21	Sales Management & Customer Service Excellence
SUPPL	Y CHAIN MANAGEMENT
1	Cost of Quality
2	Making Supply Meet Demand in an Uncertain World
3	Materials Management & MRP in SAP ERP
4	Sales & Operation Planning
5	Supplier Negotiation
6	Supplier Performance Management
7	Supply Chain Management (Fundamentals)
8	Supply Chain Management (Strategy and ERP)
9	Supply Chain Management for Pharma Companies
10	Supply Chain Management Game





# **Course Descriptions - Accounting Courses**

#### **Faculty of Business Administration**

## Department of Accounting & Law

#### **ACCOUNTING COURSES**

### **ACC111 Principles of Accounting**

The objective of this course is to familiarize students with and develop in them a thorough understanding of the accounting concepts, principles, and procedures involved in the analysis and recording of business transactions, and the preparation of financial statements for service and trading concerns. Accounting concepts and techniques underlying income determination and valuation of current and long-term assets, together with their related internal control measures and their presentation in the financial statements are emphasized.

## **ACC201 Financial Accounting**

Financial accounting is the first in-depth accounting course. Theory, the conceptual framework, development & application of International Financial Reporting Standard (IFRS) are stressed. Topics include financial statements, treatment of inventory and PPE in FS, partnerships, and ethics in accounting & business environments.

# ACC310 Advanced Managerial Accounting

The study of management accounting for internal reporting and decision-making. The course introduces a business-management approach to the development and use of accounting information. Major topics include cost behavior, cost analysis, profit planning, and control measures. Accounting for decentralized operations, capital budgeting decisions, and ethical challenges in managerial accounting are also covered.

### ACC312 Business Analysis and Decision Making

Accurate interpretation of Management accounts & financial statements is the key to improve strategic planning and decision making. The important areas of this course are time value of money, rules for preparing financial statements including IFRS & GAAP especially keeping in view the subjectivity of FS and its subsequent impact on rational decision making are the key focus of this course. Further, concepts and processes used to develop budgets are also an integral part of this curriculum.

## **ACC315 Financial Reporting**

This paper is an extension of the previous Financial Accounting paper. Financial statements are again the main feature of this paper with the inclusion of consolidated financial statements & additional concepts, such as impairment of assets, events after the reporting period & prior years' adjustments etc. Focused must be placed on practical application of IFRSs in the modern business environment.

## **ACC320 Auditing**

This course will provide an understanding of Auditing and its process. The role of standard for auditing continues to evolve. The traditional audit changes in response to factors such as technological advancement, the changing needs of users of financial information, regulatory changes, and the increasingly litigious environment in which the auditors practice. The evolution of auditing stresses the importance of professional judgment, a critical cognitive skill in the practice of auditing. A basic premise of this course is that 'concepts' and 'procedures' are inseparable. It is difficult to know when the concepts finish and procedures start. A second premise of this course is that the professional must begin with concepts and end with procedures.

### ACC325 Advanced Auditing

The objective of the course is to develop a framework for determining the nature and scope of the auditing process applicable in different environments. The course focuses on international standards of auditing, techniques for investigation, verification, interpretation, and appraisal of accounting information and financial statements, along with accountability and ethical issues.

### **ACC381 Management Accounting**

The aim of this course is to equip students with the management accounting concepts and techniques used for sound business decision-making. Modules offered include basic cost accounting concepts, their nature and behavior, cost-volume-profit relationships, absorption and variable costing, relevant costs & differential analysis, standard costing and variance analysis, gross profit analysis, and capital budgeting techniques. Prerequisite: ACC111, ACC201



#### **ACC401 Advanced Financial Reporting**

In this paper students are expected to demonstrate application of accounting for leases, treatment of deferred & current taxes, intangible assets & borrowing costs in the financial statements as per IFRSs. The most important sections of this paper is the practical knowledge of business combinations & preparation of consolidated financial statements after accounting for all acquisition adjustments.

#### **ACC415 Actuarial Courses**

This introductory course about actuarial sciences starts with a firm foundation in Mathematics and then moving on to other actuarial courses which ranges from Economics, Finance, actuarial models, and contingencies. Students are advised to possess good knowledge of general and applied mathematics and statistics before taking this course.

## ACC505 Accounting for Decision Making

This course is designed to provide future business executives with the fundamentals and skills of analyzing and using accounting information for management decision-making, planning, and control. Topics include understanding and analysis of financial statements, information management and reporting.

Prerequisite: ACC506

# ACC506 Financial Accounting and Information Systems

This course is designed to provide future business executives with knowledge on the importance of accounting in business decision- making. It also aims to develop an in-depth understanding of fundamental accounting principles and concepts, including the accounting equation, the accounting cycle, financial statement preparation and analysis, inventory management, and receivables / payables for budgeting in business organizations. Finally, it provides an insight into the key role of modern accounting information

systems in information management for business organizations.

# ACC507 Accounting Information Systems with SAP

This course is fully SAP integrated course which covers fundamentals of SAP: financial Accounting, FI, managerial accounting, CO, material management, MM, and sales and distribution, SD. The AIS course is different from other basic accounting courses in that it focuses on the processes and the working and interaction of various organizational elements rather than the accounting information itself.

# ACC557 Accounting Information Systems - For Small & Medium Enterprises

An introduction to accounting information systems and their roles in the accounting environment. Systems covered include manual accounting, computerized accounting, and Internet electronic commerce applications. Emphasis is upon developing students' abilities to understand the processing of accounting data and the controls that are necessary to assure accuracy and reliability of the data processed by the accounting system.

### ACC559 IFRS & Financial Reporting in Pakistan

This course starts with the appreciation of the Framework for Preparation and Presentation of Financial Statements as approved by the International Accounting Standards Board. The course goes on to cover major provisions of some of the important International Financial Reporting Standards as applicable in Pakistan and major SECP pronouncements affecting financial reporting of publicly listed companies. ACC561 Analysis of Financial Statements During the present era of business acquisitions, mergers, leveraged buyouts, and restructuring, and in view of constantly evolving financial reporting refinements and large scale manipulation of financial reporting to control perceptions of investors

# Course Descriptions - Accounting Courses

and lenders, the need for vigorous and meaningful analysis of financial statements cannot be overemphasized. This course aims at developing a deeper understanding of accounting principles and standards. The course is taught largely through case studies and real life business problems, thereby stimulating effective student participation in the learning process. Prerequisite: ACC501 / ACC201

### **ACC589 Project Evaluation & Financing**

The topics covered include developing schematic framework for feasibility studies, conventional and non-conventional measures of investment worth their limitations and problems, and developing project cash flows under special decision situations. The course also focuses on determining cost of capital, identifying, accessing, and developing the optimal financing-mix. Prerequisite: ACC201 or ACC501





#### **LAW COURSES**

#### LAW 105 Politics and Law

This course includes the basic theories, concepts, approaches, and enduring questions of political science. It provides in-depth knowledge and analytical skills to understand modern politics in historical context. Further, it provides a glimpse of local and international laws (i.e. War crimes, crimes against humanity, terrorism, political asylums etc.) and the effectiveness of politics within the framework of applicable laws.

#### LAW205 Business Law

The contents of this course include Contract Act, Sales of Goods Act, Negotiable Instruments, Partnerships, and Company Acts. This course aims to provide a basic introduction to these laws and an appreciation of the legal system in Pakistan.

#### **LAW303 Taxation**

Taxation is an important tool for fiscal and economic management of a country by the government. It is imposed on economic units to finance the expenditure of a government and it is also used by governments to encourage or discourage a certain sector / activity in the economy. In the wake of the above background objective, this course will enable students to: Understand the structure of taxation system & laws in Pakistan; Learn practical application of taxation laws for decision making and planning in different economic and business scenarios.

## LAW305 Corporate Law

This course provides an understanding of basic rules of corporate law such as formation of a company, separate legal entity, limited liability, and role of company's directors & auditors. Further, evaluating corporate problems, identifying appropriate legal obligations, duties, rights, and remedies are an integral part of this course.

# LAW310 Legal & Regularity Environment (For BSAF)

This course familiarizes the students with the laws and regulations at both national and global levels that are pertinent to business decision-making.

#### LAW401 Advanced Taxation

This course is an extension of initial tax paper. It emphasizes building a tax strategy by setting tax objectives

# Course Descriptions - Law Courses

and priorities, and then negotiating and allocating resources accordingly. This course is developed keeping in mind the global business context where a company's corporate and tax strategies move line by line. It demonstrates the effect of double tax treaties and how financial resources can be optimized by an effective tax strategy.

# LAW501 Legal and Regulatory Environment of Business (For MBA)

Business decisions are made within the context of a complex regulatory framework. This course familiarizes the students with the laws and regulations at both national and global levels that are pertinent to business decision- making. In addition to general introduction of legal framework, the course covers nature and implications of specific regulations such as company law, prudential regulations, WTO, Basle, IOSCO etc.

# LAW553 Corporate Governance & Practices in Pakistan

In view of increasing corporate frauds arising mainly due to the failure of proper internal Corporate Governance causing significant harm to all the stakeholders, the need for effective Corporate Governance, and its proper implementation cannot be overemphasized. The topics covered in the course include the need for good Corporate Governance, discussion of Concepts, Principles and Systems of Corporate Governance, benefits of good Corporate Governance, and a detailed examination and critical evaluation of the Code of Corporate Governance of Pakistan.

#### **ECONOMICS COURSES**

#### **ECO102 Business Economics**

Please see on website

ECO103 / 113 Principles of Microeconomics-I & II Principal of Microeconomics. It is designed for students without an economics background, and principal of Microeconomics-II is designed for students with an economics background.

# ECO104 / 114 Principles of Macroeconomics-I & II

Principal of Macroeconomics-I is designed for students without an economics background and principal of Macroeconomics-II is designed for students with an economics background.

#### **ECO105 Introduction to Economics**

Please see on website

#### **ECO201 Intermediate Microeconomics**

The objective of the course is to clarify and extend further the microeconomic concepts and to develop analytical skills of the students along with strengthening their conceptual base. The course emphasizes on three main areas. The first area focuses on consumer theory including utility functions and demand elasticity and income elasticity. The second area covers the behavior of firms, and includes topics like output maximization subject to cost constraint, costs of production, economies of scale, and returns to scale. The third area focuses on the market structure and includes a discussion of perfect market, monopoly, monopolistic competition and oligopoly. Pre-Requisite: ECO103, MTS101

#### **ECO202 Intermediate Macroeconomics**

This course is intended to develop the students' capaci-

ty to understand the issues and problems of the economy in a global scenario. The major topics of discussion include Classical and Keynesian schools of thought, theories of consumption, determinants of national income and investment, demand and supply of money and the labor market. Special emphasis will be placed on discussing the saving-investment gap in developing countries and the problem of inflation and unemployment with reference to Pakistan's economy. The students will be required to read and understand the Economic Survey, Annual Reports of State Bank of Pakistan, ADBP and World Bank.

Pre-Requisite: ECO104, MTS101

## ECO211 Analysis of Pakistan Industry

The globalization of formerly national economies, the invasive role of the information and communication technologies, as well as the union of markets and sectors today affect most industries. Business students must understand how industries are structured, how they change, how they are affected by both technology and regulation, as well as how they interact with one another and evolve as a result of it. In this context, industry analysis is about identifying the micro and macroeconomic factors that affect firms and that shape an industry, as well as about being able to put these factors into logical frameworks. This will help to understand an industry's structure, its main attributes, the degree and nature of competition, as well as its evolution.

#### **ECO301 Development Economics**

This course focuses on factors that spur economic growth and analyzes the equation between economic growth and human welfare. It also critically examines various measures taken for human welfare. In addition, changes in economic structures such as sectorial output and employment relations and various developmental

policies / strategies regarding distribution of income and sectorial development are focused upon. Pre-Requisite: ECO103, ECO1048 MTS112

#### **ECO312 Microeconomics**

The objective of this course is to direct the students to the advanced theoretical concepts of microeconomics and expose them to the rigorous analysis with mathematical tools at hand. The topics of discussion include utility maximization and ordinary (Marshallian) demand functions, cost minimization and compensated (Hicksian) demand functions, theory of production and supply, efficiency of competitive market, the economic cost of imperfect competition, theorems of optimality / welfare, and the tradeoff between equity and efficiency. Pre-Requisite: ECO201, MTS112 & MTS201

#### **ECO313 Macroeconomics**

The course is intended to give the students a strong theoretical foundation so as to understand the real problems of the economy with particular emphasis on inflation, unemployment, instability, deficit and debt to which the developing countries face at present. The discussion topics include wage rate determination, supply side disturbances leading to stagflation, determinants of the exchange rates, devaluation and its impacts for developing countries, policy formulation and implementation in the world of uncertainty and business cycles.

Pre-Requisite: ECO202, MTS112 & MTS201

#### **ECO341 Introduction to Econometrics**

This course enables the students to apply statistical methods to data through simple mathematical models and to interpret the results by using economic theory. The course introduces the students to the ingredients of econometric modeling, which include specification, estimation, evaluation, and forecasting.

The topics of discussion are the simple two-variable model, the multiple linear regression models, multi collinearity, heteroskedasticity, time series data, auto correlation, and the simultaneous equations models. Pre-Requisite: ECO103, ECO 104 & MTS202

#### **ECO342 Applied Econometrics**

The course enables the students to understand the data problems, to have a good grasp over advanced estimation techniques and to have the capability of inferring results accurately. Students will learn certain computer packages like SPSS, e-views, and strata besides excel. The major topics included in the course are classical regression model, generalized least-squares model, the maximum likelihood estimators, time series analysis and auto regressive distributed lag models.

Pre-Requisite: ECO341

## ECO403 Major Issues in Pakistan Economy

An overview of Pakistan's economy with a detailed discussion of various issues like unemployment, poverty, income distribution, debt burden, deficit, etc. which the economy is facing are discussed. The main topics of discussion include agricultural development policies, mobilization of domestic resources, role of foreign aid, development of large and small industries, sectorial development, employment pattern, population growth, international debt dependency, inflation, foreign trade deficit and other emerging issues.

Pre-Requisite: ECO301

#### **ECO411 Research Methods in Economics**

Students are familiarized with the methodology by which economists conduct research, with an emphasis on the development of an effective research question and strategies for identifying relevant scholarly literature. Students will learn how to read theoretical and empirical research papers that contain mathematical

exposition. Students will gain an understanding of collection of data used in economic analysis, and the limitations that the use of data imposes on economic inference. Students will apply their increased understanding of economic research methodology to produce their own literature review.

Pre-Requisite: ECO342

#### **ECO451 Public Finance**

The course discusses public goods and free rider problems, theories on public expenditures, social cost benefit analysis, fiscal policy and Distributional Equity in Taxation. Emphasis is placed on the application of economic theory to the analysis of the issues related to public expenditures and taxation. The discussion of budget cycle and tax structure in Pakistan are also included.

Pre-Requisite: ECO103 & ECO104

## ECO452 Islamic Economic System

Topics include the concept of Islamic method of economic life; rules and legal provisions that govern the economic life and financial transactions, and universality of Islam. The course also discusses the Islamic economic system as a reference development in the arena of economic life, and the failure and ineffectiveness of economic systems in solving the economic problems.

Pre-Requisite: ECO103 & ECO104

#### **ECO454 Population Economics**

Students are exposed to the main population dynamics, their socio-economic determinants, consequences and measurements. The major areas of focus include history of population growth, population theories, components of population changes, economic and social determinants of population trends and their consequences and population policies and their impacts.

Pre-Requisite: ECO103 & ECO104

#### **ECO455 Comparative Economic System**

This course seeks to develop concepts enabling students to differentiate the various economic systems from one another. It provides students with an understanding of the organization, operation, and performance of economic systems, both in theory and in practice. Discussion of general categories of feudalism, capitalism, socialism, communism and Marxism, a detailed discussion of the Islamic economic system and the economic system of Pakistan are also discussed.

Pre-Requisite: ECO103 & ECO104

## **ECO456 Economics and Strategy**

The students will explore the concepts, methods, and tools of managerial economics with an emphasis on business decision - making in domestic and international settings. Topics discussed include: demand theory, supply, the price system, cost analysis, market structures, factor pricing, decision criteria, and international economics. The course integrates economic reasoning with statistical techniques in order to facilitate strategic decision-making under conditions of uncertainty.

Pre-Requisite: ECO103 & ECO104

# ECO461 Natural Resource and Environmental Economics

The course explores the economic basis of environmental issues and policies. The topics of discussion include models of pollution control, value of health, life and safety, emergence of environment issue in Pakistan, industrial waste, etc.

Pre-Requisite: ECO103 & ECO104

## **ECO462 Rural Development**

Introduces the structure of the rural economy the socio-economic set up, developmental status, and core social, economic, and environmental problems to the students. The course imparts knowledge to the students about the historical background, evolutionary planning process of rural development & familiarizes students with the rural scene of Pakistan.

Pre-Requisite: ECO103 & ECO104

#### **ECO464 Game Theory**

The course develops key concepts in game theory, and emphasizes their applications to economic modeling. Contents include: choice under uncertainty and Von Neumann Morgenstern utility; games in normal form: mixed strategies, Nash equilibrium (existence and stability); games in extensive form: backward induction and other equilibrium refinements.

Pre-Requisite: ECO103, ECO1048 MTS101

### **ECO465 International Political Economy**

The objective is to train the students to think systematically about the current state of the economy, the Macroeconomic policy, and to be able to evaluate the international economic environment within which business and financial decisions are made. The course emphasizes the use of economic theory to understand the workings of financial markets and the impact of government policies.

Pre-Requisite: ECO103 & ECO104

## **ECO467 History of Economic Thought**

An introduction of the contributions of major economic thinkers from the late scholastics to the present. The course will enable the students to explore the historical circumstances under which different economic theories arose. Main areas of focus include contributions of the

classical school: Adam Smith, Malthus and Ricardo, socialism, neo-classical economics, Keynesian and post Keynesian schools, and the emergence of modern economic thought.

Pre-Requisite: ECO103 & ECO104

#### **ECO468 Agriculture Economics**

The role the agriculture plays in economic development and the various issues related to agricultural development are highlighted in this course. Major topic of discussion include the theory of rent, agricultural surplus, agriculture in dualistic development models, technological change in agriculture, supply response, and food supply theories. Special emphasis will be placed on discussing the agricultural issues in Pakistan like agricultural productivity, use of inputs, malnutrition, land ownership, soil degradation, and green revolution.

Pre-Requisite: ECO103 & ECO104

#### **ECO469 Regional Economics**

The course includes a discussion of different types of regions: need for planning for local level development; theoretical and practical problems of regional development planning; linkage between planning and implementation at grassroots level; theories of inter-regional economic growth; shadow pricing and socioeconomic development; centralized and decentralized planning and financing for development; regional policies for development and regional (Provincial) development in Pakistan.

Pre-Requisite: ECO103 & ECO104

#### **ECO471 Health Economics**

Students in the health economics course will apply economic theory and empirical analysis to study how socioeconomic status, public policy actions, and individual decisions influence health outcomes. The analysis of medical care industry and economics of private insur-

ance markets comprise another important area of study in the course along with the study of determinants of health, including behavioral, economic and social factors and access to health care.

Pre-Requisite: ECO103 & ECO104

#### **ECO472 Urban Economics**

The analytical sections of the course deal with the location of firms and households in an urban spatial context, the size distribution of urban areas, the theory of land rent, and optimal city size. Various urban problems such as poverty, pollution, and environmental quality are discussed. Other policy questions deal with congestion tolls and efficient highway investment, land use regulation, central city fiscal problems, and alternative educational policies.

Pre-Requisite: ECO103 & ECO104

#### **ECO473 Welfare Economics**

This course introduces students to basic concepts in welfare economics. It allows an understanding of important economic factors affecting the level of social welfare. The conditions for Pareto optimality, alternative welfare criteria, measures of consumer surplus, optimal income distribution, external effects, public goods, the theory of second best and the basic theory of social choice are discussed.

Pre-Requisite: ECO103

#### **ECO474 Resource Economics**

Students are provided an introduction to the economics of natural resources and the environment. It intends to develop a systematic understanding of the economic rationale behind the optimal use of natural resources.

Pre-Requisite: ECO103 &

#### **ECO474 Resource Economics**

Provides students an introduction to the economics of natural resources and the environment. It intends to develop a systematic understanding of the economic rationale behind the optimal use of natural resources. Pre-Requisite: ECO103 & ECO104

#### **ECO501 Managerial Economics**

Various analytical tools and techniques are used to develop students' decision-making skills. These tools are helpful n areas such as organization, production, marketing and evaluation of data. Students learn a variety of scientific management tools like problem solving techniques using consumer theory, producer theory, and theories of markets, statistics, econometrics and mathematics.

#### ECO502 Macroeconomics

Basic models of macroeconomics are introduced which and illustrate principles with reference to Pakistan. This course provides an overview of the following macroeconomic issues: the determination of output, employment, unemployment, interest rates, inflation, monetary and fiscal policies, public debt, and international economic issues.

#### **ECO511 International Trade**

The topics of discussion include theories of absolute advantage and comparative advantage, shift in production function resulting from international trade, Ricardian trade model, international wage differentials and productivity, free trade and income distribution, factor endowment and Heckscher- Ohlin Model, transfer of resources, tariffs, quotas, trade barriers, major trade rules by WTO, contributions of International financial institutions and monetary integration.

Pre-Requisite: ECO201 & ECO202

# ECO517 Global Economic and Political Environment

Develops the understanding and application of social, political and cultural changes and economic development in society It sensitizes students to the history of Pakistan its social, political and economic development and global economic trends as well as the macroeconomic factors which affect businesses

#### **ECO530 Development Economics**

This course focuses on factors that spur economic growth and analyzes the equation between economic growth and human welfare. It also critically examines various measures taken for human welfare. In addition, changes in economic structures such as sectorial output and employment relations and various developmental policies / strategies regarding distribution of income and sectorial development are focused upon.

Pre-Requisite: ECO531, ECO532

# ECO531 Microeconomics Theory - I

This is the third course in a series of microeconomic courses at undergraduate level. This gives students a systematic grounding in Microeconomics and prepares them to use economic models in their own research. Various topics of microeconomic theory examine the consumer behavior, firms' behavior, and the market. More specifically, this course covers the topics including utility maximization, profit maximization, derivation of demand and supply functions, the market equilibrium under perfect competition, and welfare analysis under perfect competition. This course provides mathematical treatment of these topics using multivariable calculus and some basic concepts in real analysis.

# ECO532 Microeconomics Theory - I

The course provides students with a rigorous introduction to the conceptual tools to analyze and identify the

sources of economic progress. Students should be aware of the current debates about the definition of economic progress, and what to consider when studying economic growth. Students will become familiar with the available cross-country data and will be able to draw meaningful insights from it to use formal economic models of growth as basis for understanding and distinguishing the various sources of, and constraints on, economic growth. This course emphasizes rigorous analysis on the long run macroeconomic theory and prepares students for research. It covers key technical tools and modelling frameworks that are fundamental to macroeconomics. Upon completion of this course, students should have: the ability to follow state-of-the-art developments in long- run macroeconomic theory, the perspective to critically evaluate long-run macroeconomic models, the skills to contribute to research in long-run macroeconomics.

#### **ECO533 Mathematics for Economics**

The objective is to achieve an understanding of the concepts from the text book and the ability to apply them. Please note that this course is an Economics course focus will be on the language of mathematics used in economic analysis. This course will also prepare you for the doctoral program in economics.

#### ECO537 Econometrics - 1

Econometrics is a set of research tools used to estimate and test economic relationships. The methods taught in this introductory course can also be employed in the business disciplines of accounting, finance, marketing and management and in many social science disciplines. By taking this introduction to econometrics you will gain an overview of what econometrics is about, and develop some .intuition" about how things work. The emphasis of this course will be on understanding the tools of econometrics and applying them in practice

#### ECO538 Econometrics - 2

This is a second course on a series of graduate level applied econometrics courses in IBA. The first course provides an applied introduction to the econometric tools used in many applied research applications. The course helps in estimating your models for causal interpretation. OLS and multiple regression will be revised briefly and will focus on learning practical issues in empirical research. These issues diagnose the biases and inefficiencies in OLS and as remedy we use GLS, IV, panel data estimations, limited dependent variable, and difference-in-difference.

#### **ECO539 International Trade**

The course is designed for Masters Students who are interested in pursuing policy-oriented positions as well as applying for PhD programs with a focus on international trade. The main objective of this course is to familiarize students with the latest trade theories and empirical studies in the field of international trade as well as learn global trading patterns. The course is divided into three parts. The first focuses on the neoclassical trade models and their explanation of trade patterns. The second part focuses on imperfect competition as well as recent developments on firm-level heterogeneity and its role on international trade. The third part focuses on trade policies and the political economy that determines such trade policies.

Pre-regs: ECO531, ECO533

# ECO544 Issues in Pakistan Economy

This is graduate course is designed to introduce students to the study of issues in Pakistan's economy, the nature of its state, how Pakistani society has changed over the last six decades, and how the economy behaves and develops in a globalized world. The analysis and discussion on Pakistan and its issues in the economy, society and structures, will be embedded in a broad theoretical

and historical perspective, focusing on economic development. Theories of economic development will help frame the specific experiences of Pakistan. Pakistan's economic history and contemporary issues which affect the economy today will be examined. This course provides a broad historical review of the nature of changes which have taken place in Pakistan The emphasis of the course will be on social and structural change and transformation, of society, the state and the economy.

#### **ECO555 Economics Forecasting**

Forecasting is one of the most rapidly growing research areas with wide applicability in economics. The increasing complexity of global financial markets is fueling the demand for professional experts who possess an understanding of forecasting, econometric tools to solve forecasting problems, and necessary computer skills to create relevant forecasts. Forecasting combines the essential tools in economics, statistics, and mathematics to meet these growing needs. This course assumes that students have done. Graduate level course in econometrics and macroeconomics. The course concentrates on applications of various econometric techniques to real world data with special emphasis on forecasting.

# ECO560 Public Policy Analysis: Theory and Practice

This is the first course in the public policy analysis sequence. It identifies, analyzes, and solves policy problems. The course is designed to provide a thorough introduction to public policy analysis with a balance between theory and practice. We will explore policy analysis in developing countries. The course will also explore the implications of public policy and reform in on business strategy.

Pre-Requisites: ECO531 / ECO501 / ECO102 / ECO104 / ECO103 / 113

**ECO561 Environmental and Resource Economics** 

This course is designed to provide a rigorous introduction to microeconomic frameworks and tools for analyzing and improving the efficiency of natural resource use and environmental protection. Students will apply these concepts and policy instruments to policy problems in developing countries, with particular emphasis on Pakistan.

Pre-Requisites: ECO301 / ECO312 / ECO501 / ECO531

#### **ECO562 Financial Economics**

The objective of this course is to undertake a rigorous study of the theoretical foundations of modern financial economics. The course will cover the central themes of modern finance, including individual investment decisions under uncertainty, stochastic dominance, mean variance theory, capital market equilibrium and asset valuation, arbitrage pricing theory, option pricing, and incomplete market. Upon completion of this course, students should acquire a clear understanding of the major theoretical results concerning individuals. Consumption and portfolio decisions under uncertainty and their implications for the valuation of securities.

Pre-Requisite: ECO103 & ECO104

#### **ECO563 Financial Economics**

The course gives you an understanding of the economics of health, healthcare and health policy, with an emphasis on Pakistan. Topics examined are the production of health status, the demand for and supply of healthcare services, and the special attributes of healthcare markets and the implications of those attributes for the financing, funding, organization, delivery of healthcare services, and public policy. We will analyze the roles of externalities, risk, imperfect information, asymmetries of information, and institutional arrangements in affecting behavior in healthcare as well as the formulation and implementation of health policy. Major objectives of the course include a better understanding of

analytical tools, role of institutional arrangements in affecting performance and behavior in the health sector and an improved ability to apply economic, health policy analysis, and other tools to issues in health and healthcare. By the end of the course students should have developed a better understanding of the economic and non-economic factors that affect health status, a better understanding of the determinants of market success and market failure, the role of institutional arrangements and the role of public policy.

### **ECO564 History of Economics**

This course is a survey of world economic history, and it introduces economics students to the subject matter and methodology of economic history. It is designed to expand the range of empirical settings in students' research by drawing upon historical material and long-run data. Topics are chosen to show a wide variety of historical experience and illuminate the process of industrialization. The emphasis will be on questions related to labor markets and economic growth.

## **ECO566 Monetary Economics**

This course is designed as a survey of the basic theories in monetary economics for undergraduate level students. The main objective of the course is to help students understand the core aspects of monetary economy, how monetary phenomena and policies are determined, and how they interact with the rest of the macro economy. For that purpose, several key theoretical frameworks will be constructed. Major schools of thought in monetary economics, and their differences, which give rise to different policy implications, will also be discussed..

Pre-Requisite: ECO103 & ECO104

#### **ECO567 Public Economics**

In the course the students will understand theoretical issues of public finance, study the rationale for government interventions in the market economy, make assessment of public policies and calculate the impact of government tax and expenditure policies on the economy and society.

#### **ECO570 Time Series Modeling**

The course introduces students to the main issues arising when modeling Time Series Data. Students are provided with the tools to apply some of the most sophisticated and up to date techniques used in empirical time series analysis and Dynamic Stochastic General Equilibrium (DSGE) modelling. The students will also be exposed to brief sketches of the theoretical econometric issues behind some of the more recent developments in this field. At the end of the course the students will be able to read and understand applied papers on time series analysis, will have all the tools to estimate univariate and multivariate ARMA, ARIMA, VAR, SVAR, Bayesian VAR, Panel VAR models, and will know where to look for more in depth theoretical research. The topics covered in this course include univariate ARMA/ARIMA models, structural breaks testing, ARCH and GARCH, multivariate (VAR and SVAR, Bayesian VAR) models, unit roots and co integration. Each topic will be motivated with an empirical example and hands on examples will be used throughout the class. Grading will be based on an individual project/term paper.

#### ECO571 Industrial Economics

An introduction to current theory and empirical work in Industrial economics, it starts by examining the internal structure of firms. It then moves on to the analysis of various aspects of strategic interaction between firms and the determinants of industrial structure. Finally, it discusses the role of policy in the context of competition and industrial policies and regulation. The emphasis will be on understanding how theoretical tools can be used to analyze real world issues. The theory will be confronted against empirical evidence, and its implications for public policy and business strategy will be discussed.

#### ECO572 General Equilibrium & welfare economics

An introduction to the economics of information. presenting models of moral hazard, adverse selection. and signaling. It provides knowledge of the general equilibrium, and an understanding of the intuition underlying the main welfare theorems both in general and partial equilibrium analysis. Students learn the basic concepts and results of the economics of information. This part considers models of asymmetric information, and introduces the concepts of moral hazard, adverse selection, and signaling. The students should be able to do welfare economics without use of marginal conditions. Students should be able to differentiate between problems of moral hazard, adverse selection, and signaling as well as be able to handle simple models that capture various kinds of informational asymmetry.

## ECO573 Game theory and competitive strategy

This course will cover game theory and strategic thinking. Ideas such as dominance, backward induction, Nash equilibrium, evolutionary stability, commitment, credibility, asymmetric information, adverse selection, and signaling are discussed and applied to games played in class and to examples drawn from economics, politics, the movies, and elsewhere. This course uses game theory to study strategic behavior in real-world situations. It develops theoretical concepts, such as incentives, strategies, threats and promises,

and signaling, with application to a range of policy issues. Examples will be drawn from a wide variety of areas, such as management, labor bargaining, international negotiations, auction design, and voting behavior. This course will also explore how people actually behave in strategic settings through a series of participatory demonstrations. These experiments will help refine our understanding of economic and political behavior in the real world. Prior courses in microeconomics and mathematics are helpful but not required.

## **ECO574 Water Economics and Policy**

This course is about the economics and public policy associated with water and its applications, pricing, valuation, demand, and supply. This course is particularly relevant in Pakistan where a majority of the population's access to water is at risk, access to safe portable water is limited, and the irrigation system is the backbone of the economy. The course provides a rigorous introduction to water scarcity and its implications for supply, pricing, and demand.

Pre-Requisites: ECO301 / ECO312 / ECO501 / ECO531

# ECO575 The Microeconomics of Public Policy Analysis

This is the second course in the public policy analysis sequence. This course is designed to enable students to apply microeconomic frameworks for conducting policy analysis. Students will explore the economic rationales for public policy, microeconomic models of individual choice for policy analysis, potential policy interventions in markets, and sources of market failure and institutional choice. Students will learn to develop microeconomic models for public policy analyses. Pre-Requisites: ECO301 / ECO312 / ECO501 / ECO531

#### ECO591 Research Methodology

This course covers the basic steps and process of conducting applied economic research. This includes the selection of topic, literature review and survey, selection of research method and approach, formulation of hypothesis, testing of hypothesis using statistical analysis, and summarizing results. Course objectives include applying economic theory to real world problems and concerns, learning where resources and data can be located, using statistical methods to analyze and evaluate the application of economic theory and reasoning, and gaining an appreciation for the value of economic reasoning and research, while also recognizing the limitations of its application. You will also learn to write an effective research paper and be able to effectively present it to your fellow students and faculty in economics.

### ECO631 Microeconomics Theory - II

This course is a graduate level course. The pre-requisites for this course are intermediate microeconomics and mathematics for economists and will not be waived under any circumstances. In this course we present the advanced treatment of various topics that have already been covered in your earlier microeconomics course. We will use rigorous mathematical analysis to examine topics such as consumer choices, theory of firm, partial equilibrium and game theory.

#### ECO632 Microeconomics Theory - II

Why are some countries richer than others? The objective of this course is to answer this question. The course aims to survey the main models that are currently used to describe the determinants of economic growth, namely capital accumulation, population growth and technical progress. The study of these three sources of economic growth is central to macroeconomics and is presently a very active area of research. We then turn

to testing the main implications of these models. Particularly, one wants to test whether poor countries have a tendency to catch up with the richer countries, and whether the variance of per capita national income tends to fall over time. We also look at the endogenous growth theories. We finish off with a brief introduction to Real Business Cycle literature.

#### ECO648 Econometrics Analysis - II

This course assumes that students have done at least one graduate level course in econometrics (e.g., ECO-647 in IBA). The course concentrates on applications of various econometric techniques to real world data with special emphasis on time series and panel data. The methods taught in this second course on econometric analysis will provide students with the tools to apply some of the most sophisticated and up to date techniques used in empirical macro/monetary economic modelling with especial emphasis on Dynamic Stochastic General Equilibrium (DSGE) modelling. The students will also be exposed to brief sketches of the theoretical econometric issues behind some of the more recent developments in this field. Each topic will be motivated with an empirical example and hands on examples will be used throughout the class. Grading will be based on a final individual project/term paper.

#### **ECO654 Labor Economics**

This course will allow the students to extend their knowledge of economic theory and apply it to the labor market. The course addresses the topics of labor demand and supply, wage rigidity, role of labor unions and unemployment, labor market discrimination, labor policy, theories of labor movements and child labor. Pre-Requisite: ECO103 & ECO104

# **Course Descriptions - Finance Courses**



#### **FINANCE COURSES**

#### FIN201 Introduction to Business Finance

Introduction to the fundamental tools of business finance. The main concepts examined include financial analysis, financial decision-making, time value of money, valuation of financial assets, risk and return analysis, and management of short- term assets of the firm.

#### FIN301 Financial Institutions and Markets

It provides a look at the broad framework of the financial system, as well as an insight into the nature and operations of different financial institutions and markets. These institutions and markets include the banking industry, the non-banking financial institutions, the stock market, the bond market, and the foreign exchange market.

Prerequisite: FIN201

#### FIN305 Alternate Investments

This course explores alternative investments such as investments in hedge funds, private equity / venture capital funds, real estate, and commodities, either directly or through funds of funds. The course combines theory with empirical exercises, allowing students to get a hands-on experience. Topics explored are the return and risk characteristics of alternative investments what attributes to their appeal, and how to construct a portfolio using them.

#### FIN308 Real Estate Investments

The course examines debt and equity financing for residential and commercial real estate properties. The objective of the course is to establish a solid foundation in the fundamentals of real property valuation and underwriting, as well as an understanding of the various debt and equity financing alternatives available for use in the capital markets. Lender and investor perspectives on risk and reward across property types are also examined.

#### FIN310 International Banking

Students are provided with an understanding of the operating environments of international banking institutions. Topics covered are: the nature and theory of international banking, the major functions of international banking and other important issues (international

money laundering, international banking crisis, regulation of international banking, international debt crisis, and offshore banking markets). The course includes a discussion of international monetary law - primarily, the law and guidelines established by the International Monetary Fund and Bank for International Settlements.

#### FIN312 Behavioral Finance

Describes how individuals and firms make financial decisions, which might deviate from those predicted by traditional financial or economic theory. Students explore the existence of psychological biases in financial decision- making, and examine the impacts of these biases in financial markets and other financial settings. The course examines how the insights of behavioral finance complements the traditional finance paradigm.

## FIN315 Corporate Restructuring

Corporate restructuring involves any substantial change in a company's financial structure, or business portfolio, designed to increase the value of the firm. This course will employ an in-depth group work on case studies and deal documentation. The focus will be on identifying situations that call for nonstandard corporate finance solutions, and the design and pricing of the situation-specific financing instruments.

#### FIN320 Empirical Research in Finance

An introduction to the methods that are used in contemporary financial research. Students are provided with the necessary tools to study the relevant literature of other core courses in the program and to conduct empirical financial research within the framework of the Master's thesis. Attention is given to the intuition and the practical applicability of a variety of econometric techniques that are widely used in contemporary empirical financial research. Many real world examples from the corporate finance and asset pricing literature will be referred.

# **Course Descriptions - Finance Courses**

#### FIN401 Financial Management

Builds upon the background provided in the core accounting and finance courses. The course will enhance students understanding of the theory and practice of the financial management of a firm. Topics covered include financial analysis and planning, capital budgeting process, long term financing, working capital management and mergers and acquisitions.

Prerequisite: FIN201

# FIN405 Venture Capital and the Finance of Innovation

This course covers the finance of technological innovation, with a focus on the valuation tools useful in the venture capital industry. These tools include the venture capital method, comparables analysis, discounted cash flow analysis, Monte Carlo simulation, contingent claims analysis, decision trees, and real options. Specific topics of the course include investment selection, due diligence, valuation, negotiation, portfolio company management, exits, limited partners, and firm management. Students will develop a perspective and a framework for understanding the practical aspects of the business, as well as the current state of the venture capital industry.

### FIN410 Buyouts and Acquisitions

The focus of this course is on buying (or acquiring controlling stakes in) firms. The main topics to be covered are mergers and friendly acquisitions, hostile takeovers and buyouts. Using case studies, the course surveys the drivers of success in the transactions. While issues regarding motive and strategy will be discussed, financial theory would be the main lens used to view these control acquiring transactions.

#### FIN424 Fixed Income Investments

Please see on website

#### FIN425 Branch Banking

An introduction to the concept of bank branches, functions of a branch its role in the overall banking arena, products and operations of a branch and the laws and regulations that govern its operations. The course is aimed at building primary knowledge base for bankers of all levels to better understand the branch level functionalities and its scope.

# FIN426 Lending- Products, Operations & Risk Management

Provides insights into the nature of lending products, the related operations and the role of risk management in maintaining a healthy lending portfolio. This course also introduces the various types of financing facilities available in the local as well as the global market. Furthermore, the course gives an insight about the risk management concepts along with basic knowledge of fraud and how to assess lending risk and risk appetite.

# FIN427 Finance of International Trade and Related Treasury Operations

The course imparts knowledge and expertise in the field of international trade, finance & related treasury operations. It enables students to understand the role of banks in international trade, the risks inherent in trade and become aware about local laws and regulations as well as international conventions / practices.

# FIN428 Introduction to Marketing of Financial Services

This course provides an in- depth appreciation and understanding of the unique challenges inherent in managing and delivering quality services Students are familiarized with the basic concepts of marketing, and its scope and application in the corporate arena specifically in banks. Concepts of brand equity, marketing management, and customer relationship management

are discussed in detail. Also, information on developing the marketing mix, distribution of products, and logistics management is covered.

# FIN429 Information Technology in Financial Services

With the increasing use of and reliance on technology in the financial services industry, bankers need to know not only the basic computing concepts, but also understand the correlation that now exists between banking and technology. This course is designed to equip participants to have an understanding of the above.

## FIN430 Financial Information System

Please see on website

## FIN451 Investment Banking

Introduces students to the various facets of the Investment Banking Industry. The course begins on a broad conceptual level with an examination of the philosophy and the scope of Investment Banking, and then narrows down to focus on the different facets of Investment Banking.

Prerequisites: ECO103 / ECO201, ECO104 / ECO202 & FIN401

#### FIN452 International Finance

This course concentrates on the role of external finance and foreign exchange in a macroeconomic context. The topics covered include a study of the major institutions of international finance, the balance of payments analysis, theories of foreign exchange rate determination, international risk exposures and risk management. The topics covered include a study of the major institutions of international finance, the balance of payments analysis, theories of foreign exchange rate determination, international risk exposures and risk management with a concentration on the role of external finance and

foreign exchange in a macroeconomic context Prerequisites: ECO10413 / ECO202 and FIN401

### FIN453 Security Analysis

Investment securities, application of tests of income risk and marketability in the selection of securities, diversification and management of funds, methods of security analysis, and the use of technical aids in the appraisal of investment values are covered in detail. Students are given a practical investment experience and introduced to various styles of investing and security analysis. It exposes them to the operations of money management-related processes and investment culture of the Karachi Stock Exchange.

Prerequisite: FIN401

### FIN454 Corporate Finance

It examines the fundamental question in finance i.e., the ability of companies to make profitable financial decisions using financial theories put forward by different scholars. The course also deals with controversies regarding what businesses do in order to maximize firm value and builds an analytical understanding of corporate financial decision- making.

Prerequisite: FIN401

# FIN455 Portfolio Management

An introduction to the theory and practice of investment analysis and portfolio management. The course surveys various quantitative applications and assets valuation models and their use in constructing a profitable investment portfolio. Topics include designing portfolios, risk diversifications, conceptual framework for making risk management and insurance decisions to increase business value and individual welfare, institutional aspects of the managed funds sector in Pakistan's market structure and market efficiency.

Prerequisite: FIN401

## FIN456 Financial Risk Management

Students are provided with a quantitative perspective of risk management and the conceptual framework for making risk management and insurance decisions to maximize value. The effects of, and rationale behind, public policies that affect risk and allocation of risk among businesses and individuals are also discussed.

Prerequisite: FIN401

#### FIN457 Derivatives

The course deals with the applications of derivatives, investigating the risks involved in derivative instruments, and examines how investors adjust the payoff pattern of their portfolios. Various topics, like types of option contracts, taxation of option contracts, binomial option pricing model, Black Sholes model for call options, portfolio insurance, future versus call options, and synthetic futures are also discussed.

Prerequisite: FIN401

# FIN458 Fundamentals of Treasury and Fund Management

It deals with an in-depth analysis of the various methods of treasury and fund management, incorporating asset pricing, expectation theory, interest rate risk and the term structure of interest rates. The differences among asset and liability management, managing interest rate risk, and selling interest rate risk products are also covered. Prerequisite: FIN401

# FIN501 Advance Corporate Finance

Please see on website

#### FIN506 Business Finance I

Introduces students to the theory and principles of business finance. The course starts with the goals of a

# **Course Descriptions - Finance Courses**

corporation and the basic financial decisions. Successful completion of this course will enable the students to evaluate the financial performance of a firm, calculate the measures of risk and return, understand the principles, time value of money and discounted cash flows, etc.

#### FIN507 Business Finance II

Concepts covered in the introductory business finance course are built upon. Students are provided with an understanding of the financial securities, evaluation and the computation of the cost of capital. The management of corporate capital structure, particularly the choice between debt and equity financing, and dividend policy, forecasting techniques, types of financing and investment options are also discussed in this course.

Prerequisite: FIN506

#### FIN531 Financial Intermediation

A review of the evolution of financial intermediaries in the global economy and the role played by financial intermediaries to integrate the financial system is discussed. Students will analyze recent global credit and subprime crises to develop a comprehensive understanding of the integrated financial system. Focused discussion will take place with respect to Pakistan market and participants would be required to develop intermediary solution for further broadening of the financial markets along with the legal and regulatory prospective.

## FIN532 Advance Credit Management

Credit is the core function of every bank, without which a bank cannot sustain. Recent banking crisis has highlighted the importance of sound credit management across the world. The course will include

# **Course Descriptions - Finance Courses**

introduction to credit management, fundamentals of credit management, classic credit analysis, and credit-related regulations in Pakistan.

# FIN533 Financial system - process, players, status and prognosis

The study of the financial system and its role in the economy, financial institutions, financial markets, financial instruments financial services, monetary policy, Forex and debt management is covered in detail along with the discussion of financial sector reforms.

## FIN535 Treasury and Financial Derivatives

Please see on website

### FIN536 Corporate Investment Banking

Please see on website

## FIN541 The Strategic Management of Banks

The top leader of a bank has to have an eye on all critical areas, including but not restricted to; products, customers, competitors, Board of Directors, human resource, regulators, policies, financial and nonfinancial resources, operations, controls, risk factors, liquidity, profitability, and reputation. Banking is becoming more complex and exposed to multidimensional risks. The global financial crisis 2007-8, showed how experts failed to see the impending danger and take timely action. This course is aimed at raising all these issues to offer a holistic view to the future leaders of the bank.

# FIN552 International Financial Management

An introduction to real world institutions and the analysis of financial concepts. Case studies focus on managerial practices and real world issues and decision problems. The course also deals with how evaluations of the international monetary system provide challenges and also opportunities for the key players in the field.

Prerequisite: ECO501 / FIN507

#### FIN554 Investment Banking & Financial Services

Introduces the students to the various facets of the Investment Banking Industry. The course commences on a broad conceptual level with an examination of the philosophy and the scope of Investment Banking, and then narrows down to focus on the different facets of Investment Banking.

Prerequisite: FIN507

#### FIN556 Security Analysis & Capital Markets

The course covers an analysis of the economy, current state of the economy, significance and interpretation of economic indicators, industry analysis and the growth cycle, company analysis, marketing, accounting and dividend policies, capital structure analysis and fundamental security analysis. It also includes changes in financing patterns of Pakistani companies, their debt-equity ratio and cross-sectional variation in Debt Financing. Prerequisite: FIN507

#### FIN558 Regulation & Financial Markets

The course enhances students understanding of the ways in which government and public authorities intervene in the operation of financial markets. It also provides a critical view of current regulatory development with the aim to identify the most appropriate regulatory policies toward increasingly complex financial phenomena and markets.

Prerequisite: FIN507

#### FIN559 Islamic Finance

Islamic banking refers to a system of banking or banking activity that is consistent with Islamic law (Shariah) principles and guided by Islamic economics. In particular, Islamic law prohibits usury, the collection and payment of interest, also commonly called riba. This course will cover the fundamental principles of Islamic Finance and banking.

#### FIN560 Advanced Corporate Finance

This course covers analytical foundations of corporatefinancial policies and strategies. It deals with exploration and application of theoretical and empirical literature on firms' investment and financing decisions. Topics include valuation, tax policy, option pricing, mergers and acquisitions, and corporate bankruptcy.

Prerequisite: FIN507

#### FIN563 Advanced Portfolio Management

Introduces the theory and practice of investment analysis and portfolio management. Various quantitative applications and asset valuation models are examined. Topics include designing portfolios, risk diversifications, conceptual framework for making risk management and insurance decisions efficiency. Security valuation models, setting investment goals and policies, equity and fixed income portfolio strategies and portfolio performance, transaction costs, turnover and trading are also taught in this course.

Prerequisite: FIN 507

## FIN565 Treasury and Fund Management

The course covers an in-depth analysis of the various methods of treasury and fund management, incorporating asset pricing, expectation theory, interest rate risk, and the term structure of interest rates. The differences among asset and liability management, managing interest rate risk, and selling interest rate risk products are also covered.

Prerequisite: FIN507

#### **FIN569 Financial Econometrics**

This course introduces econometrics emphasizing the the application of least squares method to cross-sectional and time series financial data. It covers mainly the estimation of linear regression model and deals with various econometrics problems associated with model estimation, such as multicollinearity and heteroscedasticity, and extensions such as simultaneous equations, co-integration techniques, etc. These techniques are applied to estimate and forecast risk premiums, return volatility and optimal mix of financing, and other related financial models for investment decision-making.

Prerequisite: MTS506 / FIN507

## FIN570 Islamic Banking & Finance

Please see on website

#### FIN574 Financial Modeling

The course teaches how to conceive and build financial models. Topics deal financial models guide commercial decisions, and how to negotiate off the model are also discussed.

Prerequisite: FIN507

#### FIN577 Seminar in Finance

This course is essentially discussion-oriented. An introduction to empirical research in finance, heavily skewed towards 'Capital Markets'. Students are required to write an original research paper or critically review of an area. Plagiarism will not be tolerated.

Prerequisite: FIN507



#### **Department of Management**

#### **MANAGEMENT COURSES**

MGT201 Principles of Management

An introduction to the basic managerial functions of planning, organizing, staffing, leading and controlling. It is specially designed to orient students with modern management practices essential for successful management of large organizations whilst operating in the changing global, political, economic, social, and technological scenarios.

#### **MGT211 Business Communication**

The course focuses on the theory and practice of effective communication techniques in business environments. It polishes verbal and non-verbal communication skills for effective participation in business meetings and other activities. It prepares students to write formal business reports and to add value to previous work through further library research and fieldwork.

#### MGT221 Organizational Behavior

Students are exposed to frameworks for diagnosing and dealing with problems in organizational settings. It inculcates a positive approach in managing productive relationships with peers, superiors, and subordinates by examining teams, individuals, and networks in a business environment. Topics such as group culture, individual motivation and behavior, collective and individual performance, decision making, interpersonal communication, small group behavior and inter-group conflict are extensively covered.

# MGT301 Ethics in a Corporate Society

The importance of ethics in the corporate society are examined. It highlights the need to draw an analytical distinction between ethics and morality, good and bad, right and wrong so as to develop a criterion of judgment for socially responsive behavior. This course

# Course Descriptions - Management Courses

examines the relationship between value judgment and attitude formation, informed by the teleology of various ethical theories. The ethical relevance of such values like honesty, justice, fairness and equity in relation to the dynamics of corporate society will be highlighted.

Prerequisites: MGT201, ACC301, MKT201

# MGT311 Production and Operations Management

The course work is intended to strengthen students' conceptual understanding and skills in the areas of operations, strategy and technology, forecasting, capacity and materials management, and design of productive systems.

Prerequisites: MGT201, MKT201, FIN201

### MGT400 Management Theory and Practice

An overview of the basic theoretical concepts in the field of management. It also highlights the linkage between management theory and management practice. Various implications of the theoretical concepts will be discussed. Students will be able to evaluate and apply these theoretical concepts to organizations and businesses.

#### MGT401 Small Business Management

This interdisciplinary course emphasizes the importance of small businesses in the economy. Topics include the adoption of managerial concepts to small business, essentials of business startup, determinants of choice of business capital, location, structure, size, etc. It aims at motivating students to choose small business at entry stages of their careers, contribute to economic growth, and setup their own enterprise later on.

Prerequisites: MGT201, MKT201, FIN201

# Course Descriptions - Management Courses

#### MGT421 Entrepreneurship

The course acquaints students with the importance of entrepreneurship for the society and helps them appreciate the role of the entrepreneur in the economy. The course imparts knowledge about entrepreneurial processes, business lifecycle, principle concepts and general guidelines for establishing a new business enterprise in a dynamic business environment Prerequisites: MGT201, FIN201, MKT201

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## MGT430 Managerial Policy

This is an advanced management course in strategic planning, policy formulation and implementation that develops an integrated organizational viewpoint. It inter-relates the functional areas of finance, marketing, production, human resource and the general business environment.

Prerequisites: MGT201, MGT211, MGT221, FIN201, MKT201, HRM401, ECO103, ECO201.

### MGT503 Managerial Communication

Please see on website

# MGT506 Corporate Strategy

Corporate Strategy is designed to train the students in methodologies of formulating and implementing successful strategies. Students learn to view, analyze, and solve business problems from an integrative perspective and learn how firms develop and sustain competitive advantage over time. The insights acquired are applied within an integrated conceptual framework. The course uses case-method as the primary teaching methodology.

## MGT507 Entrepreneurial Management

The course imparts knowledge about entrepreneurial processes, business lifecycles, principle concepts and general guidelines for establishing a new business

enterprise, at a small or large level, in a dynamic business environment.

Prerequisites: Principles of Management / Introduction to Business Finance

#### MGT510 Operations and Production Management

The course is intended to strengthen students' conceptual understanding and skills in the areas of operations, strategy and technology, forecasting, capacity and materials management, which will enable them to design productive and efficient systems. The operations aspect of the course examines the establishment processes that create the products and / or services for a company's market.

# MGT512 Strategic Human Resource Management

Organizations derive their sustainable competitive advantage on the basis of the resource bundle they possess, their ability to formulate a strategic fit with the environment and the skills to efficiently implement it. The course addresses the issues behind the right mental attitude, required knowledge, and optimization of skills needed to accelerate profitable business growth. It focuses on the formulation and implementation of strategy through people.

## MGT513 Business Strategy

A strategy is a set of policies, objectives, and resource commitments that determine how a business positions itself to create wealth for its stakeholders. Business strategy is designed to train students in methodologies of formulating and implementing successful strategies. The course primarily uses the case method as a teaching methodology.

# MGT519 Personal Effectiveness and Communication (Non-Credit)

This course builds self-aware and effective leaders in today's complex business environment. A key element of 'knowing thyself' is about sorting out what's really important along with a clear sense of personal principles and priorities. The course includes an introduction to key tenets of effective leadership, which will help students to develop new skills and strategies for leading effectively. It also discusses and develops their interpersonal skills, as well as teaches them how to be effective in a team-based environment.

## MGT531 Project Evaluation & Management

Please see on website

### MGT552 Strategic Management

Gives a broad overview of the concepts and applications of state-of-the-art management and presents a horizontal view of an organization. It is an integrative course that combines all the functional areas in marketing, finance, human resource, operations / production, labor management relations, research and development, and general management.

## MGT555 Project Management

An introduction to a structured approach to managing projects. It helps students gain managerial practice through the development and execution of a real-life project. The project focuses more on technology rather than financial management. The course includes topics such as Management Process, Utilization of Project Management, and Strategic Context of the Project, Project Planning & Scheduling.

Prerequisite: MGT201 / MGT400

# MGT556 Competitive Strategy from a Customer's

Please see on website

# Course Descriptions - Entrepreneurship Courses

MGT557 Organizational Behavior and Leadership Students are provided with an understanding of how an organization works and the behavior of groups and individuals within it. They will be taught how to manage productive relationships with peers, superiors, and subordinates by examining teams, individuals, and networks in a business environment. Topics such as group culture, individual motivation and behavior, collective and individual performance, decision making, interpersonal communication, corporate vision, organizational culture and leadership; designing effective organizational structure, small group behavior and inter-group conflict are extensively covered.

# MGT558 International Market Entry Strategies Please see on website



#### **ENTREPRENEURSHIP COURSES**

# Foundation for Management & Entrepreneurship (FME) MGT102 / 103

FFME is a one year course in which student teams create, develop, launch 8 manage business. During the courses, students study entrepreneurship, marketing, accounting, organizational behavior, information systems, and operations. The CED at IBA funds up to Rs.100, 000 /- as a start-up money for student businesses. This is a 6-credit hour course, spread over 2 semesters, 3 credits each.

## **ENT451 Marketing for Entrepreneurs**

An in-depth study of entrepreneurial marketing strategies for the 21st century. It covers marketing strategies for small and medium sized companies and startups. The course also covers issues related to sustaining business in a highly competitive environment. The course is structured around lectures, case study analyses and group assignments involving entrepreneurial products or service offerings.

### **ENT452** Entrepreneurial Finance

Students will learn the value of pro forma financial planning and 'what if' analysis and the various ways to fund and manage the growing firm from inception through harvest, with a particular emphasis on deal structure and risk / reward scenarios. This course focuses on the various aspects of funding and managing entrepreneurial ventures and the various ways these can be financed (i.e. corporate, technology, non-profit). The class will utilize cases based on real world companies from various industries to cover topics in investment analysis, financing the entrepreneurial firm, managing the growing business and harvesting.

## **ENT453 Business Law for Entrepreneurs**

To succeed, businesses need to effectively manage intellectual property and employment law issues. Entrepreneurs are taught how to manage the law for a start-up. Entrepreneurs must also be aware of their legal obligation and seek to manage litigation risks involved with product liability, antitrust and other areas of law

## **ENT454 Entrepreneurial Management**

A survey of management topics designed to give students a broad view of the environment and techniques of entrepreneurial business including strategy, entrepreneurship, accounting, finance, marketing, marketing research, organizational behavior, and effective presentations. The backbone of the course is a business plan where student teams create product or service concepts which are then developed into a cohesive and persuasive business plan. At the end of the semester, the plans are presented to and evaluated by a panel of judges including debt and equity capital providers, entrepreneurs, and the teaching team.

## **ENT455 Family Business Management**

A family business enterprise must view each challenge from a multi-generational perspective. The business must also examine its goals, objectives, and must reinvent itself to grow. The course discusses the challenges and unique concerns of family business management. It is organized around the following themes: mentoring, reinvention, individual development and career planning; management of family structure, conflicts, and relationships; and organizational issues including succession and estate planning, strategic planning, and formalizing the firm.

# Course Descriptions Entrepreneurship Courses

#### **ENT456 Developing Entrepreneurial Opportunities**

Provides students with the knowledge needed to recognize and evaluate entrepreneurial opportunities. The gives students a solid understanding of the vital role played by entrepreneurs and entrepreneurship in the global economy. The course's emphasis will be on entrepreneurship as virtually applicable across all organizational settings. The characteristics and implications of social entrepreneurship, high-tech entrepreneurship, corporate entrepreneurship, public sector entrepreneurship, family business, and other contexts will also be discussed.

#### ENT457 Women's Entrepreneurship & Leadership

This course explores leadership roles that have been held by women in politics, social movements, science, engineering, business, religion, and the arts, using readings, movies, and guest lectures. In each case, we consider what difference gender makes. The course includes self-assessment; leadership development; and exploration of leadership philosophy, traits, and styles within diverse cultures and contexts from a woman's perspective.

#### **ENT458 Social Entrepreneurship**

Social enterprises are often launched to address problems where government, the private sector, and the traditional non-profit sector fail to provide a public good. The emphasis will be on how such organizations are started, how they are sustained, and the various business models that are adopted to achieve an organizational mission. The focus will be on how to bring and adapt business skills to the creation and management of social enterprises. It provides a conceptual framework and techniques for thinking strategically about innovation in the social sector

#### **ENT459 Financing Entrepreneurial Ventures**

Students will understand how entrepreneurs and their financial backers can spot and create value through topics that trace out the venture capital cycle, such as opportunity recognition, valuation and evaluation, negotiating funding, and managing the investment. It will explore the new venture finance from a number of different perspectives: the entrepreneur's, the venture capitalists, the VC backing investors and the stock market investors. Finally, management strategies for ventures undergoing financial distress will be explored.

#### **ENT460 New Technology Ventures**

An introduction to the fundamentals of technology entrepreneurship, a recent global. This course provides a basic understanding of the personal, technical, and market success factors of a new high tech or Internet venture. It draws heavily on case studies of technology-based businesses. Students will work individually or in small groups to develop a product concept and a business plan around a new innovation in their concentration area.

#### **ENT461 Sustainable Entrepreneurship Strategies**

An introduction to the global challenges and opportunities arising from exponential growth in resource use and economic activity. Beginning with an introduction to the economics of sustainability, students will study trends and science driving the growing role of businesses in promoting sustainability. Strategies being pursued by innovative and entrepreneurial business organizations to provide much needed solutions will be evaluated on conventional economic criteria and alternative metrics. The entrepreneurial potential of new technologies and community-oriented models for localization of essential services will be considered from a practical perspective.

#### **ENT462** Corporate Entrepreneurship

Entrepreneurship is the practice of entrepreneurial skills and approaches by or within an organization. The essential objective of the course is to develop an awareness and understanding of the range, scope, and complexity of the issues related to the creation of an organizational environment that is supportive of entrepreneurial endeavors, along with the effective implementation of technological and organizational innovations in a corporate setting.

#### **ENT463** Creativity and Innovation

A comprehensive introduction into innovation from both a practical and a theoretical viewpoint. The course addresses thinking, problem solving, domain knowledge, creativity, culture, innovation, and entrepreneurship. The innovation process of inspiration, ideation, and implementation are explained. The course is designed to be interdisciplinary and innovative in order to assist students to expand their perception, employ creative skills, develop ideas with their team, sustain a creative climate, and manage innovation. It offers methods and processes designed to help identify opportunities and cultivate appropriate skills and attitudes.

#### **ENT464** Entrepreneurial Sales Strategy

Sales strategy and execution is one of the most critical success factors in building entrepreneurial ventures. Students will develop the practical knowledge and specific skills necessary to maximize top line revenue growth for emerging companies. Topics to be covered include direct, indirect, and channel sales strategies; implementing pipeline management principles and forecasting techniques; the use of technology in selling; building a sales organization; and the development of strategic partners and alliances.

# Course Descriptions - Human Resource Courses

### **ENT465 Co-Curricular Activities**

Co-curricular activities for this are:

- Hatchery Development & Management; Venture Accelerator; Women Entrepreneurship Center; Youth Entrepreneurship Center
- \*\* Summer Entrepreneurship Intensive Program (Sixth Semester)

Each student will have to go through a mandatory Summer Entrepreneurship Intensive Program in the 6th Semester, where they would have to spend 2 months (July - August) working for an Entrepreneurial venture, either in Pakistan or abroad. This will give them a hands-on experience of running a business, including marketing, accounting, organizational behavior, information systems, and operations.

# HUMAN RESOURCE MANAGEMENT (HRM) COURSES

### **HRM401** Human Resource Management

This HRM course would expose the students to learn and understand the Human Resource basic functions and processes. It serves as an introduction to HRM students who plan to specialize and learn at an advanced level in the field. This course is focused on people at work and would expose students to learn and understand the basic functions and processes of Human Resource

### **HRM430 Recruitment and Selection Techniques**

This module is based on academic theory and research on selection and recruitment practices for both Human resources students and practitioners. The course explains different recruitment techniques and the key features of common selection methods, along with the criteria of evaluating these methods. Nature of performance is discussed to analyze jobs and their measures leading to description of the main stages in the process

of job selection. The validity of these selection methods is covered, including the examination of psychological processes that take place within selection. Finally, issues associated with fairness in selection and assessments are considered.

Prerequisites: MGT201, HRM401

### HRM445 Occupational Health and Safety

Topics for discussion revolve around the technical, political, management and personal issues relating to health and safety in the workplace. Emphasis is placed on the role and importance of effective health and safety management to business, government, organized labor, individual employees and society. Key legal rights and responsibilities of employees and employers with respect to health and safety issues in the workplace are also discussed.

Prerequisites: MGT201, HRM401

### **HRM451 Industrial Relations Management**

The course is centered on management of labor relations. Socio-political factors affecting labor relations, principles and strategies of negotiation, trade unionism, its benefits and drawbacks, as well as means of evaluating union demands are also the topics discussed in this course.

Prerequisites: MGT201, HRM401

# HRM452 Organizational Analysis and Research

The module helps students understand organizational theories in a historical context and explains the different level of analysis used in organizational research. The course also provides an overview of the research paradigms applied in the fields of organizational behavior and occupational psychology, enabling individuals to develop their critical thinking skills when analyzing organizational issues. Students will also learn the different forms of research, the steps involved in it, and the paradigms used in social sciences research.

Prerequisites: MGT201, HRM401

### **HRM453** Life Career Development

Students are taught the importance of career development in an employment and social context, and their influences on career choice and career development. Students will be exposed to various career models and theories available and will critique and evaluate their usefulness and application in making appropriate career decisions. A variety of career interventions are discussed including career guidance and career counseling.

Prerequisites: MGT201, HRM401

### **HRM455 Portfolio Management**

Please see on website

### **HRM456 Training and Development**

Students will be able assess influence of organizational strategy on the role and practice of training and development. The course enables students to identify training needs of individuals and organizations, select training methods and consider their influence on trainee development in the workplace. It provides for a critical review of the techniques available for the evaluation of training and to consider their role in practice. The significance of resource based strategies for training and development are used to provide a context for considering different training and development techniques Prerequisites: MGT201, HRM401

## HRM457 HR and Information System

Human Resource Management Information is pivotal to the strategic planning and subsequent success of the organization. Thus, the subject focuses on the primary activities performed by the human resources (HR) function and how Human Resource Information Systems (HRIS) can be developed to support these activities. With the emergence of Enterprise Resource Planning (ERP) System HRIS has become a critical area

# Course Descriptions - Human Resource Courses

of attention for management professionals. Undertaking this course will allow the students to build on, and expand, their knowledge of HRIS from a theoretical and a practical perspective.

Prerequisites: MGT201, HRM401

## **HRM458** Leading the Change Process

Creating a shared changed vision, fostering an understanding of the change process, and leading the change transition are important ingredients of the course. Other topics include encouraging an innovative organizational culture, managing growth and decline, and corporate restructuring.

Prerequisites: MGT201, HRM401

# **HRM462** Performance and Compensation Management

The course elaborates on the quantum transformation that has occurred in Human Resource Management in the 21st century, how HR strategies impact organizational performance and why performance and compensation management is so critical to organizations. It will prepare students to become effective managers of human capital, by teaching them how to develop, motivate and reward a competent team and maximize its performance.

Prerequisites: MGT201, HRM401

### **HRM530 Recruitment and Selection Techniques**

Recruitment process and techniques and how they contribute to selection process are explored. Students can examine the constructs and dimensions used to predict and measure performance at work, and also the conceptual relationships between these dimensions. It enables students to explain the theory and research on individual and group decision-making in organizations, and apply this within the context of selection and assessment. The course further provides for a critical

and effective use of several forms of statistical analysis. Prerequisites: MGT201 / MGT400

### **HRM552** Organizational Development

Please see on website

### **HRM557 Team Management**

The course is about forming, leading, and managing teams and groups. It encourages discussion on how to deal with difficult group members, encourage creativity, improve group decision-making, and liaise with other functions within and outside the organization. Students are assigned to teams at the very beginning, where they analyze cases of outstanding and poor team dynamics, complete group assignments, and evaluate their own team dynamics and outcomes.

Prerequisite: MGT201 / MGT400

# **HRM558 Leading the Change Process**

Students will be acquainted with the tasks of leading the change process in organizations. Creating a shared changed vision, fostering an understanding of the change process, and leading the change transition. Other topics of discussion include encouraging an innovative organizational culture, managing growth and decline and corporate restructuring. Prerequisite: MGT201 / MGT400

# HRM562 Performance and Compensation Management

Please see on website

### **HRM571** Training and Development

Students will assess the influence of organizational strategy on the role and practice of training and development. They will be able to identify training needs of individuals and organizations, select training methods, and consider their influence on trainee development in

the workplace. The course provides a critical review of the techniques available for the evaluation of training. The significance of resource based strategies for training and development are used to provide a context for considering different training and development techniques. Prerequisites: MGT201 / MGT400



### **Department of Social Science & Liberal Arts**

### SSC101 English Grammar & Composition

The course aims to train students for critical reading and analytical writing. Students are made to work on patterns of development, dictions, and genre analysis.

## SSC102 Foundation of Human Behavior

Please see on website

## SSC103 English Grammar & Composition

Please see on website

### SSC104 Foundations of Human Behavior

Please see on website

# SSC106 Intermediate English Grammar and Composition

Builds upon the previous course to further teach students how to communicate effectively using written English. Students will learn how to develop deliberate, methodological strategies to generate ideas, formulate arguments, draft essays, revise, proofread and cite academic sources. The course will facilitate guided practice in a range of written modes, including but not limited to narrative, discursive, argumentative, reflective, and summary writing.

### **SSC111 International Relations**

Please see website

### SSC121 Major Themes in World History

This survey course introduces students to major patterns, processes, and events in world history organized around recurring issues and themes through the close reading and analysis of primary and secondary texts. Themes considered may include economics, conquest and war, religion, government, revolution, disease, technological invention, empires and nations, and globalization.

### SSC131 Fundamentals of Sociology

Please see on website

### SSC150 Remedial English

Please see on website

### SSC151 Pakistan History

An introductory survey to the history of Pakistan from 1947 to the present. Over the course of the semester students will proceed thematically through different aspects and periods of Pakistani history, and will critically reflect upon where these issues stand today.

### SSC154 Research Methods in Social Sciences

Aims to develop an understanding of research methods so as to enable students to employ research-based knowledge, understand issues related to research and choose a research design. The course assists students in data collection and analysis along with critical evaluation of research material.

### SSC201 Arabic I

Develops in students a basic but solid knowledge of Arabic grammatical structures and syntax, a limited functional vocabulary, extensive practice in speaking and writing, a familiarity with Arabic sound and intonation patterns, as well as an elementary knowledge of Arabic cultures.

#### SSC202 Arabic II

Develops and refines listening, speaking, reading, and writing skills; provides strategies for effective communication and reading; reviews and supplements previously introduced grammatical structures and uses. Upon completion of this course, students should be able to communicate using sustained, linear discourse on topics of general interest, and to comprehend the general meaning of most texts of a non-technical nature written in Arabic.

### SSC203 Arabic III

Develops in students an advanced level of proficiency defined as the ability to communicate with some ease, if not perfectly, with a native speaker of Arab, in spoken and written language, and to understand the meaning and most details of an Arabic text, written or spoken.

### SSC204 Arabic IV

This course uses literature, newspaper and magazine articles, art, music, and films to explore the histories and cultures of Arab countries. Students will be introduced to methods of literary and cultural study in

Arabic in order to develop advanced linguistic comprehension and expression.

### SSC205 French I

Develops in students a basic but solid knowledge of French grammatical structures and syntax. Its components are a limited functional vocabulary, extensive practice in speaking and writing, a familiarity with French sound and intonation patterns, as well as an elementary knowledge of French cultures.

### SSC206 French II

Develops and refines listening, speaking, reading, and writing skills; provides strategies for effective communication and reading; reviews and supplements previously introduced grammatical structures and uses.

### SSC207 French III

Develops in students an advanced level of proficiency defined as the ability to communicate with some ease, if not perfectly, with a native speaker of French, in spoken and written language, and to understand the meaning and most details of a French text, written or spoken.

### SSC208 French IV

This course uses literature, newspaper and magazine articles, art, music, and films to explore the histories and cultures of Francophone countries. Students will be introduced to methods of literary and cultural study in French in order to develop advanced linguistic comprehension and expression.

#### SSC209 Mandarin I

Students are expected to achieve control of the Mandarin sound system (especially the 4 tones), basic sentence patterns, aural comprehension, daily conversations and writing characters. A limited number of Mandarin characters will be introduced in this course for reading comprehension. In addition, students will study Pinyin, the Romanization system used to transcribe Chinese sounds using the western alphabet.

### SSC210 Mandarin II

Aims to help students improve their listening and speaking proficiency; achieve a solid reading level

through the introduction of roughly 500 new vocabulary entries; and learn to express themselves clearly in writing on a variety of covered topics using learned grammar patterns and vocabulary. These goals are approached through grammar lectures, in-class drills and listening / speaking activities, oral presentations, and regular quizzes / tests, collectively covering all four areas of proficiency: listening, speaking, reading, and writing.

#### SSC211 Mandarin III

Develops in students an advanced level of proficiency defined as the ability to communicate with some ease, if not perfectly, with a native speaker of Mandarin, in spoken and written language, and to understand the meaning and most details of a Mandarin text, written or spoken.

### SSC212 Mandarin IV

This course uses literature, newspaper and magazine articles, art, music, and films to explore the history and culture of China. Students will be introduced to methods of literary and cultural study in Mandarin in order to develop advanced linguistic comprehension and expression.

### SSC213 Advanced English Composition

Focuses on a question or topic in a disciplinary or interdisciplinary context within the Social Sciences. The course explores thinking, research, and writing practices in specific fields, and the ways in which scholars and practitioners use writing to communicate their findings to a wider audience.

### SSC216 Culture, Media, Society

Serves as a theoretical and historical introduction to the pervasive impact of mass media on global culture and society.

### SSC217 Introduction to Political Science

An introduction to the study of political institutions, processes, and behaviors, of the relationship among political ideologies, state practices, and systems of governance; international relations among states; processes of political decision-making; and individual and social behavior within political contexts. Students will be acquainted with major political thinkers, and with the three major forms of governance that have emerged in the modern era: democracy, fascism, and communism.

### SSC218 Introduction to Psychology

Introduces students to the history, concepts, major theories, and methods of research that contribute to our understanding of both human behavior. Students will engage with historical and contemporary debates about cognitive processes and neurological disorders, identity formation, human and animal interaction, individual and social development, perception and sensation, learning and memory, and biological and evolutionary perspectives on human and animal development.

### SSC221 South Asian History

Introduces students to major developments in South Asian History from the emergence of the early Harappan period to the struggle for independence. Students will investigate key historical forces and individuals that shaped South Asian politics, society, and culture, including the introduction of Buddhism, Hinduism, and Islam, the development of languages, the production of major cultural and scientific works, interactions with regional neighbors, the formation of ethnic communities, and major political incursions and social reconfigurations.

### SSC231 Fundamentals of Sociology

An introduction to the basic concepts, theories, and

methods of thinking and analysis in the Social Sciences. Students will learn how social scientists formulate questions about human identity, agency, and behavior; the nature of social life and social interactions; and the historical development of civilizations and societies.

### SSC232 Introduction to Historical Methods

An introduction to historiography and historical methods of research and analysis. The course emphasizes how historians frame their explorations of the past; investigate issues and debates in current historical practice; articulate questions about conventional periodization; and distinguish between oral, art factual, and written evidence, between objective and subjective narratives, and between private and public histories.

# SSC233 Introduction to Social and Cultural Anthropology

An introduction to the study of social and cultural development, and of diversity in human societies. Discussions will focus on: anthropological heterogeneity; Case studies offered by major figures in the field. Theoretical and historical readings on the major subjects anthropologists address.

#### SSC234 Introduction to Urban Studies

An introduction to the history, formation, planning, economics, social structures, and cultures of urban environments, this course will help students understand how urbanization, inner-city migrations, industrialization, available housing, economic, ethnic and racial segregation, environment, crime, municipal efficiency, telecommunications, and political governance affect the development and growth of cities.

### SSC235 Introduction to Linguistics

An introduction to the fundamental properties of languages, their morphology, phonology, and syntax,

their semantic and pragmatic functions, their historical development, and the ways in which they are shaped by different cultural and social contexts.

### SSC239 History of Ideas I

This two-semester course explores the metaphysical and material histories of such ideas as freedom, justice, ethics, reason, the self, the real, identity, faith, citizenship, rights, etc. It introduces students to methods of critical and philosophical analysis that investigate the sources and limits of historical, empirical, and theoretical knowledge.

### SSC238 History of Ideas II

This two-semester course explores the metaphysical and material histories of such ideas as freedom, justice, ethics, reason, the self, the real, identity, faith, citizenship, rights, etc. It introduces students to methods of critical and philosophical analysis that investigate the sources and limits of historical, empirical, and theoretical knowledge.

#### SSC240 Personal Effectiveness Course

Designed to improve the levels of personal effectiveness in the cooperate environment. It aims at increasing students' self-awareness and confidence levels by teaching them tools of effective behavior.

### SSC253 Corporate Social Responsibility

Please see on website

### SSC301 Socioeconomic Philosophy of Islam

How does one study a given religious system? What are the scholarly tools and conceptual frameworks for exploring a civilization radiating from a religious core? What are the limitations of an academic study of Islam? In what way is it different from the account and concep-

tion of the believer or, in the case of cultures, of the actor? These and similar questions will inform our investigation of Islam as we explore its intellectual, social, political and philosophical history.

### SSC302 Computational Research Methods

Please see on website

### **NATURAL SCIENCES COURSES**

### **NSC351 History of Science**

Explores the history of scientific knowledge from classical antiquity to the present, emphasizing two key ideas. The relation between science and utility and the ways in which science emerged over the course of the last few centuries as an inherently global practice.

### **NSC352 Ideas of Physics**

An introduction to the major discoveries and basic concepts in physics that examine how scientists make sense of the physical world in which we live. Topics discussed include the scientific method, basic principles of classical physics, gravity, laws of motion and conservation, thermodynamics, and relativity and quantum mechanics.

### NSC353 Space, Time, and Space-Time

An introduction to major scientific, mathematical, and philosophical theories and debates about the nature of space and time, and the way these shape our understanding of the physical world. Theorists and thinkers considered include Aristotle, Euclid, Descartes, Newton, Leibniz, Galileo, Riemann, Poincare, Einstein, Schrodinger, and Hawking.

### **NSC354** Introduction to Environmental Sciences

An introduction to the history and scope of the environmental sciences, methods of research, and experiment that produce scientific knowledge about the environment, major problems (global warming, pollution, industrial development) that degrade biological ecosystems, and a complex understanding of the impact human societies have had and continue to have on the natural world.

### NSC355 Principles of Ecology and Conservation

Presents the major scientific ideas and principles that shape ecology and conservation science, especially as these relate to frequently encountered environmental issues. Topics discussed will include population regulation, species decline, competition and predation, dynamics of ecosystems, habitat fragmentation, ecotourism, and the role of biological and physical factors in developing community structures.

### **NSC356 History of Evolution**

An introduction to theories of evolution, evolutionary history, and evolutionary processes and patterns that have produced life on earth, this course considers evolutionary biology as a way of knowing and discovering, a set of approaches to questions about the living world that inform how biologists organize and produce scientific knowledge.

### **NSC357 Introduction to Geology**

An introduction to the geological sciences, covering geological materials and processes, and including an historical background. Lectures and discussions will focus on the practical applications of geology to every-day life. Students will gain an overview of the biophysical history of the Earth, including its formation. They will identify the ways in which geology affects our lives, and discover interactions between geology and other realms of knowledge.

#### **VISUAL STUDIES & HUMANITIES COURSES**

### **HUM201 Speech Communication**

Aims to enable students to understand, analyze, and acquire communication skills. Oral presentation experiences are heavily integrated throughout the course with a focus on public speaking design and delivery. The goal is to help students communicate orally for effective interpersonal communication. The pedagogical tools for this include presentations, parliamentary debates, MUN workshops, and stage performances.

### HUM238 History of Ideas - II

Please see on website

### **HUM351 Great Books**

Introduces students to enduring works of literature and philosophy. The course aims to develop habits of close critical reading, textual analysis, argumentative writing, aesthetic appreciation, and thoughtful discussion. Authors considered include Homer, Plato, Kalidasa, Firdousi, Dante, Shikibu, IbnSina, and Shakespeare.

### **HUM352 Reading Poetry**

Introduces students to enduring works of lyric expression. It will develop habits of close critical reading, textual analysis, argumentative writing, aesthetic appreciation, and thoughtful discussion. Authors considered might include Chaucer, Donne, Rumi, Coleridge, Basho, Whitman, Dickenson, Hardy, Ghalib, Rimbaud, Frost, Tagore, and Moore.

### **HUM353** Introduction to Drama

How do plays work? What is the relation between a dramatic text and a theatrical performance? How might we profitably approach a reading of character, place, dialogue, costume, movement, sound, rhythm, spatial composition, and what makes a play different from a

novel or a poem, a film or a painting? Which elements represented in these other media does drama also appropriate? These and related questions will inform our study of canonical dramatic texts.

### **HUM354** Introduction to Urdu Literature

Presents an introduction to various genres of Urdu literature (read both in translation and in Urdu) as they developed through the eighteenth, nineteenth, and twentieth centuries, with greater emphasis on fiction and poetry. We will examine the works of major writers with close attention to the development of traditional narrative and poetic genres, styles, and influences.

# HUM355 Anglo-Indian Narrative and the Postcolonial Subject

Explores the colonial and postcolonial narratives in English written in or about India and Pakistan. Authors considered include Harriet Tytler, E.M Forster, Rudyard Kipling, Nirad Chaudhury, Raj Anand, Ruskin Bond, Khushwant Singh, Anita Desai, Salman Rushdie, BapsiSidhwa, Aamir Husain, Sara Suleri, HanifKureishi, David Davidar, KamilaShamsie, ManizaZaqvi, Arundathi Roy, JeetThayil, and Mohsin Hamid.

### **HUM356** Foundations of Philosophical Thought

Introduces students to major questions and issues in philosophy, and its methods of inquiry and analysis. Readings include arguments articulated by major western and eastern philosophers. Topics considered include the problem of evil; free will and determinism; moral imperatives; the limits of knowledge; utilitarian versus deontological ethics; faith and belief; justice and goodness.

## **HUM357 Philosophy Logic and Ethics**

Students are acquainted with basic philosophical and ethical concepts, and methods of logical thinking

through close readings of major philosophical texts.

### **HUM358** Comparative Classical Philosophy

Through close readings of primary classical texts from China, India, and Greece, students will engage in major epistemological debates as these were articulated by different societies and cultures in the ancient world. Specific attention will be paid to how these debates frame and shape how we think today.

### **HUM359 Introduction to Comparative Religions**

Gives students an understanding of the world's major religions: Zoroastrianism, Hinduism, Judaism, Buddhism, Christianity, and Islam. The course examines a number of cross-cultural themes in religion, including monotheism vs. pantheism, the soul, the sacred, peace and war, as well as the social and cultural practices of each faith. By the end of the course students will have an understanding of the history of these religions and the issues they each face in the contemporary world.

### **HUM360 Creative Writing**

In this introductory course, students will explore all four motives of writing; that is sheer egoism, aesthetic enthusiasm, historical impulse and political purpose, and the kinds of prose, poetic, and dramatic texts these produce. Students will work on identifying and sustaining their unique aesthetic voices, languages, and styles; learn strategies for the generation and development of plots, characters, dialogue, and description; discuss how substance relates to form; and explore how shifting points-of-view are crucial to the aesthetic experience of imaginative texts

### **HUM361** Theater Project: The Living Newspaper

Students are introduced to techniques and strategies of documentary performance using a form developed in

in the US during the Great Depression. Students will research a social issue of immediate local and / or national concern, and then use this research to write and stage a 'living newspaper' performance.

### **HUM363** Introduction to Visual Culture

Reading and analyzing visual material requires a different set of approaches than reading and analyzing text. This introductory course investigates the visual in its myriad manifestations.

# HUM364 History of Art I: Classical Antiquity to the Middle Ages

Offers students a broad introduction to the aesthetic and social interpretation of selected works of art from classical antiquity to the renaissance, with an emphasis on the comparative analysis of Asian, Greco-Roman, and Medieval traditions. Students are introduced to the basic terminology of the arts, the language of aesthetic criticism, and the relationship of the arts to each other and to their historical context.

# HUM365 History of Art II: Renaissance to the Present

An introduction to the aesthetic and social interpretation of selected works of art from 1500 to the present. The course introduces the student to the basic terminology of the arts, the language of aesthetic criticism, and the relationship of the arts to each other and to their historical context.

### HUM366 Art of the Islamic World

An introduction to the rich aesthetic history and culture of the Islamic world, from the 8th century to the present day. Lectures and discussions will concentrate on selected monuments, paintings, and other visual material produced in the Arab Middle East, North Africa, Spain, Iran, Turkey, South Asia, and the Far East, with

special emphasis on the historical, geographical, and cultural contexts within which this art was produced.

### **HUM367** Theories of Design

Examines different aspects of design by examining larger questions of production, consumption, and use, and their participation in a larger discourse about design and visual culture. Reading and discussion will assess the relationship between design and the visual by investigating questions about spatial control, framing, sequence, and social communication.

### **HUM368** Colonial and Postcolonial Visual Cultures

Readings and discussions will introduce students to major theories of colonialism and post-colonialism, and to the politics of postcolonial representation. Focus will be on how contemporary artists resist, reconfigure, or appropriate their colonial heritage, how questions of cultural agency and cultural hybridity inform frames of social and aesthetic analysis, and how individual works may be read as both contiguous with, and as breaking away from an imperial past.

### **HUM369** The Rhetoric of Architecture

An introduction to basic principles and concepts in architectural design. Students will learn how to look at, appreciate, and analyze the aesthetic richness of our built environment. They will examine both historical and contemporary structures, the social and geographical contexts in which they were built, the manner in which these structures configure public and private space, and their impact on historical and contemporary ways of experiencing our world.

### MEDIA AND COMMUNICATIONS COURSES

# MCS301 Research Methods in Media and Communications

An introduction to quantitative and qualitative methods of media and communications research. Topics investigated include media effects theories, content analysis, communication models, semiotic analyses, surveys and questionnaires, interviewing and participant-observation, and secondary-data analysis.

# MCS302 Gutenberg to Google: A Social History of Media

Introduces students to the history of media forms and communication technologies from the invention of printing to the emergence of the Internet. It explores the processes of mediation in and through time; the social, economic, and geographical contexts that shape different forms of communication; the evolution and institutionalization of communication technologies; the development of a global public sphere; and the effect of new media on local, national, and global communities.

### MCS303 Theories of Media and Communications

An introduction to theoretical and critical approaches used to analyze the content, structure, context, and processes of media communication. The course develops a complex, nuanced understanding of media environments, familiarity with specialized language used to assess processes of communication, and an understanding of contemporary debates in media and communication studies.

### MCS351 Media and Post - Colonialism

Introduces students to theories and practices of media representation as these relate to the formation and analysis of postcolonial societies. Topics covered include theories of the post-colonial; the politics of post-colonial representation; post-modernism and the post-colonial; nationalism and identity; alternative media and resistance; ethnicity, indignity and hybridity; and language and representation.

### MCS352 Media, Law, and Ethics

This course will introduce students to major ethical and legal issues that govern or guide the various uses of mass communication technologies and cultural and social resources.

# MCS353 Race, Class, and Gender in Film and Television

This class explores the evolution of dynamics of race, ethnicity, and citizenship especially in their intersection with class and gender in cinematic and tele-visual representation through the study of how racial and ethnic diversity have been represented.

### MCS354 The International Newsroom

This course will examine some of the deeper issues that continue to shape our world: climate change, global diseases, the imbalance between population growth and food supplies, and the depletion of natural resources. Students will learn to cultivate the qualities that are important for reporting global events: accurate information, careful analysis, intelligent use of background material, and an understanding of the nuances that color any issue.

## MCS355 Analyzing the News

An analysis of news media content and structure using a range of critical strategies including content analysis as a methodology. Students will investigate questions such as: What can we learn about news by analyzing news content? What are the quantitative and qualitative techniques used by professional media content analysts? What is the nature of content? Who is involved in producing this content? Who comprises the intended audience?

### MCS356 Introduction to Visual Communication

This introductory course will focus on reckoning with

the complex visual world we live in using a range of examples from fine art to advertising, from architecture to film. Students will be encouraged to think broadly about what makes up their visual world and its cultural implications through careful looking, reading, and writing.

### MCS357 History of Commercial Art

Introduces students to the history of the commercial arts from lithography to logos, book design to branding, and stencils to motion graphics, and including the origins and history of advertising.

### MCS358 Communication in Advertising

An introduction to the study of advertising as social communication, as cultural representation, as an economic force, and as a central structural feature of consumer societies. The course surveys the history of advertising, investigate changing strategies used by advertisers over the past two centuries, examine social attitudes and ideologies as these emerge through advertisements, and introduce students to semiology and the semiotic analysis of promotional texts.

### MCS359 Watching Films

An introduction to an interrelated set of approaches to film study, all of them defined by their attention to the filmic text. The course begins with an extended examination of the elements of film form, principally style (miseen - scène, cinematographic properties, editing, sound) and narrative (structure and narration).

## MCS360 History of Film

Students are introduced to the history of world cinema from its origins to the present, emphasizing the work produced by major directors, historically and critically important movements and films, the emergence and development of film genres and national cinemas, the socioeconomic structure of the industry, and the development of new and innovative technologies.

### MCS361 The Non-Fiction Film

An introduction to a range of non-fiction film genres including documentaries, educational films, propaganda, ethnographies, autobiographies, cinematic essays, and newsreels. Readings, lectures, and discussions will focus on issues of truth and accuracy, sociological and ethical questions raised by the films themselves, on their processes of production, and on the films as aesthetic and cultural texts while paying attention to the way these films reflect the social contexts in which they were produced.

### MCS362 Introduction to Television Studies

Through an examination of the history of television, this course introduces students to a theoretical framework for thinking about and analyzing this important medium of communication. The course will cover interdisciplinary approaches to studying global television texts, audiences, and industries.

# MCS363 Television, Newsmagazines, and Documentaries

An overview to the practice and principles of TV, news-magazines, and documentaries. As part of the course work, students will watch, discuss, and write about a range of non-fiction narrative pieces. The course takes students behind-the- scenes and explore how non-fiction stories come together from the first idea to the completed work. Students get the opportunity to try their hand at basic production techniques, create simple narratives of their own and enhances the ability to critically observe and analyze non-fiction media.

### MCS364 Theories of Film and Television

Examines the major theories of film and television that

will help students develop multiple strategies through which to analyze the many and varied visual narrative texts they encounter every day. Topics covered include genre theory, the psychology of spectatorship, Hollywood and Bollywood studio star systems, ideologies of visual narrative, auteur theories, the gaze and the politics of identity, serialization, reality television, and apparatus theory.

### MCS365 Narratives across Media

Explores how narrative structures and models operate differently between film, television, and digital media in both fictional and non-fictional forms. Drawing heavily on various theories of narrative, the course will consider how different media offer possibilities to creators and viewers to tap into the central human practice of storytelling.

### MCS366 Digital Activism and Democracy

How does the Internet affect politics? In the last decade, text message campaigns, online social networks, and citizen media have played a major role in world events. This course explores how digital technology changes both the manner and the meaning of democratic participation. Students will read and analyze case studies and both scholarly and popular readings about new media technologies and applications, and their measurable impact on global and local, social, and political structures.

# MCS367 Media Convergence and the Virtual Public Sphere

The course investigates the social, cultural, and aesthetic effects of such convergences, the shifting roles of spectators, participants, artists, and industries across a range of media practices, and the pervasive impact these shifts have had on the way we understand our selves.

### MCS401 Communication for Social Change

Introduces students to strategies through which they can use communication processes and techniques to facilitate social, economic, and technological change. Coursework includes historical and contemporary theories of social change, assess case studies of communication campaigns that have made a difference in people's lives, consider the effect of new technologies in local and global contexts, examine independent and alternative news gathering organizations, and execute a media campaign focused on a specific local social issue.

### MCS491 / 492 Culminating Experience

The culminating experience is a 9-credit final project that includes both a written and an experiential component undertaken by students in their final year of study at IBA. Project proposals must be submitted before the beginning of the fall semester. The proposal should include a well-articulated research question, research methods to be used, an extensive bibliography that lists both primary and secondary sources to be consulted, and a brief summary of why the student wishes to pursue this line of inquiry. The final written component should be of at least 40-pages (including appendices), and both include a synoptic summary of the data collected and an extensive analysis of that data as it pertains to the research question.

### **POLITICAL SCIENCE COURSES**

### POL301 Research Methods in Political Science

Aims at making students think systematically, understand research, and the interface between data and theory. It focuses to develop an understanding of qualitative and quantitative techniques and when and why scholars and researchers use them.

### **POL302 History of Political Thought**

The history of political thought is interdisciplinary in nature. It covers a broad range of topics that helps students understand political processes and their contexts. The course will cover central themes in the history of political thought, political theory, and related areas of inquiry from classical Greek antiquity to contemporary debates.

### **POL303 Introduction to Comparative Politics**

Introduces the fundamental concepts political scientists use to study the processes and outcomes of politics in a variety of state settings, including the study of global economic and political change. The comparative component allows students to study politics and society in a comparative perspective both within the state and across the world. The course provides a general introduction to the concepts, methods and the substance of comparative politics.

### POL351 Political Psychology

Critically analyzes the way the national political elite perceives the world. The course focuses on an examination of the psychological factors influencing or driving these views and behavior. Particular attention will be paid to how these elites conceptualize different policy issues, internal and external, and then formulate / implement differing approaches to attain national objectives.

## POL352 Foreign Policy of China

Critically analyzes the foreign policy of the People's Republic of China. The focus is primarily on contemporary issues of salience in Chinese foreign policy - strategic imperatives, regional security dynamics geo-economic factors, and bilateral and multilateral relations. The ultimate objective of the course is to further

a deeper and more nuanced understanding of the variables shaping and influencing China's behavior within the international system.

### POL353 State and Society

Undertakes a philosophical examination of the concept of the state and its relation to those who reside therein. This course, seeks to examine the evolution of the modern state through a careful critical consideration of the 'Social Contract' that serves as a mediating mechanism between the citizens and the state they inhabit. Classic texts such as Thomas Aquinas, Cicero, Thomas Hobbes, Machiavelli, John Locke, Rousseau, and John Stuart Mill will be used to examine the philosophical rationale behind the Social Contract.

### POL354 War: Conceptual Underpinnings

Conducts a critical examination of the concept of war with particular attention to conflict between states. The philosophical rationale behind war will be examined. The history of violence between states and within states will also be touched upon. The main emphasis of the course will be on contemporary global conflicts, and will attempt to undertake a case study based approach to the concept of war.

### **POL355 Human Rights**

Human Rights enjoy a significant place in international politics today. All states are expected to adhere to a basic, minimum standard of universal' human rights. Human Rights have often been violated by states claiming to be champions of the concept. It is important for all sections of civil society to understand the concept, its validity and its application, as well as the historical evolution of the practice.

### **POL356 Environment and Politics**

Designed to create a better understanding of issues

related to the environment. The atmosphere, land, and oceans are all exposed to threats that can play havoc with human health. Factors leading to pollution will be discussed. Strategies to control the problem will be given particular significance. Various dimensions of politics of environment will be discussed. The contribution of international organizations, non-governmental organizations, and specialized agencies to the cause of regulating the environment will also be discussed.

### POL357 Diplomacy in a Globalized World

Diplomacy was also used to build alliances, to isolate adversaries, and to promote dynastic interests. The introduction of technology and increasing number of states today has increased the occurrence of crisis, reduced time available to diplomats for decision-making and enhanced psychological pressures on decision makers. Impact of media on diplomacy and the role of diplomats will also be discussed.

### POL358 Islam and International Relations

Over the ages, various civilizations have had differing perceptions about states, their functions, the nature and role of power and the need for cooperation between civilizations. This course will consider Muslim states, Islamic empires and other Islamicate political entities, and their relations with other states, from the classical age of Islam to modern times.

### POL359 The Modern Middle East

The Arab Spring has generated newfound interest in a region that has always held great geo-strategic importance. Though the Middle East is very much in the limelight at the moment, few people have a grasp on the region's history and development, political, social or economic. The purpose of this course is to introduce students to the region and to trace the history and development of its countries to the present day.

### POL360 Theories of Democratic Transition

The course covers contemporary literature on democratic transition with a close focus on the Third Wave. It starts with an overview of the debate on social requisites of democracy, background factors, and modernization theory. The question of compatibility between Islam and democracy has generated more heat than light and the literature is largely polemical with very few exceptions.

### POL361 Democracy and Difference

Examine a number of texts that endeavor to strike a balance between democratic universalism and a politics attuned to the unique desires, beliefs, and ways of life of particular individuals and groups, the merits and shortcomings of various arguments that have been advanced along these lines will also be discussed.

### POL362 Pakistan's Foreign Policy

The course will begin by examining the main determinants that fashion foreign policy including preservation of sovereignty, national security and achievement of economic goals. The course would then examine the instruments of executing foreign policy. Once these international principles have been studied, the course will evaluate Pakistan's relations with its neighbors.

# POL363 Purchasing Power: A Political History of Money

Critically examines the link between money and political power. Besides learning how monetary developments contributed to major historical shifts in the balance of power, students will gain an appreciation of how our understanding of money has been shaped by historical developments. Students will also be introduced to the unique monetary history of South Asia, and its role in shaping the international financial system.

### **POL401 International Politics**

An analytic and normative study of international relations. Students survey various theoretical perspectives in the discipline to understand the chief problems, actors, and structures of international politics. Through the organizing concepts of security, identity, and political economy, students will explore a range of contemporary phenomena, including the state, nation, and ethnic group; international organizations and society; political change, resistance, and violence (including terrorism); normative concerns; and international political economy and its accompanying inequality.

### POL491 / 492 Culminating Experience

The culminating experience is a 9-credit final project that includes both a written and an experiential component undertaken by students in their final year of study at IBA. Project proposals must be submitted before the beginning of the fall semester. The proposal should include a well-articulated research question, research methods to be used, an extensive bibliography that lists both primary and secondary sources to be consulted, and a brief summary of why the student wishes to pursue this line of inquiry. The final written component should be of at least 40-pages (including appendices), and both include a synoptic summary of the data collected and an extensive analysis of that data as it pertains to the research question.

### **PSYCHOLOGY COURSES**

## PSY301 Research Methods in Psychology

An introduction to concepts and methods used in behavioral research. Topics include the nature of behavioral research, testing of research ideas, quantitative and qualitative techniques of data collection, analyzing and interpreting research data, and ethical considerations in research.

### **PSY302 Human Development**

Examines human development, defined as a systemic change within an individual and between an individual and his/her social environment, from psychosocial, cognitive, and neurobiological perspectives. Through primary readings and case studies, students will investigate why we behave the way we do, how these behaviors shape and affect our emotions, attachments and relationships, and how these emotions, attachments, and relationships change as we grow older. Theorists considered include Freud, Vygotsky, Piaget, Erikson, Kohlberg, Bronfenbrenner, Ainsworth, and Bowlby.

### PSY303 Personality, Identity, and the Self

Introduces the idea of self. The self is the subject of one's own experience of phenomena: perception, emotions, and thoughts. The self has many facets that help make up integral parts of it, such as self-awareness, self-esteem, self- knowledge, and self-perception. Current views of the self in psychology position the self as playing an integral part in human motivation, cognition, affect, and social identity.

### PSY351 Introduction to Social Psychology

Students are introduced to the psychological study of human social influence and interaction, to how human behavior, thinking, and feeling are socially influenced by the presence (imagined, implied, or actual) of other people. Topics covered will include self-concept, social judgment, attitudes, persuasion, conformity, aggression, prejudice, and interpersonal relationships. Emphasis will be placed on developing critical / analytical and empirical research skills that help students develop a complex understanding of why and how the social world shapes how we act.

# PSY352 Organizational Behavior and Industrial Psychology

Investigates the history of psychology and the application of its principles and methods to industrial and organizational behavior. Topics covered include teams in organizations, motivation, individual differences, attitudes and emotions relevant to work, stress and wellbeing, fairness and diversity within organizations, leadership, decision-making, conflict resolution, and organizational change and development.

### PSY353 Psychology and the Media

Examines the relationship between forms of mass media and psychology from two complementary perspectives: representations of psychological issues in the mass media (film, television, radio, newspapers), and their psychological, cultural, and ethical implications; the impact of the mass media on human identity and human behavior.

## **PSY354 Psychology of Conflict**

Introduces students to the psychology of human aggression, intergroup bias, stereotyping, and discrimination, and investigates methods and strategies of negotiation and conflict resolution. It proceeds from the assumption that transforming cultures of violence into cultures of peace requires an understanding of the psychological roots of human aggression.

# PSY355 Introduction to Developmental Psychology

Human psycho physiological, cognitive, and emotional development and change from conception to old age are explored. Students will be introduced to major theories (that explain how humans develop over time), to research, and the case studies on which these theories are based. Theorists and practitioners considered include Freud, Piaget, Vygotsky, Kohlberg, Erikson, and Ainsworth.

### **PSY356 Attachment and Loss**

Attachment Theory, formulated by John Bowlby and extended by his colleague Mary Ainsworth serves as the dominant approach to social development in children and adults. Students are exposed to Bowlby's work on attachment, separation, and loss, and explores how events experienced in early childhood impact individual behaviors, in both personal and professional settings.

### **PSY357 Child and Adolescent Development**

This course offers a chronological examination of the physical, cognitive, and psychosocial aspects of development from conception through early adulthood. Major topics of focus include the interactive influences of heredity and the environment, prenatal development and birth, parenting, schooling, peer-groups, religion, the mass media, emotional and / or physical abuse, and transitions during puberty.

# **PSY358 Psychology of Aging**

Psychology of Aging examines age-related changes, both normal and pathological, that people experience in their learning, memory, and intellectual skills, their personalities, their social relationships, and their interaction with the physical environment. Research evidence for change as well as stability in multiple psychological domains will be examined in the context of changing paradigms of aging.

# **PSY359 Introduction to Cognitive Psychology**

Cognitive psychology is the scientific study of mental processes, of how the mind works (and fails to work), how it absorbs, selects, processes, and transforms sensory information. Students will investigate how perceptual information enters the mind, how knowledge is organized, how new information is added to memory, and how knowledge is transformed by inductive and deductive reasoning.

### **PSY360 Sensation and Perception**

Serves as an introduction to how humans (and some other animals) sense and perceive their environment. Students will investigate major psychological approaches to sensation and perception including behaviorist, empiricist, gestalt, Gibsonia, and computational theories

## **PSY361 Human Memory**

An overview of classic and current issues in the study of human memory. It examines research findings to gain a better understanding of the structure and organization of memory. Topics will include working memory, encoding and retrieval processes, implicit memory and multiple memory systems, reconstructive processes in memory, eyewitness memory, developmental changes in memory, etc.

## PSY362 Abnormal Psychology

An introduction to fundamental psychological, biological, and socio-cultural concepts and principles that help define psychopathological human behavior. Readings and discussions will focus on how psychologists define, describe, classify, assess, and diagnose mental disorders; their causes and treatment options; and preventive strategies that help reduce the disruptive impact of maladaptive behaviors.

# PSY363 Psychology of Human Emotion

An investigation of human emotions, their impact on cognitive processes, on human development, and on the architecture of social interactions.

# PSY401 Language, Memory, and the Human Mind

This course introduces students to major issues and debates about how the mind encodes and decodes information, forms concepts, categorizes thought, and acquires language. Topics explored include information

theory, recognition memory, perceptual development, decision-making processes, and the representations of meaning and knowledge.

### PSY491 / 492 Culminating Experience

The culminating experience is a 9-credit final project that includes both a written and an experiential component undertaken by students in their final year of study at IBA. Project proposals must be submitted before the beginning of the fall semester. The proposal should include a well-articulated research question, research methods to be used, an extensive bibliography that lists both primary and secondary sources to be consulted, and a brief summary of why the student wishes to pursue this line of inquiry. The final written component should be of at least 40-pages (including appendices), and include both a synoptic summary of the data collected and an extensive analysis of that data as it pertains to the research question.



# Course Descriptions - Marketing Courses

## **Department of Marketing**

#### MARKETING COURSES

## MKT201 Principles of Marketing

An introductory course which exposes students to the discipline of marketing by equipping them to analyze the political, economic, social, and technological environments. Students are encouraged to make observations about their marketing environment, detect signals about changes in the market place, formulate need analysis, and learn about consumer and organizational markets.

#### MKT301 Methods of Business Research

The course inculcates and encourages research culture amongst students to keep them abreast in today's highly competitive environment. The managerial aspects of conducting research are discussed thoroughly with applications from various facets of business. The course directs the students towards the scientific research methodology, so that they can observe business processes, formulate hypothesis, conduct experiments, draw conclusions and disseminate them.

Prerequisite MKT 201 / MTS 202

## MKT401 Marketing Issues in Pakistan

Fulfills the need to understand the local marketing landscape and the peculiar challenges it poses for marketers in Pakistan. Class room discussions are highly interactive and focus on emerging topics like bottom of the pyramid marketing, issues in market research, new product development, etc. Teaching pedagogy includes frequent guest speaker sessions from marketing practitioners and case study discussions.

Prerequisite: MKT 201

### MKT451 Advertising

Provides students with an understanding of how advertising is applied in a marketing environment. There is a need to equip students with the importance of advertising in the economy, and its place in the media of mass communications. This course emphasizes the preparation and execution of a media strategy. Students will gain an in-depth understanding of advertising appeals, product and market research, selection of media, testing of advertising effectiveness, and organization of the advertising profession. Students will also develop skills in scientific media planning and management. The course places a heavy emphasis on the underlying marketing disciplines of customer-focus and branding. Prerequisite: MKT 201

### MKT452 Consumer Behavior

An overview of importance of understanding consumers as buyers and users of products and services. The course delves into deeper issues revolving around consumer decision making. Multiple factors forming the foundations of consumer behavior such as economic, social, psychological and cultural factors are discussed in the light of individual behavior variables such as needs, motives, perceptions, attitudes, personality and learning. Lectures, interactive sessions, and mini real-life cases are all included in the pedagogical design to enable students to understand how the marketing mix can be developed to satisfy demanding consumers. The module culminates in a research based project where students extend their learning and map consumer behavior of a segment in any product category by incorporating one or more concepts of CB. Prerequisites: MKT 201: MKT 301

### MKT453 Sales Management

Familiarizes students with the concepts and practices of sales management. The course focuses on setting up

sales objectives, planning and implementing sales programs, supervising the sales effort and measuring sales performance. The areas of sales forecasting, budgeting, hiring, sales force motivation, compensation and performance evaluation are also covered.

Prerequisite: MKT 201 / MKT 401

### **MKT454 Personal Selling**

Personal selling has an even more important and critical role to play in today's highly competitive and complex environment of the business world. Personal Selling has evolved into a different activity than it was just a decade ago. At BBA level, this course provides an overview of personal selling, providing insight into the operating paradigm of today's personal selling endeavors.

Prerequisite: MKT 201 / MKT 401

### MKT455 Retail Management

This course is meant for the students who ultimately envisage fulfilling a managerial function in any area of retailing, will benefit greatly from this course. It will allow students to see how retailing fits within the broader disciplines of business and marketing. It will enable them to grasp the role of retailing in society and, conversely, society's impact on retailing.

Prerequisite: MKT 201

### MKT456 Export Marketing

The course familiarizes students with the procedures, policies, and management problem faced by Pakistani exporters. It includes a study of the Pakistani exporters, types of export channels, sources of export market information, locating sales channels through international publications, etc.

Prerequisite: MKT 201

# Course Descriptions - Marketing Courses

### MKT457 Dynamics of Distribution and Logistics

Objectives of this course is include: to studying the strategic importance of logistics and distribution management, planning and operations; and enable students to differentiate between logistics and other related disciplines such as Supply Chain Management, material handling, distribution management and inventory management, warehousing and transportation. The aim is to develop an understanding of the four key areas and their interrelationships, namely strategic role of logistics and distribution management, difference between logistics and distribution and related disciplines.

Prerequisite: MKT 201

### MKT458 Public Relations

Public Relations will provide students with the basic framework for creating and managing a PR Campaign. Through practical exercises students will also learn how to create, edit, and evaluate PR texts for various publics and different situations. They will also be able to conduct basic research for PR purposes, create a PR plan, budget and implement it, and finally evaluate the results.

Prerequisite: MKT 201

### MKT460 Direct Marketing

Students will learn the interactive use of advertising and other promotional media to stimulate consumer behavior, predominantly through database and targeted marketing, in order to obtain a measurable response. The course will include the study of one- to-one and customer relationship marketing, in which measuring customer value and building customer loyalty are major concepts.

Prerequisite: MKT 201

### MKT461 Brand Management

An understanding of the psychological aspects of consumers' awareness, preference, and loyalty to brands which is vital in developing long-term company growth. Topics include the importance of product, service and corporate brands, multi-brand portfolios, extensions, brands as a driving force for standardization and globalization, with explicit examples of branding drawn from the local industries of Pakistan. Prerequisite: MKT 201

### MKT462 Essentials of Demand and Supply

The practice of Supply Chain is becoming widespread in all industries around the globe, and firms are quickly realizing the benefits provided by the efficient Demand & Supply Process. The students will be introduced to the concepts of the Value Chain Model and an understanding of the analytical tools necessary to solve Demand & Supply Chain problems. New concepts namely Demand-Driven Company, Demand-Driven Economy, 5th P will also be introduced.

### **MKT501 Marketing Management**

This course takes a simulation approach so that the principles of marketing can be applied for planning, analyzing, implementing, and controlling marketing strategies. It builds upon the philosophy of integrated marketing. Product, Price, Place, and Promotion programs are discussed in detail. Students are also involved in conducting marketing audits.

# MKT505 Advanced and Applied Business Research

An advance study of the tools and techniques of Marketing and Business Research, which are imperative to effective decision-making. Students practice various forms of qualitative and quantitative methods of information collection, analysis, and interpretation, and

learn how to apply them effectively in different situations. This learning is achieved through case-based class discussions, interaction with the industry, through guest speakers, and a live semester long project.

Prerequisite: MKT501 / MTS 506

# MKT506 Branding and Creative Corporate Communication

Please see on website

### MKT552 Consumer Behavior

Consumer Behavior will help the student understand how buying decisions are made among the plethora of market alternatives. The consumers journey is studied through reflection on personal behavior and experience; discussion of market practices, and analysis of Pakistani products. The student is exposed to CBBE model; motivational strategies involving perception and learning models; and the bridge between personality traits, positioning (STP), and attitude change towards brands and services. The role and influence of culture, family, and environment is also studied to show how marketers may adapt and improve marketing campaigns to effectively reach the consumer through live case examples. Through classroom exercises, market observation, and corporate speaker sessions, students will study CB insight-based strategic marketing decisions made with limited consumer knowledge .The students' learning will culminate in a 360 degree recommended strategy for a product or service by incorporating CB insights, and provide a solution for gaps discovered through primary and secondary market research.

Prerequisite: MKT 501

\*Recommended elective for Marketing Major

### MKT556 Social Marketing

Social marketing is an approach towards behavior change for the greater social good that has been developed using the principles of commercial sector marketing. This course is designed to develop an excellent understanding of the application of social marketing principle and approaches through research and practice. Students will be expected to apply research techniques as part of developing a strategy for a social marketing project of their choice. The course will focus on deepening the understanding of target markets through research and on use of information collected through research to manipulate the 4 Ps and develop an effective social marketing campaign.

Prerequisite: MKT501

### MKT557 Dynamic Distribution & Logistics

Please see on website

## MKT558 Customer Ascendancy

Students will apply marketing concepts and theories, learnt in basic marketing courses, to develop strategies and plans for maximizing Customer Satisfaction and Market Leadership. Identifying customer needs and changing expectations, developing matching offers, delivering the offers, designing customer service programs, customer relationship management, making strategies to maximize customer satisfaction, obtaining customer feedback, and monitoring customer satisfaction are included in this important course for all marketers. The project report is a major pedagogical tool of this applied course.

Prerequisite: MKT501

# MKT559 Supply Chain Management

The objective of this course is to generate an basic level understanding and expose students to the importance of supply chain for the success of the business translating conceptual exposure among the students and professionals as to why supply chain management is among the top initiatives for businesses of all sizes. The objective of this course is to inculcate the importance of supply chain in students. The course will include analysis of key SCM elements and how they may be used on a conceptual level during supply chain design, planning and operation to improve performance.

Prerequisite: MKT501

### **MKT561 Brand Management**

Brands are known as the most valuable assets that a company has invested in and developed over time. For marketers a brand is a promise of quality to customers. Lack of branding is perceived as a major weakness in marketing in Pakistan. Brand management is the application of marketing techniques to a specific product / services, product line, or brand.

Prerequisite: MKT501

\*Recommended elective for Marketing Major

# MKT566 Media Management

Media planning is a crucial part of the advertising process and ultimately of the brand planning process, yet little has been done towards imparting formal education in this relatively new field of Marketing Communications. Since media is closely linked to technology, it is continuously changing in dynamics and affecting the overall brand marketing process, hence closely knitting the subject with Brand Management and Marketing Management. This course is the key to developing a synergized thought process amongst students with a Marketing major.

Prerequisite: MKT 501

# MKT569 Global Marketing Management

Please see on website

## MKT570 Strategic Sourcing & Procurement

Please see on website

### MKT571 Strategic Sourcing & Negotiation Skills

Please see on website

### MKT573 Markstrat

Please see on website

### MKT586 Retailing

The objective of this course is to familiarize students with the decisions involved in running a retail firm and the concepts and principles for making those decisions. While the course focuses on the retail industry, including retailers of consumer services, the content of the course is useful for students interested in working or companies that interact with retailers, such as manufacturers of consumer products, or for students with a general management, or entrepreneurial interest. The course will focus a great deal on the value of strategic planning, including a detailed review of the titans of retailing.

Prerequisite: MKT 501

# MKT651 Personal Selling

The field of Personal Selling has matured into a professional endeavor. To-day, selling may be a stronger profession because of the obstacles it has overcome and sometimes still faces. Personal selling gives hands-on training to the students by inviting them to make sales presentations in class. A working insight into the personal selling area is developed, so that sales managers can empathize with the sales people and make more informed decisions. The course also emphasizes the connections of personal selling with other marketing activities. It has a modular approach, covering communications, prospecting, negotiating, and sales presentations.

Prerequisite: MKT501

# Course Descriptions - Marketing Courses

### MKT653 Sales Management

Sales Management as a function of marketing focuses on the development of a sound sale and distribution strategy. The aim of this course is to familiarize students with the concepts and practices of sales management. Students will look at real life examples from the Pakistani market. Sales management efforts in different industries of Pakistan are also studied in depth.

Prerequisite: MKT501

### **MKT656 Services Marketing**

The Services Marketing Module seeks to provide an understanding of the differences and similarities between goods and services as well as analyzing services marketing to enable students to become an expert service marketer. This course is designed to cater to the continuous dominance of services over products while addressing the issues of intangibility of the service environment. The course also looks at the use of technology in the conception, design, and, execution of the service product. Service differentiation through people is a cornerstone of this course.

Prerequisite: MKT501

# MKT657 Strategic Marketing

Students are enabled to make better business decisions - from high level strategic choices to tactical decisions on product policy, promotions, pricing, and distribution, which require a thorough understanding of marketing. The framework applied is described as the 4 C.s. Customer, Company, Competition and Collaborator. What sets marketing apart from many other disciplines is its focus on the customer, and a great deal of time will be spent discussing ways in which marketers view customers. This framework will be used to discuss strategies as well as tactical decision-making that focuses on elements of the marketing mix, often called the 4 P's: price, place (distribution), product, and promotion.

Prerequisite: MKT501

### MKT658 Business to Business Marketing

This specialized course in marketing is concerned with management of business-to-business marketing transactions and developing marketing strategies for industrial, corporate, and institutional customers. Students will develop an understanding of how organizations make buying decisions; what are the various organizational influences, and the methodologies for addressing the various concerns of these influences. The role of B2B market research, branding of B2B brands, and the innovative field of B2B Services will be explored along with discussions on marketing to the Government and other institutions. Prerequisite: MKT501

### MKT659 Global Marketing Management

This module will take students on the journey to become the best global marketer that they can possibly be. The course and will also look at global marketing in the Pakistani context. The key theme running throughout the course is 'Think Globally, Act Locally.'

Prerequisite: MKT 501.

### MKT752 Seminar in Marketing

Seminar in marketing is a capstone marketing course. This is a modular course with practitioners and experienced experts leading most of the sessions. This is enriched by presenting various points of view of leading marketing gurus and incorporating practical implementation strategies. Research is undertaken, specifically of interest to the marketing community, and a solution provided. In this course students are, thus, expected to contribute to marketing knowledge through research and review of cutting edge marketing concepts.

Prerequisite: MKT501 / MKT505

## MKT503 Applied Business Research

Well-thought-out business decisions require a thorough understanding of all stakeholders of the business, and the environment surrounding it. This course is designed to equip students with the essential tools of research which forms the basis of sound decision-making. Through an applied approach using real case studies and a semester-long research project, supplemented by classroom discussions and presentations, students gain knowledge of how a business issue is converted into a research problem and the various approaches used to bring out the most appropriate alternatives within a given situation.

### **MKT507 Marketing Analytics**

This course is designed to make sense of big data to reach on better and competitive decision using statistical models. The spread of this course covers holistic marketing approach which includes consumer profiling, segmentation, analysis of consumer based brand equity, advertising effectiveness, price optimization and sales analytics.

### **MKT569 Social Media Marketing**

Social Media Marketing (SMM) is no longer confined to niche technological products or tech-savvy consumers. In a very short space of time, it has been accepted as a crucial marketing tool. In order to truly appreciate its richness and depth, it is important to learn about what SMM can offer in detail rather than relying on informal discussions during different marketing modules.

# MKT 466 Digital Marketing

See on Website

# MKT 563 Digital Marketing

See on Website

## Department of Computer Science

#### MIS COURSES

### MIS103 Introduction to Computer Applications (2,1,3)

This is a complete lab-based course with the core focus on Microsoft Office Application (Microsoft Word, Microsoft Excel, and Microsoft PowerPoint). Students would be learning these applications by working on class assignments in the lab. Students would also cover the basic concepts in Computer Hardware and Operating Systems and the usage of the Internet.

**Pre-Requisite: None**Offered Semester: Both

### MIS150 Essential Software

Please see on website

## MIS343 Data Warehousing (3,1,4)

A study of the techniques for planning, designing, building, populating, and maintaining a successful data ware-house. This course provides students with an in-depth knowledge of the different phases of building data warehouse. Throughout the course, the special focus is given to the practical aspects of dimensional modeling, ETL, Data Quality and cleansing, and decision support through OLAP.

Pre-Requisite: CSE 341 Offered Semester: Fall

# MIS405 Excel & Access for Business Managers (2,1,3)

This course instills important skills in MBA students so that they may enter the market as effective Excel and database users to become efficient managers. This course will enable them to use Microsoft Excel and Access to improve their work, analysis, and decision making skills.

Offered Semester: Summer/Winter Orientation Program.

### MIS406 Social Computing (3,0,3)

The course focuses on the emerging area of 'Social Computing' which is becoming quite popular and important these days within the discipline of Information Systems. It incorporates collaborative learning and class discussions with the instructor acting as a moderator. Typical topics covered include: network theory, theories of social influence, analysis and design of social online environments.

Pre-Requisite: None
Offered Semester: Fall

### MIS450 Technopreneurship (3,0,3)

Develops technopreneurial skills in CS students so that they are able to start up a technology-based business. With the amalgamation of class discussions, mentoring, and sharing real life practical experiences, students would develop an understanding of what it takes to start a technology business. Students would be prepared for challenges & risks that a technopreneur is likely to face.

Pre-Requisite: CSE 141 Offered Semester: Fall

## MIS454 Audit, Ethics & IS Issues (3,0,3)

The course analyzes the impact of computers on society Topics included are privacy issues, changing patterns of interaction, security, control of information systems, breakdowns, vulnerability, hazards, computer crimes, fraud, defenses, access controls, audit planning and execution, disaster recovery, and risk management.

Pre-Requisite: MGT 211 Offered Semester: Both

# MIS456 E-Commerce (3,0,3)

An introduction to e-commerce concepts, objectives, market drivers that affect techniques and

technologies. The topics in the course include: intelligent agents, client/server model, commitment, concurrency, recovery, and network service and application management. It also discusses policy and regulatory issues in e-commerce. It also identifies the various e-commerce applications in the areas of finance, securities, trading, auctions, and travel.

Pre-Requisite: CSE 248 Offered Semester: Spring

### MIS458 Enterprise Resource Planning (3,0,3)

An overview of enterprise resource planning systems. The course focuses on the ERP Life Cycle. It introduces students to problems that traditionally fragmented information systems create and therefore to the underlying need for integration of business processes and information in large organizations. The course also includes demonstrations and hands on exercises. Students use this software to perform some of the processes and tasks to create, track and communicate enterprise information.

Pre-Requisite: ACC 111
Offered Semester: Fall

# MIS463 Mobile Marketing - A Technological Perspective (3,0,3)

Examines the business potential of using the mobile platform for marketing purposes. It encompasses both the technology opportunities and technology challenges involved in the implementation of a successful mobile marketing campaign. Students learn how to assess different mobile technologies and platforms, examine the right technology to implement a mobile marketing campaign, and identify associated technology challenges.

Pre-Requisite: CSE 312, CSE 341

Offered Semester: Spring

### MIS464 Financial Services Technologies (3,0,3)

The role of Financial Services Technologies is becoming increasingly essential and critical in order to achieve efficiency in the delivery of low cost transactions to the customers. This course equips students with the knowledge of the fundamental components involved in the evaluation, implementation, integration and operation of Financial Services Technologies.

Pre-Requisite: None Offered in Spring Semester.

Spring

### MIS502Operations & Technology Management

Please see on website

### MIS503 Enterprise Integration (3,0,3)

Students are provided with the theories, models, and analytic techniques required to develop solutions for integrating heterogeneous information systems. Basic concepts that enable diverse applications developed in different are explored and illustrated. Independent- as well as- group assignments, provide the students with the opportunity to investigate Enterprise Integration Solutions from the Web and from the local environment.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

# MIS513 Information: Industry Structure & Competitive Strategy

Please see on website

MIS541 SAP ABAP Programming I

Please see on website

MIS542 SAP ABAP Programming II

Please see on website

# MIS550 Logistics and Supply Chain Management (3,0,3)

The course enhances student's problem solving skills. Students learn how to identify issues / problems and develop solutions in areas such as procurement management, supplier management, inventory handling, warehouse management, logistics etc. It covers topics such as inventory management & bull-whip effect (SCM game), domestic and international transport, logistics outsourcing (3pl and 4pl), designing the transport network, and actual performance measurement along the supply chain.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

### MIS552 Advanced Data Warehousing (2,1,3)

Data warehouses are databases of a specific kind that periodically collect information about the activities performed by an organization. Course topics include: discussion on conventional data warehousing techniques, spatial data warehousing techniques, temporal data warehouses, designing conventional data warehouses, designing spatial and temporal data warehouses, and ongoing research in warehousing.

Pre-Requisite: Track-IM Offered Semester: Spring

# MIS553 Mobile Marketing Strategies (3,0,3)

Designed to provide students with a sound understanding of the mobile channel as a marketing tool in both the international and local markets. It is primarily for MBA / MS students with several years of work experience. The course takes a very practical and realistic approach to examining Pakistan's own mobile marketing eco-system and the opportunities and challenges therein while emphasizing how the mobile has become an essential component marketing campaigns.

Offered Semester: Fall

### MIS555 Auditing IT Infrastructures (3,0,3)

Discusses the components and basic requirements for creating an audit plan to support business and system consideration. The various parameters required to conduct and report on IT infrastructure audits for organizational compliance are explored with discussions on the qualifications, ethics, and certification organizations for IT auditors.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

## MIS564 Social Computing Applications

Please see on website

### MIS565 Advance E-Commerce (3,0,3)

The course will stress on the understanding of end to end technological infrastructure to establish and support e-commerce. Other business aspects of e-commerce such as marketing, logistics, third party integrations among others, will also be discussed. The course includes an overview of some of the commercial B2C and B2B e-commerce systems.

Pre-Requisite: MIS 456

Offered Semester: Upon Request

# MIS566 Fundamentals of SAP-ABAP Programming-I (2.1.3)

The first section of this course comprises Introduction to SAP ABAP, SAP architecture, and ABAP Development work bench tools. The second section deals with the study of an ABAP workbench in detail, which in turn includes the study of flow of an ABAP program, and the ABAP workbench. The third section of this course is based on an in-depth study of an ABAP dictionary, including study of data objects, performance, input checks, object dependencies, views, search and performance monitoring.

Pre-Requisite: CSE 341

Offered Semester: Upon Request

## MIS567 Simulated Approach to SCM (1,5,1.5)

Successful organizations employ Supply Chain Management (SCM) techniques to minimize the supply chain issues which ultimately improve organizational performance and profitability.

Pre-Requisite: MKT 201, MGT 311 Offered Semester: Upon Request

# MIS568 Business Processes Management in ERP using SAP

SAP is used as a learning tool for understanding the business processes and their functioning and integration across various parts of enterprise. As such, the course is a fully SAP ERP integrated course which covers fundamentals of SAP ERP Financial Accounting (FI), Managerial Accounting (CO), Materials Management (MM), Production Planning (PP), Sales & Distribution (SD), Human Capital Management (HCM) and Project Systems (PS).

### MIS 651 Theoretical Foundations of IS (3,0,3)

An introduction to the evolving theoretical foundations of Information Systems. Students are exposed to the major theories utilized and appropriated in the field during the last few decades, acquiring philosophical perspectives on theories, models, and explanations. The above objectives are achieved by reading and comprehending the latest research in information systems.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

# MIS653 Advanced Theoretical Concepts in IS (3,0,3)

Reviews and critically evaluates recent advances in Information Systems theories. Students read and critically analyze and discuss three to four recent research papers each week. This engages the student in the current debate and discourse on theoretical issues in information systems and their impact on organizations, society, and individuals. The course is discussion based. The students are expected to produce a conceptual paper at the end of the semester, analyzing a locally relevant and important research problem utilizing theoretical understanding acquired during the semester.

Pre-Requisite: None

Offered Semester: Upon Request

### **COMPUTER SCIENCE & ALLIED COURSES**

### CSE141 Introduction to Programming (3,1,4)

This is a first of a series of programming-based courses. It introduces fundamental problem solving skills and algorithm development with the help of a programming language. It covers concepts such as variables & data types, selection and iteration structures, methods and recursive methods, arrays and structures, file I / O and optionally elementary 2D graphics based on certain tool kits. It also covers flowchart design and pseudo code approaches for representing solution to problems as well as debugging and testing techniques.

Pre-Requisite: None
Offered Semester: Both

# CSE 142 Object Oriented Programming Techniques (3,1,4)

Object Oriented Programming (OOP) is the paradigm of choice for large programs. Principles of abstraction, encapsulation, inheritance, and polymorphism are explored with an understanding of code structuring and design philosophies. It requires a thorough

understanding of the fundamentals of programming. Imparted concepts include class definition, constructors, destructors, access control, method overloading and overriding, inheritance, static and dynamic binding, exception handling, object life cycle, garbage collection, and name spaces. Java, C#, or C++ is used for implementation of concepts learned in this course.

Pre-Requisite: CSE 141
Offered Semester: Both

### CSE145 Introduction to Computing (3,1,4)

An overview of topics from number representation, hardware architecture, operating systems, databases, as well as some computing models, languages and grammars, software development and engineering, networking, and graphics. Java or C++ is used to demonstrate certain concepts.

Pre-Requisite: None
Offered Semester: Both

### CSE241 Digital Logic Design (3,1,4)

An introduction to basic concepts of digital computer logic including switching logic, combinatorial circuits, minimization methods, adders, comparators, multiplexers, synchronous and asynchronous sequential circuits, registers, counters, flip-flops, encoders, decoders, buffers, RAM, switches, PLDs, instruction set design, processor implementation techniques serial and parallel arithmetic units, pipe lining, and memory hierarchy.

Pre-Requisite: CSE 145, MTS 211

Offered Semester: Both

### CSE247 Data Structures (3,1,4)

Provides a foundation in the basic concepts of programming data structures. Students are taught how to select and design data structures and algorithms that are appropriate for problems that they have. The course focuses on comparing algorithms and studying their correctness and computational complexity. Students are provided a mixture of theoretical knowledge and practical experience using any programming language (JAVA, C, C++ or C#).

Pre-Requisite: CSE 145, MTS 211

Offered Semester: Both

# CSE248 Computer Communications and Networking (3,1,4)

An introduction to data communications in computer networks. It is a four credit hour course comprising of three hours for theory and three hours of lab teaching per week. The course will help students to develop thorough understanding of the techniques, applications control of modern data communication networks and technologies such as TCP/IP, 802.11, Ethernet, DNS, DHCP, NAT, etc. Topics included are error detection and correction, multiple-access, bandwidth allocation, routing, internetworking, reliability and if time permits quality of service issues in real-time applications. The fundamentals on which the Internet work would be followed as a case in point to forward these concepts. In addition the course will closely map onto Cisco technologies and hands on laboratory sessions/tutorials and assignments to help students prepare for CCNA in future using Wireshark for protocols examination and Packet tracer for simulations.

Pre-Requisite: CSE 142, CSE 145

Offered Semester: Both

### CSE 307 Introduction to AI (3,0,3)

An overview of the theoretical and practical aspects of designing intelligent computer systems. Students are expected to implement the concepts learned during the course using standard and Al-specific programming languages and tools.

Pre-Requisite: CSE 247 Offered Semester: Both

### CSE309 Theory of Automata (3,0,3)

This course is about the theoretical foundations of computer science. Mathematical and abstract computational models are explored with special reference to the theory of formal languages. Concepts include Kleene's Closure, Regular Expressions and Languages, Deterministic and Non-Deterministic Automata, Transition Graphics, Context Free Grammars and Derivations, Push-Down Automata and Pumping Lemma, Turing Machines and other equivalent machines, and Chomsky Hierarchy of Languages. The domains and limitations of each computational model are also explored.

Pre-Requisite: MTS 211, CSE 141 Offered Semester:

Both

# CSE312 Software Engineering (3,0,3)

An introduction to the fundamental principles and methodologies of large-scale software development. Students learn the theory and practice of software engineering. They apply software engineering practices to their projects in order to identify their strengths and shortcomings through the use of Personal Software Process (PSP). Additionally, they work as part of a team on a full life cycle software project that includes planning, software specification, software design, coding, inspections, and testing.

Pre-Requisite: CSE 247
Offered Semester: Both

### CSE 317 Design and Analysis of Algorithms (3,0,3)

This course is a core course, and requires a working knowledge of the basic algorithms, such as searching, sorting, hashing, and various other computational algorithms. Students are taught how to analyze these methods and design efficient ones. The key emphasis is on algorithms that are in widespread use.

Pre-Requisite: CSE 247
Offered Semester: Both

### CSE331 Operating Systems (3,0,3)

Concepts included are process management and scheduling, interaction of concurrent processes, interrupts, I/O, device handling, memory and virtual memory management, and file management. A survey is carried out of the design and implementation of distributed operating systems, both by introducing basic concepts and considering examples of current systems: UNIX and recently developed operating systems such as Linux, Vista are presented.

Pre-Requisite: CSE 345 Offered Semester: Both

## CSE341 Database Systems (3,1,4)

The course covers the foundations of database systems, database management systems and the design and implementation of database systems using industries top DBMS such as Oracle, SQL Server, etc. Topics included are fundamentals of database architecture, focusing on basics such as the relational algebra and data model, deriving a physical design from the logical design, schema normalization and de-normalization, data security, data integrity, query optimization, transactions management, and introduction to distributed databases, object oriented databases and data warehousing.

Pre-Requisite: CSE 247
Offered Semester: Both

### CSE344 Compiler Design (3,1,4)

Examines the design consideration, constraints, and implementation techniques for developing compilers and interpreters. Programming language code translation issues are explored with reference to problem domains, resource requirements, and runtime requirements. Concepts include Compiler back-end Operations like Scanning, Parsing (top-down and bottom-up parsing), BNF/EBNF and Syntax Trees, Semantic Analysis and Annotated Grammars, and Compiler Front end Operations like Runtime Environments, Code Generation and Introduction to Code Optimization.

Pre-Requisite: CSE 309, CSE 305

Offered Semester: Fall

# CSE345 Computer Architecture and Assembly Language (3,1,4)

An introduction to computer system structure and organization. Topics include representation of information, processor architecture, input/output, CPU, ALU, memory hierarchy, arithmetic circuits, micro and macro instructions, arithmetic shifts, overflow and underflow situations, fixed point and floating point data, instruction codes, super scalar structures, VLIW, and other modern CPU architectures.

Pre-Requisite: CSE 241, CSE 247

Offered Semester: Both

### CSE351 Cloud Computing (3,0,3)

Please see on website

## CSE403 System Modeling and Simulation (3,0,3)

Focus is on two areas, analysis of practical problems and their solution using computational techniques. The standard singe queue server problem is used to introduce the student to problem analysis techniques and computational modeling. The use of statistical techniques is introduced to model random processes in a non-mathematical way. These techniques are then used to solve other practical problems in which convergence, system behavior, performance measures and validation are discussed. Programming skills are a prerequisite of the course.

Pre-Requisite:

Offered Semester: Fall

## CSE407 Human Computer Interaction (3,0,3)

Gives students an understanding of the effects of Human Computer Interaction (HCI) on the design of interactive systems, hardware and software to determine their usability. This course discusses the key issues and their solutions to make a system more human friendly. It provides the necessary knowledge and skills to design, prototype and evaluate usable human-computer interaction in both its narrow sense (the user interface) and its broad sense (information systems, people, organizations, societies and cultures).

Pre-Requisite: CSE 312
Offered Semester: Both

### CSE441 Systems Programming (3, 1, 4)

Provides students with an introduction to system-level programming. The course is primarily based on Linux Operating Systems Programming and C/C++ is used as the programming language. General OS Systems Concepts and Windows OS Systems concepts are discussed also. It covers a selection of systems programming topics in multitasking, process synchronization, inter-process communication, and operating system mechanisms and interaction.

Pre-Requisite: CSE 331
Offered Semester: Both

### CSE448 Microprocessor Interfacing (3,1,4)

This course covers the fundamentals of Intel x86 assembly language and the basic architecture of the Intel microprocessor. Concepts include assembly language, microcomputer system hardware, input/output devices, and bus discipline. In addition, 8051 Micro controller Programming and Interfacing is also covered. This course also has hardware lab sessions.

Pre-Requisite: CSE 345

Offered Semester: Upon Request

# CSE450 Application Development for Mobile Devices (3.0.3)

Familiarizes students with application development (web or native) challenges for mobile devices. The course imparts concepts such as Differences between Conception, UI-Design, Coding, Launching of a mobile application and a traditional application; developing a basic Mobile website; Understanding some discrete techniques to enhance user experience used uniquely in mobile devices.

Pre-Requisite: CSE 142, CSE 312

Offered Semester: Both

## CSE455 Network Security (2,1,3)

Introduction to the security issues in computing, communications, and electronic commerce. The course covers security requirements and vulnerabilities, legal and ethical issues, basic cryptology, private and authenticated communication, electronic commerce security, software security, viruses and other malicious codes, operating system protection, trusted systems design, network security, firewalls, auditing, physical security and dis recovery.

Pre-Requisite: CSE 248
Offered Semester: Fall

### CSE459 Business Intelligence (3,0,3)

Business intelligence (BI) refers to technologies, applications and practices for the collection, integration, analysis, and presentation of business information. The purpose of business intelligence is to support better business decision making. This course provides an overview of the technology of BI and the application of BI to an organization's strategies and goals.

Pre-Requisite: CSE 341, MIS 343

Offered Semester: Spring

# CSE460 Introduction to Game Programming and Robotics (3,0,3)

Introduces the fundamentals of game programming and robotics. This is a programming intensive course and students are required to spend a significant amount of time in developing interactive games and creating virtual simulation environments to be used in conjunction with robots. Students will get hands on experience of XNA Studio Express, Microsoft Robotics Development Studio, and Lego Robots. The main focus of the course is on the processes, algorithms, and mathematics necessary to create 3D computer games and to build autonomous robots for various tasks

Pre-Requisite: CSE 307

Offered Semester: Upon Request

## CSE462 Introduction to Image Processing (3,0,3)

Please see on website

# CSE491 Computer Science Project . I (0,3,3)

This is the first of a two-semester intensive Software development project under faculty supervision. Students may propose their own projects for departmental approval or may apply for a project proposed by a faculty member. Students are expected to have a complete prototype ready for demonstration

at the end of the first semester. An industry partner or equivalent is part of the requirement.

Pre-Requisite: CSE 341, CSE 312

Offered Semester: Both

### CSE492 Computer Science Project . II (0,3,3)

This is the second of the two-semester intensive Software development project. Students are expected to look into the advanced issues of implementation of their prototype developed in the first part and possible commercialization aspects of their project.

Pre-Requisite: CSE 491

Offered Semester: Both

### CSE503 Software Project Management (3,0,3)

This course deals with the lifecycle of Software Project Management, project planning, software estimation, software project schedules, reviewing work products, system requirements, project automation, software metrics, testing, bugs and diagnosis, and change configuration.

Pre-Requisite: CSE 312 Offered Semester: Fall

# CSE556 Image Processing for Recognition (3,0,3)

This course would help students to understand how concepts of image processing provide the basis for Machine recognition. The course would explain how images and sequence of images could be used to understand the scene and real world problems. The course focuses on different models which are used for object recognition. The course also includes machine learning techniques which are used for object classification and recognition.

Pre-Requisite: None

Offered Semester: Fall

### CSE558 Mobile Computing (3,0,3)

An overview of the technical as well as business aspects of mobile computing and wireless communications. Main topics to be covered are: mobile applications, mobile computing platforms, wireless networks, architectures, security, and management of mobile computing and wireless communications. The role of wireless Internet and Mobile IP is reviewed and the mobile computing plat forms are examined with a discussion of wireless middle ware, wireless gateways, mobile application servers, WAP, i-mode, J2ME, BREW, Mobile Internet Toolkit, and Mobile Web Services.

Pre-Requisite: None

Offered Semester: Upon Request

### CSE559 Image Processing (3,0,3)

Image processing is an applied course and designed in a way that students would be able to use this course toward their postgraduate research or final year project. The course is designed to provide students intermediate level expertise in image processing. The course explains formation of image and its digitization by using different sampling criteria. The student would



learn Human visual system and different color systems used to represent images. Different image transformations will be explained which are important in image registration. Student will learn how to enhance images using different enhancement filters. Stereo geometry will be explained which is used for 3D object reconstruction and texture mapping.

Pre-Requisite: Track-IS

Offered Semester: Upon Request

### CSE564 Software Systems Engineering (3.0.3)

This course introduces students to the concept of systems engineering and the use of software for systems engineering.

Pre-Requisite: CSE 141, CSE 142

Offered Semester: Fall

## CSE566 Software Quality Assurance (3,0,3)

This course teaches software quality requirements, assessment of the quality of a software design, explains specific methods of building quality software, helps students understand software reliability models and metrics, and develop a software quality plan. It also covers software quality planning, validation and verification methods and techniques, risk analysis, and software review techniques.

Pre-Requisite: Track-SE Offered Semester: Spring

### CSE567 Requirements Engineering (3,0,3)

Concepts for systematically establishing, defining, and managing the requirements for a large, complex, changing and software-intensive system, from many perspectives including technical, organizational, and management are taught. The course also considers the past, present and the future paradigms and methodologies in requirements engineering.

Pre-Requisite: Track-SE Offered Semester: Spring

### **CSE568 Introduction to Data Sciences**

In this class we will study some of the tools needed to access data, transform it, analyze it, and communicate results. Students will gain experience in developing a data product that analyzes and solves a real problem. We focus on the practice of data science and a final project in which students develop a data product is central to the course.

### CSE569 Web Engineering (3,0,3)

Aims to teach students the technologies and techniques for creating large-scale hypertext information systems on the WWW. Based on recent hypertext research and current WWW standards it will address the issues of publishing individual documents and sites together with the problems of global information management. Course topics will include, principles of web architecture, web information design, searching the web graph, factors that have led development of the web in its present form and current trends in the development of hypertext in the web.

Pre-Requisite: Track-SE Offered Semester: Spring

# **CSE572 Formal Methods**

Please see on website

### CSE575 Advanced Human Computer Interaction (3,0,3)

Provides an understanding of how interactive systems are developed and used with a focus on their usability. The hardware and software issues that determine the usability of an interactive computer system will also be studied in this course. The course discusses the key issues and their solutions to make a system more human friendly. Provides the necessary knowledge and skills to design, prototype and evaluate usable human-computer interaction. It further provides a strategic grounding in both theory and good practice

for students to make effective use of applying HCI principles to IS design in their professional work.

Pre-Requisite: Track-HCI

Offered Semester: Upon Request

# **CSE576 Usability Engineering**

Please see on website

## **CSE577 Interaction Design**

Please see on website

## CSE578 GUI Design

Please see on website

# CSE579 Multimedia and Multi-Modal

# Systems

Please see on website

### CSE651 Advanced Analysis of Algorithms

Please see on website

## CSE652 Knowledge Discovery and Data Mining (3,0,3)

This course offers a comprehensive coverage of well-known Data Mining topics including classification, clustering, and association rules. A number of specific algorithms and techniques under each category are discussed. Methods for feature selection, dimensionality reduction, and performance evaluation are also covered. Students will be exposed to relevant Data Mining research.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

# CSE654 Combinatorial Optimization (3,0,3)

This is a graduate level introductory course on optimization. The course covers fundamental concepts in optimization theory, generic algorithmic approaches, as well as modeling optimization problems and their numerical solution. In particular, the topics include elements of convex analysis, linear

programming, sensitivity analysis, Lagrangian duality, and introduction to discrete optimization. Optimization algorithms, including the simplex method and its variants, and branch-and-bound method are introduced.

Pre-Requisite: Track-IS

Offered Semester: Upon Request

### CSE655 Probabilistic Reasoning (3,0,3)

This course provides an in-depth analysis of Bayesian Belief Networks. The course focuses on the syntax and semantics of Bayesian Networks and how to use BNs to model and analyze uncertain situations. Models such as dynamic Bayesian networks, dynamic Influence Nets, Markov Nets as well as the learning of structure and parameters of a Bayesian network are discussed in detail. The course is intended for graduate level CS students, the current research issues in the field of probabilistic reasoning are discussed. Students are expected to use various software and develop their own tools to implement various reasoning and learning algorithms.

Pre-Requisite: Track-IS

Offered Semester: Upon Request

# CSE657 Essentials of Theoretical Computer Science (3,0,3)

The course is divided into three parts, corresponding to the three ways of modeling computations. In the first part the model of finite state automata is discussed. In the second part students will explore how all conceivable discrete computing devices can be simulated by Turing machines, a conceptually simple abstract device. Finally, polynomial time computations, a more pragmatic model of the computations will be studied. The course concludes by teaching mathematically unexpected results regarding complexity theory.

Pre-Requisite: Track-TCS Offered Semester: Upon

Request

# CSE658 Knowledge management and e- learning systems (3,0,3)

Introduces a wide range of methods and techniques that are currently used and researched in knowledge management systems and applications that are based on knowledge of human understanding. A focused approach on the topics of 'structured information retrieval' is used to impart some techniques of knowledge and data acquisition.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

### CSE659 Computational Intelligence (3,0,3)

The course presents the fundamentals of computational intelligence. Topics included are evolutionary algorithms, particle swarm optimization, ant colony optimization, artificial immune systems, artificial neural networks, fuzzy systems, and hybridization of the above techniques. The course focuses on the applications of these techniques on real world problems and shows how they are designed, implemented and analyzed for a given a problem domain. This is a programming intensive course.

Pre-Requisite: Track-IS Offered Semester: Upon Request

### CSE660 Computer Vision (3,0,3)

Computer Vision is a study in algorithms, tools, and techniques that enable computers to extract information out of digital images. This course offers an introduction to the core concepts, some industrial-strength tools and recent breakthroughs in Computer Vision. By the end of this course, students should be able to analyze problems in Computer Vision and break them into simpler solvable problems.

Pre-Requisite: Track-IS

Offered Semester: Upon Request

### CSE661 Semantic Web (3,0,3)

The course examines existing Semantic Web technologies: XML, RDF (Resource Description Framework), RFDS, OWL (Web Ontology Language), understands the role of ontology, ontology modeling, reasoning, and querying mechanisms. Latest papers published in recent Semantic Web conference proceedings and journals are also discussed. This course also offers a practical experience using Protégé ontology editor, Jena ontology API with JAVA programming language. Students are required to complete the semantic web project at the end of the semester.

Pre-Requisite: Track-IS Offered Semester: Upon Request

### CSE662 Parallel Processing (3,0,3)

This course requires sequential programming concepts and practices as a pre-requisite. It's an introduction to the concepts of fundamental architectural differences in terms of memory and data. Inter-process communication is also introduced. Teaching MPI (Message passing interface), which is the main implementation tool for parallel algorithms, is an integral part of this course. The goal is to provide students with a proper grounding (at entry level) in concurrent programming concepts and to equip them with the tools necessary to build their own parallel programs.

Pre-Requisite: Track-TCS

Offered Semester: Upon Request

# CSE665 Information Retrieval and Web Search - I (3,0,3)

This course covers the foundations of Information Retrieval (IR) as well as advanced or more recent topics in Web Information Retrieval (WIR). Core topics include material necessary to understand how an IR

system is constructed. In IR, topics such as IR models (Boolean, vector space, probabilistic, latent semantic indexing, and neural nets), indexing models (storing and accessing), file organization, query processing, and document clustering will be covered. Moreover, advanced research topics such as Aggregated Search, Digital Advertising, Digital Libraries, Discovery of Spam and Opinions in the Web, Evaluation, Information Retrieval in Context, Multimedia Resource Discovery, Scalability Challenges in Web Search Engines, and Users in Interactive Information Retrieval Evaluation will also be discussed.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

# CSE666 Information Retrieval and Web Search - II (3,0,3)

This is a research-based course on Information Retrieval and its application on tools such as Lucene, Solr, Luke, Knime, etc. The course covers the advanced and most recent research topics of Information Retrieval. Topics such as aggregated search, discovery of opinions in a corpus, digital advertising, digital libraries, and information retrieval in context, multimedia resource discovery, and scalability challenges in web search engines will be covered and their experiments conducted.

Pre-Requisite: CSE 665

Offered Semester: Upon Request

# CSE668 Big Data Analytics (3,0,3)

The focus is on analyzing massive structured and unstructured data sets using Hadoop-based Big Data platform. The list of covered topics include text analytics, sentiment analysis, social network mining, streaming data mining, recommender system, time-series analysis, kernel-based learning, advanced visualization. The course makes heavy use of

analytics software such as R and KNIME. Students participate in multiple data analytics competition hosted on Kaggle.com or on places like KDD, PAKDD. The course also prepares students for several company-specific certifications in Data Science

Pre-Requisite: CSE 652

Offered Semester: Upon Request

### CSE690 MS Research Survey (0,3,3)

The Research Survey is required to be taken by all students, regardless of whether they opt for a Thesis or non-Thesis based MS degree.

### **ICT & ALLIED COURSES**

## ICT512 Advanced Web Technologies (3,0,3)

Provides an understanding of different concepts, architectures, techniques, and infrastructures for service oriented computing in web development. The course explains the principles and practice of web services. It provides a comprehensive overview of state of the art web services and associated disciplines, relating concepts to practical examples and emerging standards.

Pre-Requisite: CSE 308

Offered Semester: Upon Request

## ICT515 Distributed Systems (3,0,3)

This course deals with an in-depth understanding of Distributed Systems. Focus is 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. Students will be exposed to the principles of Distributed Systems and the challenges

encountered while designing and implementing as well the pertaining to research in the field of distributed systems

Pre-Requisite: CSE 341

Offered Semester: Fall

### CT554 Information Security (3,0,3)

This course provides solid the foundation needed for multi-disciplinary approach to challenges of securing information. This rigorous course focuses on theoretical basis, explaining high-level frameworks, discusses available standards and deliberates upon best practices of information security.

Pre-Requisite: Track-IM

Offered Semester: Upon Request

## ICT556 RFID Technologies (3,0,3)

This course provides the students with an understanding of the fundamentals of Auto IDs (machine readable IDs) and its uses in our life. The course then focus on RFIDs starting with fundamentals of wireless technology (as RFID is based on wireless), its various components, how it works, standards, operations and ends on applications of RFIDs including Internet of Things (IoT).

Pre-Requisite: Track-NCC
Offered Semester: Fall

# ICT651 Computer Communication Networks & Simulation-I (2,1,3)

This is a PhD level course that focuses on the architecture and performance evaluation of wireless and wired network protocols for data and telecommunications networks. Students are expected to have a strong mathematical background and an understanding of probability theory. Topics discussed will include: queuing theory, performance of data link

and network layers; flow and congestion control and routing; Networks considered include Sensor, Local, Metropolitan and Wide Area Networks as well as broadband, satellite, mobile and wireless networks. Network simulations and Wireless Sensor Networks test bed will also be used to establish certain concepts where possible.

Pre-Requisite: CSE 248, MTS 102 Offered Semester: Upon Request

# ICT654 Computer Communication Networks & Simulation - II (2,1,3)

This is a continuation of the Computer Communication Networks and Simulation-I (CCNS-I) course at the PhD level that will focus on the architecture and performance evaluation of network protocols for wireless networks. Topics discussed will include: simulation of advanced concepts in queuing theory, performance of wireless networks, including 802.11x (WiFi), WiMax and Long Term Evolution (LTE) network. The prime emphasis in the course will be towards completion of projects initiated during CCNS-I and publishing of results. Time permitting, issues pertaining to data link; network layers; flow and congestion control and routing may be discussed.

Pre-Requisite: ICT 651

Offered Semester: Upon Request

# ICT659 Wireless Sensor Networks (1,2,3)

This focus of this PhD level course is on the research aspects of wireless and sensor networks. Students are expected to have a good understanding of data communications and networks as well as a working knowledge of programming concepts. The course will be lab intensive with 2 credit hours for labs and 1 credit hour for theory. Topics discussed will include: physical layer, MAC Layer, IEEE 802.15.4 and ZigBee, routing protocols, energy management, mobility, and sensor network programming. An important component of the course will be conduct of a research

project and publishing of results. Time permitting, issues pertaining to time synchronization, localization and security may also be discussed.

Pre-Requisite: CSE 248, CSE 141, MTS 102

Offered Semester: Upon Request

# ICT660 Advanced Topics in Wireless Sensor Networks (1,2,3)

Builds upon the concepts studied in ICT659 (Wireless Sensor Networks) The areas of research will be based on focusing on recent advances in the field of wireless sensor networks, and in particular will focus on cross-layer and context-aware protocols for sensor networks. The course will be lab intensive with 2 credit hours for labs and 1 credit hour for theory Simulation of sensor networks will be conducted where necessary. Group and individual research topics will be pursued with possibilities of international research collaboration. Topics discussed will include: cross-layer design of wireless sensor network protocols; implementation of SMAC (Sensor Medium Access Network) protocol, and other recent cross-layer protocols in TinyOS; concepts of context-aware protocols Students must undertake research projects and the results of this research will be published. Detailed topics covered would be based on the individual research topics selected which will subsequently be covered in the mid-term and final exams. Important issues will relate to the MAC layer, time synchronization, and energy efficient protocols.

Pre-Requisite: ICT 659

Offered Semester: Upon Request

# ICT661 Applications of Mathematical and Computational Techniques to Networking (3,0,3)

The course focusses on the practical applications of mathematical and computational techniques to networks. Using graph theory and statistical techniques, computational models of different networks are developed and analyzed. Typical

problems such as shortest path optimization, max flow min cut algorithm, travelling salesman problems are computationally modelled.

Pre-Requisite: Track-NCC

Offered Semester: Upon Request

### ICT 662 WSN Protocols and Applications (3,0,3)

This is a broad-based PhD level course that focuses on a review of the current trends in Wireless Sensor Network protocols, applications, implementations and standards. Students will be expected to conduct a broad literature review of the field from the academic research as well as the industry implementation and standardization points of view. The topics will be covered initially of the various protocol layers and subsequently of advanced topics. At each stage emphasis will be given to the following issues: research academic direction, industry implementation, standardization and finally future research directions.. Discussions will also focus on the direction of the academic community vis-à-vis the WSN industry. A detailed review of the various research areas that exist in WSN along with the innovations being explored in each area will be routinely conducted. Selected papers will reviewed and discussed along with industry implementation trends and standardization efforts. The course will equip current PhD students with a comprehensive overview of the field which will allow them to select future research topics, or to modify their existing research areas to meet future demands in this field. Students will also be expected to select a research topic or modify their research topic to meet the demands of the evolving industry. They will also compare and contrast existing research areas to determine futuristic areas of research.

Pre-Requisite: CSE 248

Offered Semester: Upon Request

# **Course Descriptions - Mathematics Courses**

### Department of Mathematical Sciences

### **MATHEMATICS COURSES**

### MTS101 Calculus-1 & Plane Geometry

Concepts of Functions and Algebra of Functions, Limits and Continuity of Functions, Derivability and Integrability are developed. Techniques leading to better understanding of curve sketching. Theorems like Rolle's Theorem and the Mean Value Theorem to Taylor's and McLaurin's Expansion are taught to lay down foundations for higher level courses. Integrals as sum and representing areas leading to techniques of integration are taught with rigor.

Pre-Requisite: College Algebra or Inter / A-Level Math.

### MTS 102 Introduction to Statistics

An introduction to data analysis, presentation, and probability. The aim is to acquaint students with the basic methods of data handling, which are required for different kinds of analysis as well as for the requisite knowledge of Advances Statistics and Business Research Methods, in their academic terms.

### MTS104 Calculus with Application-I

The basic concepts in differential and integral calculus of single variable functions, with an emphasis on applications in various areas are covered.

Pre-requisite: Mathematics at Intermediate or A levels or MTS105)

# MTS106 Calculus with Applications-II

Builds upon the concepts developed in MTS 104 regarding differential and integral calculus of functions of two and more variables, with emphasis on applications in various areas.

Pre-requisite: MTS104

### MTS110 Mathematical Methods

The knowledge of methods and investigative techniques of mathematics employed in various domains is imparted in this course. The course has four major components, elements of Complex Variables, Infinite Sequences and Series, The Fourier Series and elements of Abstract Algebra. Successful students are thus prepared to understand higher level courses.

### MTS111 Essential Software

This is a first year standard course and assumes that the student has knowledge of high-school mathematics, functions and graphs This course has two components, MATLAB, and Latex. MATLAB is introduced as a computational tool. The second component is LaTeX, which is a standard document production tool. Students are trained in LaTeX programming, and are exposed to mathematical document production with all formalities of the document in place.

### MTS112 Applied Probability Theory

An introduction to Probability distributions for discrete and continuous data. Limit theorems, generating functions, bivariate distributions and sampling distributions of popular statistics are derived. Applications of distributions in real life problems are highlighted. Pre-requisite MTS202

### MTS201 Logic & Discrete Structures

Introduces students to a variety of discrete mathematical and combinatorial structures related to science, engineering, and computing. The course provides an opportunity to learn the nature and scope of discrete mathematical structures in the areas of Mathematical Logic & Set Theory, Elementary Number Theory, Analysis of Algorithms, Elementary Combinatorics & Discrete Probability, and Graph Theory.

Pre-requisite MTS101

### MTS202 Statistical Inference

This course provides methods for research and practice in social and physical sciences and business administration. Students will be acquainted with the advanced methods of data along with sampling, decision analysis, and data modeling using sample information.

Pre-Requisite: MTS101, MTS102

### MTS203 Linear Algebra

Aims to ground students in linear algebraic concepts and structures, such as vector spaces, direct sums of sub-spaces of a finite dimensional vector space as well as linear transformations. Deeper issues such as dimension theorem, null spaces, image spaces of linear transformations, rank and nullity of a linear transformation, relation between rank, nullity, and dimension of the domain of a linear transformation, etc. are then introduced. The ultimate aim is to empower students sufficiently so that they may use linear algebraic techniques in diverse application areas, such as, designing good numerical solution techniques for applied problems.

### MTS204 Calculus-3

It requires the students to be versed in topics of analytic geometry of plain and space curves. It builds on these concepts, and extends to advanced concepts of multivariate calculus, which include the limit and continuity of multivariate functions as well as differentiability. The partial derivatives and multiple integrals are dealt with rigor. The course concludes on general vector calculus.

Pre-requisite MTS232

# MTS210 Regression Analysis and Experimental Design

Simple linear regression model is studied in detail. Inverse regression, general linear test and multiple

# Course Descriptions - Mathematics Courses

linear regressions are introduced along with some elementary Designs of Experiments. Computation is carried on by SPSS or SAS.

Pre-requisite MTS112

### MTS211 Discrete Mathematics

This course serves two purposes. It aims to introduce symbolism and logic while treating the subject of discrete mathematics at a sophomore standard. Topics at a glance include Logic, Discrete Sets, Functions, Algorithms, and their complexity, as well as Mathematical Reasoning, and Methods of Proofs.

### MTS212 Business Mathematics & Linear Algebra

Algebra of Matrices and matrix methods of solving systems of linear equations are taught in this course with particular emphasis on application to areas in business and management. Linear Programming Problem is taught as a tool of optimization in business and management. Some other mathematical models and tools of practical importance are also included in this course.

Pre-requisite MTS106

## MTS232 Calculus-2 & Solid Geometry

Concepts from calculus and geometry are integrated in this course. Topics include multivariate differential calculus and their applications. It is expected that students taking this course would develop a good understanding of how calculus might be employed for solving geometrical problems.

Pre-Requisite: MTS101

# MTS241 Introduction to Differential Equations

Focuses on the theory and applications of Ordinary Differential Equations (ODEs). Students will be introduced to the terminology, formulation and solution procedures for ODEs in the context of physical sciences

and engineering problem. They will be able to appreciate the scientific significance of applications and computational procedures for ODEs.

Pre-requisite: MTS101

### MTS301 Real Analysis

Topics include completeness properties of the real numbers, limits of numerical sequences, properties of continuous functions on closed bounded intervals, Point-wise and uniform convergences. This course aims to provide a pure grounding in Real Analysis, and therefore facilitates related courses such as Stochastic Processes.

(Pre-Requisite: MTS232)

### MTS302 Complex Analysis

This course complements the Real Analysis course MTS 301. It includes the algebra and the geometry of complex numbers, Cauchy- Riemann equations, and harmonic functions. Advanced topics covered expose students to Laurent series, uniqueness of representation, and zeros of analytic functions.

Pre-Requisite: MTS301

### MTS303 Advanced Differential Equations

This course exposes students to first order PDEs, the classification of second order PDEs, and their canonical forms. Then the standard diffusion, heat, and the wave equations in Cartesian, cylindrical, and spherical polar coordinates are treated. Students finish the course with skills acquired for modeling and solving important problems in a diverse application area.

Pre-Requisite: MTS241

### MTS304 Stochastic Processes

The course aims to impart the understanding and the appreciation of non-deterministic phenomena, and their mathematical treatment with an emphasis on credit-cri-

sis, stock movements in stock markets, dynamics of financial derivative prices as well as the dynamics of elementary particles.

Pre-Requisite: MTS202, & MTS301

### MTS305 Abstract Algebra-I

This is a pure mathematics Abstract Algebra course, and aims to develop the skills of recognizing mathematical abstractions. Purely abstract concepts such as groups, subgroups, generators, cyclic groups, cossets, and quotient sets are introduced first followed by permutations, symmetric, and alternating groups, rings, finite and infinite fields.

Pre-Requisite: MTS110

### MTS306 Abstract Algebra II

This course requires Abstract Algebra 1 as a pre-requisite. Topics in brief include: review of rings and fields, introduction to integral domain, ideals, prime, and maximal ideals.

Pre-Requisite: MTS305

## MTS411 Functional Analysis-I

This senior level Functional Analysis course deals with the following topics: Completeness; convergence and completion of metric spaces; Normed spaces; Banach spaces; Bounded and continuous linear operators, and functional dual spaces.

Pre-Requisite: MTS302

### MTS412 Functional Analysis-II

In brief, topics incorporate affine spaces, Banach spaces, and Hilbert spaces. Students who successfully finish this course are expected to apply the knowledge for further research in this and related fields.

Pre-Requisite: MTS411

## MTS413 Numerical Analysis

This course imparts the skills of numerical analysis and techniques for solving different problems.

Pre-Requisite: MTS232

### MTS414 Scientific Computing for Linear PDEs

Imparts the theoretical foundation as well as the practical implementation of some of the methods used for solving PDEs. The numerical solution of important PDEs, such as the Poisson and the Helmholtz PDEs is dealt with in this course.

Pre-Requisite: MTS303 & MTS413

### MTS431 Numerical Solutions of PDEs

Develops computational skills required for numerically solving partial differential equations (second order). Different discretization methods are introduced and different solution strategies, some for linear PDEs and some for non-linear PDEs are built. Successful completion of this course implies having the skill-set required for direct numerical solutions of PDEs.

(Pre-Requisite:MTS306)

# MTS432 Integral Equations

Some of the major topics in this course include: Linear integral equations, Fredholm integral equations, Eigenvalue problems, Volterra integral equations, Singular integral equations.

## MTS433 Advanced Numerical Analysis I

Modern techniques of solving a system of linear equations, obtained from PDE discretization of various kinds are taught. Students taking this course should be able to contribute to the development of these iterative solvers as well as solve any consistent system of linear equations.

Pre-Requisite: MTS303 MTS301 & MTS413

## MTS434 Advanced Numerical Analysis II

This is an advanced course for the iterative solution of discretized Partial Differential equations of the second-order. The iterative solution technique taught here is Multigrid. Concepts related to solving PDEs on multiple resolutions that correspond to each other are built.

Pre-Requisite: MTS453

### MTS435 Differential Geometry

The course introduces the basic language of differentiable manifolds important in understanding geometric objects independent of any ambient space. On completion of this course, students are expected to have the basic tools of modern geometric methods applicable in modern physics.

Pre-Requisite: MTS241 & MTS301

## MTS437 Fluid Dynamics I

The study of fluid mechanics helps to understand many other aspects of engineering and applied sciences, for example food industry, energy conversion systems, and fluid control systems. Fluid mechanics deals with fluids either in motion or at rest. The aim of this course is to study the famous principles of classical mechanics such as Newton's laws of motion, conservations, and basic equations used in fluid mechanics.

Pre-Requisite: MTS303

# MTS438 Fluid Dynamics II (Pre-Requisite: MTS437)

This course follows Fluid Dynamics I and deals with Rheology and some of its properties like shear thinking and shear thinning viscoelasticity are discussed. Students are also taught geostrophic flow and Kelvin-Helmholtz instability.

Pre-Requisite: MTS437

# Course Descriptions - Mathematics Courses

# MTS441 Financial Mathematics with a Computational approach

An introduction to financial mathematics from a sufficiently elementary level to a computational level. Basics stochastic processes are introduced and market dynamics are connected to well-defined processes. Stochastic calculus is also taught in this course. Successful students will have the skills required for setting and pricing derivatives.

Pre-Requisite: MTS304 & MTS306

# MTS442 Computational Finance

Provides a systematic introduction to the development, analysis and implementation of numerical methods for solving financial problems.

Pre-Requisite: MTS441

# MTS443 Modern Algebra I (Galios Theory & Applications)

Galois Theory connects the theory of polynomial equations and group theory. The aim of this course is to impart a comprehensive and working knowledge of the classical field and Galois Theory from a theoretical and a computational perspective.

Pre-Requisite: MTS413

# MTS444 Modern Algebra II (Commutative Rings & Fields)

Commutative Algebra deals with the properties of commutative rings and modules. This course introduces commutative algebra and also present it in conjunction with homological algebra. Successful completion of this course implies the abilities required to work in core areas of mathematics such as algebraic geometry and algebraic topology.

Pre-Requisite: MTS443

# Course Descriptions - Mathematics Courses

### MTS445 Measure Theory I

Introduces the notion of abstract measure space and the corresponding integral. On completion students will be able to use the expertise acquired in the context of the analysis and probability courses.

Pre-Requisite: MTS301

### MTS446 Measure Theory II

An introduction to the theory of Lebesgue Integration. The course introduces the Lebesgue measure on R, and to show how this theory leads to the Lebesgue integral on R. On successful completion of this course students will be able to understand the manipulation of Lebesgue integrals using basic theorems.

Pre-Requisite:

## MTS447 Operations Research I

Operational Research is a discipline that deals with the application of advanced mathematical techniques to help make better decisions. The course introduces the key aspects of operations research methodology along with mathematical models, including transportation, network, linear and integer programming.

Pre-Requisite: MTS203

### MTS448 Operations Research II

This course is a follow up course of Operation Research I. It will cover topics such as network optimization models, branch-and-bound algorithm for combinatorial optimization and advanced integer programming.

Pre-Requisite: MTS447

# MTS451 Topology I

Topology is an important Mathematical Language, which plays a role in virtually all areas of modern mathematical inquiry. The course introduces topology, covering topics fundamental to modern analysis and geometry. Successful students will have the skills

required for advance courses like algebraic topology and differential topology.

Pre-Requisite: MTS301

### MTS452 Topology II (Differential Topology)

Differential topology deals with the extension of differential calculus to manifolds. The course provides basic tools with which to study manifolds and, as is the case with the best mathematics, gives proofs of results about familiar objects that are not easy to obtain by elementary means. Successful completion of this course implies the abilities required to work in the category of smooth manifolds.

Pre-Requisite: MTS451

# MTS506 Quantitative Methods for Decision-Making

One of the primal aims of the course is to give a thorough insight and understanding of fundamental statistical concepts in the context of social & management sciences, in particular economics and management problem situations. The objective of this core course is to make students critical consumers of statistical analysis using available software packages.

### MTS511 Advanced Real Analysis

Introduces the basic concepts of set theory and then gradually builds up preliminary concepts of real analysis such as real number system, sequence of real numbers, open sets and closed sets.

# MTS512 Measure Theory & Integration

This is a 3 credit hours course on Measure Theory designed for advanced graduate students of PhD Mathematics. The course treats Measure Theory in an abstract and a rigorous way. Additionally, some topics from Functional Analysis are also included, in order to understand the Measure Theory in its real spirit.

### MTS513 Topics in Algebra

An introduction to algebra through a study of group and ring theories. The course introduces the students to some of the basic ideas and results of group and ring theories through case studies.

### MTS514 Topics in Commutative Algebra

An introduction to the theory of commutative rings along with modules as main tool of representation in studying such rings. The basic homological characterization of modules are also introduced with the help of exact sequences that has many applications both in Algebra, Topology and Geometry in general, at an advanced level. Fractions and localizations are introduced with the intention of application-besides algebra-both in geometry and analysis where they arise naturally as germs of functions locally determining both the geometry and analysis, of which meromorphic functions on Riemann Surfaces is just a special case. The idea of Neothriannes is very important in obtaining strong results that has application in many branches of mathematics along with Hilbert basis theorem.

Pre-Requisite: MTS513

### MTS515 Advanced Numerical Analysis

This is a 3 credit hours course designed for a graduate degree in Mathematics. This course is basically Numerical Functional Analysis that deals with both theoretical and numerical issues of partial differential equations such as condition number, perturbation, spectral theory and also thorough treatment of some of the advanced methods for linear and non-linear systems.

### MTS516 Topology

A graduate level course, it prepares students for applications in mathematical analysis besides topology itself at advanced level. On the other hand algebraic

topology is introduced to help develop necessary tools for calculations involving invariants, and develop necessary background in dealing classification issues up to an equivalence.

## MTS521 Scientific Computing

Develops PDE based Problem-solving skills. The course takes on from basic level problem discretization, and carries on to a relatively advanced stage, such as developing and trying novel pre-conditioners for a discrete linear system. Successful students are expected to be fully capable of actually using computers to solve a wide variety of applied problems.

Pre-Requisite: MTS515

### MTS525 Stochastic Processes II

This course is a successor to Stochastic Processes I and requires participants to understand the basic stochastic processes, and probability space laws. Successful students are expected to understand continuous and discrete processes and to successfully apply this knowledge to solve applied problems.

Pre-Requisite: MTS304

## MTS529 Stochastic Differential Equations

Provides students with the background that they will require for stochastic analysis of financial derivatives, and developing exotic contingent claims later on. Sound comprehension skills for stochastic processes and equations are expected for successful completion

Pre-Requisite: MTS304

# MTS533 Integral Equations

This course emphasizes concepts and techniques for solving integral equations from an applied mathematics perspective. Material is selected from the following topics: Volterra and Fredholm equations, inverse scattering transform, and group theory. Examples are

taken from fluid and solid mechanics, acoustics, quantum mechanics, and other applications.

### MTS537 Mathematical Astronomy

Provides students with fundamental knowledge of the mathematical tools used in exploring positional astronomy. Starting with the basics of spherical trigonometry, it describes the various terrestrial and celestial coordinate systems and coordinates transformations. This course also explores the basic issues in celestial dynamics starting with Kepler's Planetary laws and the Kepler's equation.

### MTS539 Homological Algebra

Two approaches will be followed in this course: the first is taking Homological Algebra as a theory of a function of two variables, one abelian and the other non-abelian and the other approach is Grothendieck which converts the theory of a single abelian variable, leading to algebraic geometry in its range of applications.

Pre-Requisite: MTS513

## MTS541 Computational Algebraic Geometry

The main focus in this course is the computational aspects of algebraic geometry. Since many major calculations in algebraic geometry involve calculations only in the corresponding affine neighborhoods, major relevant ideas are all developed from scratch in context of affine algebraic geometry.

Pre-Requisite: MTS513

# MTS545 Applicable Modern Geometry I

Establish the transition from vector calculus in R^n to a more general setting, that of manifold, and show that the former is just a special case of the latter. This also helps to establish a deep and rich interplay between topology and analysis, especially when we do integration on manifolds.

# Course Descriptions - Mathematics Courses

Pre-Requisite: MTS511, MTS513, MTS516

### MTS549 Algebraic Geometry I

The primary object of study is the classical algebraic variety (or a pre-variety i.e. EGA) with affine varieties serving as its local model. For this course, a basic background in commutative algebra is assumed. However, to handle all algebraic instruments necessary for both local and global analysis of varieties, required details can be filled. Some intersection theory is included, in both affine and projective cases, to help student develop an appreciation for the advanced topics in the context of applications.

Pre-Requisite: MTS513, MTS516

# MTS551 Scientific Computing & Software C alculus-3

Same as MTS521 Scientific Computing.

## MTS553 Algebraic Cycles I

This course provides a rigorous introduction to the most important objects and concepts of algebraic geometry and number theory. At the end of this course students will be familiar with the concept of schemes and higher chow groups.

Pre-Requisite: MTS513

# MTS557 Arithmetic Algebraic Geometry

This is an introductory course on Diophantine geometry that deals with Fermat's equations as well as Diophantine equations and inequalities. At the end of this course students will be familiar with L-functions and zeta-functions.

Pre-Requisite: MTS513

# MTS561 Exploratory Data Analysis

Provides an understanding of the nature of scientific data and the subsequent need for statistical analysis

# Course Descriptions - Mathematics Courses

Students will enhance their statistical expertise and critical judgment in scientific studies, including an awareness of ethical issues in research and analysis.

## MTS565 Mathematical Physics I

The course includes the following topics: Complex Analysis, Ordinary Differential Equations, and Partial Differential Equations and Boundary Value Problems.

# MTS569 Statistical Data Mining & Knowledge Discovery

Statistical Data Mining and Knowledge Discovery bring together a stellar panel of experts to discuss and disseminate recent developments in data analysis techniques for data mining and knowledge extraction. This carefully edited collection provides a practical, multi-disciplinary perspective on using statistical techniques in areas such as marketing research, risk management, financial forecasting and classification, rule based systems in decision support systems, image and speech analysis, health informatics.

### MTS573 Statistical Machine Learning

Please see on website

# MTS577 Galois Theory

This course gives a detailed introduction to Galois Theory that starts with review of group action on a set and Sylow Theorem with its application. Students will understand the concept of field extension and Galois groups, and will also study separable and inseparable extensions.

Pre-Requisite: MTS513

### MTS621 Numerical Treatment of P.D.E

An introduction to numerical methods for hyperbolic partial differential equations. Successful students are

expected to be able to solve a wide variety of hyperbolic PDEs numerically.

Pre-Requisite: MTS515

### MTS625 Financial Mathematics I

Develops concepts of financial mathematics, mainly for pricing financial derivatives. Another aim of the course is to develop and re-visit stochastic calculus concepts applied to options and different exotic contingent claims.

### MTS629 Financial Mathematics II

Develops numerical methods for solving different PDEs related to mathematical finance. Tool-development in Matlab and C also forms a part of this course. Successful students are expected to be comfortable solving different finance problems related to pricing of derivatives.

Pre-Requisite: MTS515

## MTS637 Computational Astronomy

In this course advanced techniques of computations of the major celestial phenomenon based on positional astronomy are explored. The objective is to prepare students to compute details of astronomical events and phenomena independent of any commercial software. Pre-Requisite: MTS537

# MTS645 Applicable Modern Geometry II

This course goes beyond the study of the fundamental instruments of differential geometry of manifolds. Moreover, it investigates some of the algebraic and topological invariants associated with a manifold. After completing this course the student will be expected to use the techniques learned in theoretical physics, or pursue his/her studies further in differential geometry. Pre-Requisite: MTS545

### MTS649 Algebraic Geometry II

This course encompasses the basic ideas that form the basic language of modern algebraic geometry, the language of sheaves and schemes. A comprehensive introduction to Sheave Theory is developed to help students learn the basic tools required, in context of the Moduli Theory of sheaves on schemes.

Pre-Requisite: MTS549

### MTS653 Algebraic Cycles II

This course follows Algebraic Cycles I. It provides an in-depth knowledge of higher chow groups and additive higher chow groups.

Pre-Requisite: MTS549

### MTS657 Polylogarithms

This course can also be studied after Algebraic Cycles I. Students are familiarized with polylogs, infinitesimal and tangential versions of polylogs and their relations with the groups generated by geometric configurations.

Pre-Requisite: MTS557

### MTS661 Multivariate Statistical Analysis

Multivariate analysis arises with observations of more than one variable, when there is some probabilistic linkage between the variables. In some cases, it might make sense to isolate each variable and study it separately. In most cases, however, the variables are interrelated in such a way that analyzing the variables in isolation may result in failure to uncover critical patterns in the data. The construct of the course also includes computer assignments.

Pre-Requisite: MTS525

# MTS665 Mathematical Physics II

This is an advanced level course that builds the basic mathematical techniques to be used in exploring deeper issues in the theoretical and particle physics.

Pre-Requisite: MTS565

# Course Descriptions - Statistics Courses

### MTS671 Monomial Algebra

Monomial ideals are ideals in polynomial rings that can be described in combinatorial and geometric terms. These descriptions make monomial ideals quite accessible by allowing us to employ intuition and tools from discrete mathematics and geometry to study them. Pre-Requisite: MTS514

### MTS691 Topics of Special Interest I T

To be described by the supervisor offering the course.

### MTS692 Topics of Special Interest II

To be described by the supervisor offering the course.

## SCI105 Physics-I (Mechanics)

The course includes the following topics: Statics-Mathematics & Physics of Scalars & Vectors, Calculation of CM & CG, Newton's Law, Work Energy Theorem and its Application, A Brief Introduction to the Fundamentals of Relativistic Mechanics and Ouantum Mechanics, etc.

## SCI205 Physics-II (Electromagnetism)

This course covers elementary topics in Vector Analysis, namely Electrostatics, Magnetism and Induction.

# MTS461 Nonlinear Dynamics and Chaos

This first course in nonlinear dynamics and chaos is aimed at upper-level undergraduate. We will use analytical methods, concrete examples and geometric intuition to develop the basic theory of dynamical systems. Starting with first-order differential equations and their bifurcations, followed by phase plane analysis, limit cycles, and their bifurcations and culminating with the Lorenz equations, chaos, iterated maps, period doubling, re-normalization, fractals, and strange attractors and mathematical modeling of real world problems.

### MTS581 Smooth Manifolds

This course is an introduction to smooth manifolds and the tools used to do mathematics on smooth manifolds. The notion of Smooth manifold makes precise the concept of a space which locally looks like the usual Euclidean space Rn. Hence, it generalizes the usual notions of curve (locally looks like R1) and surface (locally looks like R2). This course consists of a precise study of this fundamental concept of Mathematics and some of the constructions associated with it: for example, much of the infinitesimal analysis (i.e., calculus) extends from Euclidean space to smooth manifolds. On the other hand, the global analysis of smooth manifolds requires new techniques and even the most elementary questions quickly lead to open questions. Thus this course will lead the students to study further Riemannian geometry, general relativity and complex manifolds.

Pre-requisite: MTS516

### MTS662 Analysis on Manifolds

Course Description: This course continues from Analysis, in the direction of manifolds and global analysis. The first half of the course covers multivariable calculus. The rest of the course covers the theory of differential forms in n-dimensional vector spaces and manifolds.

### MTS 655 Algebraic Curves

This course is in fact an introduction to algebraic geometry. The main objective of the course is to present some of the basic concepts and techniques of algebraic geometry, with an emphasis on how these specialize to algebraic curves. A secondary objective is to illustrate some of the links between algebra and differential geometry in the study of the geometric properties of algebraic curves.

### STATISTICS COURSES

### STA601 Linear Statistical Models

Focus is on theory of the Gaussian linear models with applications to illustrate and complement the theory. The theory and applications of standard tests and estimators in multiple regression and ANOVA models are covered in detail. The course then covers tools for judging the failure of model assumptions, residual diagnostics, model selection and transformations.



# **Course Descriptions - Statistics Courses**

### STA602 Generalized Linear Models

An overview of generalized linear models, which extend the linear modeling framework to allow response variables that are not normally distributed. The course first reviews the general linear model with continuous response and considers its restrictions, motivating the development of generalized linear models (GLMs).

## STA603 Advanced Probability Theory

An introduction to the elements of advance probability theory. The course starts with the description of random variables, expectations and independence and convergence concepts. Then spaces of Probability measures and characteristic functions are discussed.

#### STA604 Stochastic Processes

An advanced treatment of random functions, with emphases on extending the limit theorems of probability from independent to dependent variables, and also on generalizing dynamical systems from deterministic to random time evolution. Familiarity with advance probability is required, but the course will emphasize on developing a sound and intuitive understanding of the material.

### STA605 Advanced Statistical Inference

The approaches to Statistical inference i.e. frequent and Bayesian are introduced. The decision rules and criteria for decision rules, minimax are discussed.

### STA606 Multivariate Statistical Analysis

Covers the Statistical principles and techniques of multivariate Statistics. Estimation, an inference for the mean vectors for multivariate data are introduced and several associated tests are discussed e.g. Hotelling.s T2 test, Wilks, Pilai-Lawley, Roys tests, etc.

### STA611 Time Series Analysis and Forecasting

This course introduces the fundamental Stationary and non-Stationary models and associated estimation, inference and diagnostic and forecasting tools for univariate and multivariate time series.

### STA612 Experimental Design and ANOVA Models

Aims to cover the models and techniques for the analysis of the data arising from the planned experiments. The basic building blocks of randomization, replication, local control, orthogonally are discussed.

### STA621 Statistical Machine Learning

Statistical machine learning merges Statistics with computational science, computer science, systems science and optimization. Machine learning and Statistics are one and the same discipline, with different communities of researchers attacking essentially the same fundamental problems from different perspectives.

# STA622 Statistical Data Mining and Knowledge Discovery

This course carefully provides a practical, multi-disciplinary perspective on using Statistical techniques in areas such as marketing research, risk management, financial forecasting and classification, rule based systems in decision support systems, image and speech analysis and health informatics.

### STA631 Classifications and Pattern Recognition

This course combines the statistical and computer science techniques for classification and recognition of patterns in complex data sets. The course starts with the discussion of linear classifiers, linear discriminant function for minimum mean square error, binary outputs, and perception learning algorithm. Nearest neighbor decision rules, convergence, finite sample considerations, use of branch and bound methods are covered next.

### STA632 Optimization Techniques

A variety of optimizing techniques covering linear and non-linear programming, transportation and assignment problem, network flows, branch and bound methods are covered. Simplex method, two phase method and Charnes. M-techniques are discussed.

### **STA641 Bayesian Statistics**

An introduction to the theory and application of Bayesian Statistical methods. The course begins with fundamental notions such as probability, exchangeability and Bayes' rule and covers topics such as one parameter models, the normal models, and posterior approximations with Gibbs sampler.



# Course Descriptions - Statistics Courses

### STA642 Reliability and Survival Analysis

Introduces the elements of reliability theory and survival analysis. The course starts with discussion of binary coherent structure, minimum, lower/upper bounds of reliability functions, bridge structure, closure properties of coherent structures of IFRA components and the concept of time order and random censoring are covered. Estimation and inference on several life distributions e.g. exponential, Gamma, Weibull, likelihood. The course then focuses on Life tables, failure rate, mean residual life, aging classes IFR, IFRA, NBU, NBUE, HNBUE. Semi- parametric regression for failure rate data, Cox's proportional hazard models with one and several covariates is also discussed.

# STA651 Non-Parametric and Semi- Parametric Statistics

This course presents the Statistical and mathematical principles and applications of smoothing techniques using non-parametric and semi-parametric methods. Non-parametric functions estimation for cross sectional data using kernel smoothing method is introduced. Several methods of non-parametric regression estimation are covered. The course then focuses on semi-parametric generalized regression models using the link function or index argument with generalized partial linear models, additive and partial additive models.

### STA652 Simulation and Re-sampling Methods

This course discusses the Monte Carlo simulation and re-sampling methods that allow researchers to explore and often relax both theoretical and statistical assumptions, to better exploit their data. These methods allow researchers to use computers and data as experimental laboratories for data analysis.

### STA661 Advanced Operations Research

Provides the knowledge of interior point techniques for linear programming problems including techniques that

constitute the alternative to Simplex point methods, especially for large-scale optimization.

### STA662 Stochastic Financial Models

This course introduces continuous financial time series concepts and their applications in derivatives pricing including forward and future contracts, arbitrage and hedging, options market, properties and stock option prices of both American and European options.

### **STA 671 Financial Time Series**

The course initiates with the discussion of returns and their empirical characteristics, measuring dependence between returns using correlation, Kendall's Tau, Spearman's Rho and tail dependence.

### STA672 Advanced Econometrics

This course covers the estimation and inference of single equation and multi equation regression models. The course briefly covers simple and multiple regression, and violation, implication and remedial of the assumptions of the classical linear regression

### STA681 Econometric Analysis of Time Series

Covers the econometric methods in the analysis of time series data. The course briefly covers univariate time processes and their mathematical properties. Tests of unit roots are discussed before moving on to vector auto regression, co-integration and error correction model.

### STA682 Longitudinal and Panel Data Models

An introduction to the applications of the longitudinal and panel data from many disciplines in which longitudinal data analysis is used. The heterogeneity and dynamic features of the data are also covered.

### STA691 Functional Data Analysis

Focus is on the theory and application of functional data analysis. The functional data analysis is about the

analysis of information on curves or functions. The course will cover the methodological aspects of functional data analysis.

### STA692 Functional Time Series Analysis

An introduction to the analysis of functional time series in which are curves observed sequentially in time, e.g. curves formed by annual death rates as a function of age, or annual fertility rates as age etc.



# **Contact Information**

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# **FALL 2016**

		Ju	ly- 20	16		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

		Aug	ust - 2	2016		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

	September - 2016										
Sun	Mon	Tue	Wed	Thu	Fri	Sat					
				1	2	3					
4	5	6	7	8	9	10					
11	12	13	14	15	16	17					
18	19	20	21	22	23	24					
25	26	27	28	29	30						

		Octo	ber -	2016		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

		1	Nove	mber-	2016		
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
ı			1	2	3	4	5
	6	7	8	9	10	11	12
ı	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			
ľ							

December - 2016									
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
				1	2	3			
4	5	6	7	8	9	10			
11	12	13	14	15	16	17			
18	19	20	21	22	23	24			
25	26	27	28	29	30	31			

# **SPRING 2017**

		Janu	ary -	2017		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

			Febr	uary -	2017		
Su	n	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3	4
5	5	6	7	8	9	10	11
12	2	13	14	15	16	17	18
19	)	20	21	22	23	24	25
26	5	27	28				

March - 2017									
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
			1	2	3	4			
5	6	7	8	9	10	11			
12	13	14	15	16	17	18			
19	20	21	22	23	24	25			
26	27	28	30	31					

		Ap	ril - 2	017		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

May - 2017										
Sun	Mon	Tue	Wed	Thu	Fri	Sat				
	1	2	3	4	5	6				
7	8	9	10	11	12	13				
14	15	16	17	18	19	20				
21	22	23	24	25	26	27	ı			
28	29	30	31				ı			

June - 2017							
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30		

# Gazette / Public Holidays 2016

Eid-ul-Fitr*	7, 8 & 9 July - 16	
Independence Day	14 August - 16	
Eid ul-Azha*	11, 12 & 13 Sep - 16	
Ashura*	11 October - 16	
Birthday of Allama Iqbal**	09 November - 16	
12 Rabi ul Awal	12 December – 16	
Birth Anniversary of Quaid e Azam	25 December – 16	

# Local / Optional Holidays-2016\*\*

Urs of Shah Abdul Latif Bhittai (14 Safar) **	15 November - 16		
11 Rabiull Awal**	11 December - 16		
APS Peshawar Holiday**	16 December - 16		
Death Anniversary of late Benazir Bhutto**	27 December – 16		

# Gazette / Public Holidays 2017

Kashmir Holiday	05 February-17	
Pakistan Day	23 March - 17	
Labor Day	01 May - 17	
Eid-ul-Fitr*	26, 27 & 28 June – 17	
Independence Day	14 August - 17	
Eid-ul-Azha*	6,7 & 8 September – 17	
Ashura*	29 & 30 September – 17	
Birthday of Allama Iqbal* *	09 November – 17	
12 Rabi ul Awal*	1 December – 17	
Birth Anniversary of Quaid e Azam	25 December – 17	

# Local / Optional Holidays-2017\*\*

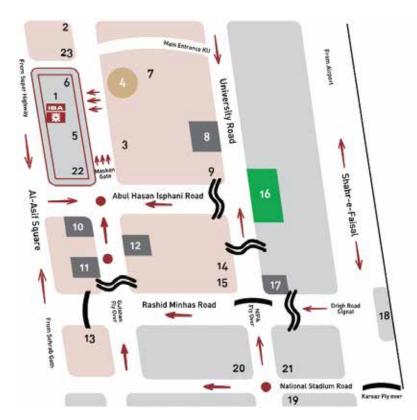
Local / Optional Honadys Lot /						
Death Anniversary of late Zulfiqar Ali Bhutto**	4 April - 17					
Holi**	13 March - 17					
Urs of Shah Abdul Latif Bhittai (14 Safar)	4 - November - 17					
11 Rabi ul Awal**	30 November – 17					
APS Peshawar Holiday**	16 December - 17					
Death Anniversary of late Benazir Bhutto**	27 December – 17					

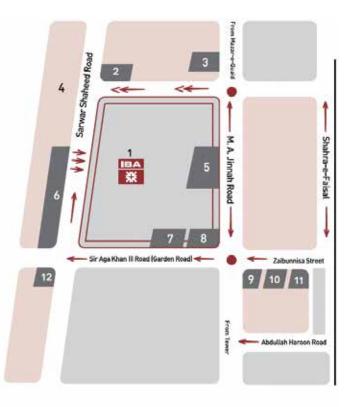
<sup>\*</sup> Subject to Sighting of the moon
\*\* Subject to receiving notification from Govt. of Sindh

# **Direction Map**

# **Main Campus**

# **City Campus**





- 1. IBA Main Campus
- 2. IBA Staff T own
- 3. IBA Boys Hostel
- 4. Cricket Ground
- 5. Commerce Department
- 6. Applied Economic Research Center
- 7. United Bank Limited
- 8. NED University
- 9. SGTC

- 10. Maskan Apartments
- 11. Disco Bakery
- 12. KFC
- 13. Oxford School
- 14. Petrol Pump
- 15. Nadeem Medical Centre
- 16. Safari Park
- 17. NIPA
- 18. Drigh Road T rain Station
- 19. Civic Center
  - 20. Hasan Square
  - 21. Expo Center
  - 22. Bhayani Heights
  - 23. HEJ
  - Traffic Signal / Square
  - Long Distance - Flyover Park / Ground

- IBA City Campus
- 2. OMI Hospital
- 3. Prince and Princes Cinema
- Headquarter Pakistan Coast Guard
   Nishat Cinema

- 6. APWA Building7. Pakistan Medical Association
- 8. Kandawala Building
- 9. Lyrics Cinema

- 10. Bambino Cinema
- 11. Star Cinema
- 12. Anklesaria Hospital



# The Karachi Edge

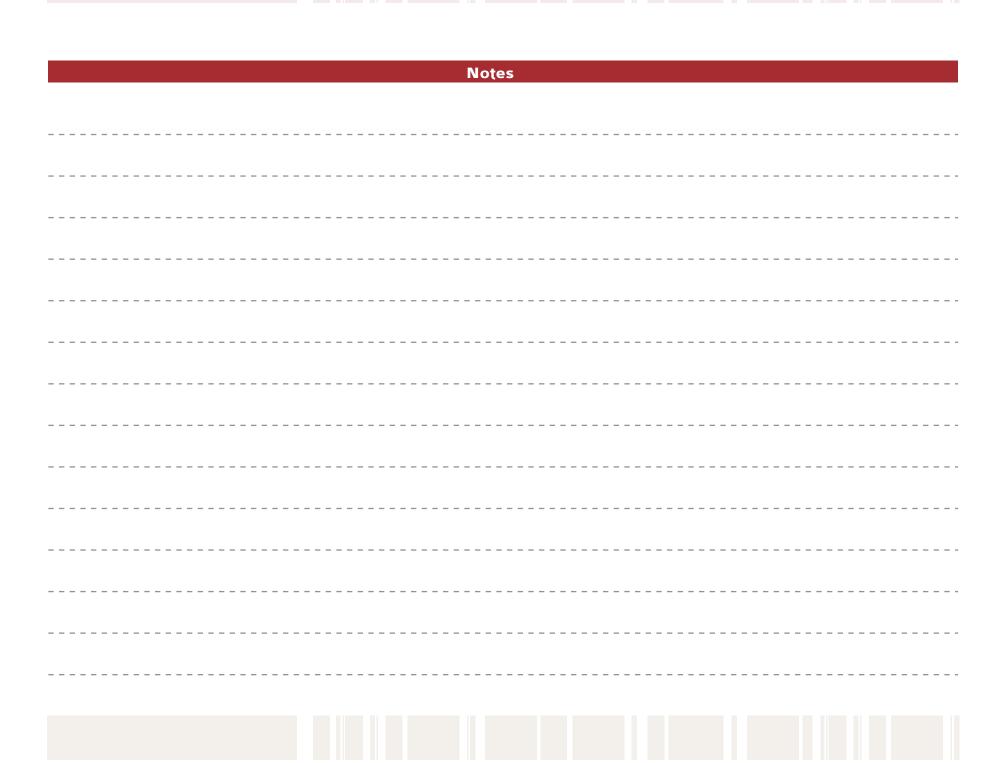


The City of Karachi encapsulates a multitude of cultures, nations, architecture, sight-seeing places, career opportunities and so much more. It is a standing monument to the efforts of the Father of the Nation, whose dream is now a reality and which we now live in today. The 3rd largest city in the world with regard to population and the 20th largest metropolis in the world, its flyovers, high rises and expansive roads present never-ending opportunities for ambitious and creative minds looking for innovation and challenges. While holding its glorious title as the gateway to Asia, the city generates 65% of the total national revenue and is the major port city of the country.

This industrial, financial and commercial powerhouse of the country has more than 600 listed companies on its stock exchange and is the headquarters of most of the local and multinational companies in Pakistan. It offers ample career opportunities in various market sectors including financial institutes, oil and petroleum industry, FMCGS, multinationals, telecommunication / media, television, production, publishing, software production, business and market research, education and tourism and so many more.

Looking for recreation? This city will not disappoint you. Bowling, go-carting, Cineplex, amusement and water parks like Aladdin and Dream world, gaming zones, boating, and crabbing: it's all here. The Arena offers you the best ice- skating, rock-climbing and swimming experiences while concerts, theatres and drive-in cinemas await to give you the movie experience of your life. That's not all. A city is incomplete without any landmarks of its history and culture and you will find plenty of these in the City of Lights. Top of the list is the white marble glory of the Quaid-e-Azam's Mausoleum. The most visited sight of all, this memorable place is home to hundreds of tourists who come to pay respects to the Father of the Nation and admire the beauty of the structure and the impressive change of guards. ceremony. In addition, you will find museums and art galleries like the Maritime, PAF and National Museums, the Fayzee Rahman Art Gallery, and Sadequain Gallery in Frere Hall, among others. And not to forget, the ancient and compelling splendor of the Mohatta Palace.

Finally, purely from a professional point of view, it is noteworthy that this city is a hub of local and international business organizations. All major employers of Pakistan are located in the City of Karachi, making it a perfect choice for a business school. IBA Karachi welcomes you to this extraordinary city and promises you the experience of your lifetime!



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