AERC

PROSPECTUS 2021

Applied Economics Research Centre
"Institute of National Capability in Applied Economics"
University of Karachi
Karachi

Sitting (LTR): Dr. Syed Faizan Iftikhar, Dr. Zeeshan Atiq, Dr. Asghar Ali, Dr. Mohsin Hasnain Ahmed, Prof. Dr. Pervez Wasim, Dr. Uzma Iram Prof. Dr. Samina Khalil (Director), Dr. Shaista Alam, Dr. Ambreen Fatima, Dr. Noman Saeed, Amir Hussain Siddiqui, Tehseen Jawaid.

Standing (LTR): Khurram Iftikhar, Syed Zia Abbas Rizvi, Faisal Sultan Qadri, Syed Kamran Abbas Naqvi, Syed Ammad Ali, Minhajuddin Siddiqui Nigar Zehra, Sadaf Majeed, Lubna Naz, Narjis Khatoon, Uzma Tabassum, Humera Sultana.

APPLIED ECONOMICS RESEARCH CENTRE
(Institute of National Capability in Applied Economics)
University of Karachi

VISION STATEMENT

The Centre for Applied Economics Research at the University of Karachi, Pakistan will be a leading academic organization dedicated to advancing, applying and facilitating high standards of interdisciplinary and applied economics policy / academic research and academic teaching (undergraduate / graduate / post graduate) for a wide variety of audiences within the university and across community, province and national / international areas.

MISSION STATEMENT

AERC is committed to enhance inter-disciplinary and *applied economics* research support to scholars and public agencies for research, and educational activities. The Centre conducts original survey research, qualitative data collection, and data analysis that inform scholarship and public policy decision-making. Objective research and consultation are provided through:

Partnership: Establishing and developing research relationships, both within the University and with external public policy makers, researchers, and not-for-profit agencies locally, nationally and internationally; and

Research Excellence: Designing and providing quality research by adhering to the highest ethical standards and best professional practices.

OUR GOALS

Our main goal in the light of development plan is expectations of changes to prepare our students to meet the new challenges of a dynamically, rapidly changing society. Impart knowledge, and build skills and attitudes which are most likely to provide our students with the means to be competitive in such an environment.

The research environment has undergone tremendous transformations in recent decades, pressured by scientific challenges and inherently complex societal and economic issues that call for solutions unconstrained by national boundaries. This requires the pooling of expertise from various sectors and the sharing of available resources. More than ever, the future of our societies hinges on creativity and the ability of all concerned actors to innovate.

APPLIED ECONOMICS RESEARCH CENTRE (AERC) OFFICIALS

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Dr. Uzma Iram	*Head of PhD Programme*	99261541-3	214
Dr. Syed Ammad Ali	*Incharge, GSP*	99261541-3	216
Dr. Khurram Iftikhar	*Incharge, GSP-Fall*	99261541-3	224
Mr. Muhammad Afaque	*Manager Accounts*	99261541-3	261
Ms. Anees Mabood	*Deputy Librarian*	99261541-3	249
Mr. Shehzad Mumtaz	*Manager Administration*	99261541-3	241
Mr. Mahmood Arif	*Computer Programmer*	99261541-3	237
Mr. Zeeshan Kifayat	*Graduate Program Officer*	99261541-3	260

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The Founder Director of AERC

Prof. Dr. Ehsan Rashid was an eminent economist, who laid the foundation of the Applied Economics Research Centre (AERC), an *Institution of National Capability in Applied Economics*, in 1973 and was appointed as its first Director. His visions and intuitions are embedded in research and teaching activities of the AERC, a leading institution of higher learning and research in the country.

Dr. Ehsan Rashid was a brilliant student at Aligarh University and proficiently accomplished a Master's degree in Economics, where he also taught for few years, as a Lecturer. His doctorate degree in Economics from the University of Bonn which he attained in 1956 was based on the Joseph Schumpeter's Theory of Innovation.

During his illustrious career Dr. Rashid held various posts of significance including that of the Vice Chancellor of the University of Karachi, Director of the AERC, Chairman, Department of Economics, and Reader at the University of Karachi. He devoted his life to the pursuit of knowledge and strived continuously for the autonomy and development of institutions in the country. His numerous contributions to both will never be forgotten.

Besides holding academic and bureaucratic positions, Prof. Dr. Ehsan Rashid was also a member of the Pakistan Institute of Development Economics, Chairman of Pakistan Economists, and Bankers Committee of Islamic Ideology Council. He was also appointed as Chairman of Pakistan Islamization Commission. His last appointment was as Rector of Islamic University, Islamabad.

As a son of a celebrated man of letters [Prof Rashid Ahmad Siddiqui], Dr. Ehsan Rashid was himself a sophisticated and widely-read man. His range of wisdom and knowledge can be judged by his proficiency in Persian, English and Urdu. At the age of 75, Prof. Dr. Ehsan Rashid departed from us on February 13, 2002.

Message from the Director, AERC

Applied Economics Research Centre (AERC), University of Karachi, is a unique research institute devoted to imparting post graduate level education on one hand and conducting, supporting, and encouraging academic and policy oriented research in applied economics and related disciplines on the other. We are performing research on various topics. We publish academic journal, research reports, opinion pieces, and newsletters to the public, and we also seek to exchange opinions with people from various fields through conferences, seminars and workshop.

As Director of the AERC, I envision our Institute as part of a vital strategy to invest in emerging research fields in applied economics and social sciences that may defy today's traditional academic classification.

Tomorrow's challenges demand innovative and unconventional approaches that cross or dissolve the boundaries of classic disciplines. I encourage the faculty in AERC to work on modern-day socio-economic and development problems that lie at the intersection of economic growth, sustainable development, emerging business economies / good and efficient governance. Our research should be notable for its breadth of scale with innovation and sustained excellence from Structural and Institutional Economics to Financial Economics, International and Trade Economics to Business Economics, Public Economics to Behavioral Economics, and International Political Economy to Experimental Economics, Environmental and Natural Resource Economics to Sustainable Development etc.

Today, AERC remains a vibrant and active teaching and research community with multiple areas of interests and expertise. We are home to more than 25 teaching and research faculty, and more than 100 graduate students pursuing MPhil and PhD degrees. Our diversity of expertise is matched by a shared culture of excellence and a common appreciation for interdisciplinary collaboration. In light of the recent, rapid changes occurring around the world, since 2013, our vision for our research needs to be "To conduct research which contributes to country's sustained and holistic development, with an eye on the global landscape."

It goes without saying that the source of pride for the AERC faculty is found in their ability to teach and carry out outstanding research and make contributions in the key research domains of applied economics and social sciences. However, at the same time, it also, is important to provide the society with information it can use along with advice on policy recommendations. We expected to play an active role in these areas as well. In fact, there are many opportunities for the AERC faculty to contribute to the management and development of contemporary society, both in the public and private sectors.

To achieve these goals, it is important that the faculty, researchers, administrator, and research support staff in the AERC work hard together as one while maintaining a high level of contribution to the public good, as well as, a high degree of originality in their respective research. I invite you to take some time to visit the AERC's website and learn more about our latest activities, research, achievements, and events. Even better, I encourage you to visit our institute in person, to meet our students and faculty and be inspired by their ambitions, creativity.

As Galileo once said, "All truths are easy to understand once they are discovered; the point is to discover them."

In the ever-increasing complexity of the modern world, it is becoming more and more difficult to find the truth. We, at the AERC will continue searching for the truth and endeavoring to aid our society and the global community through our academic activities.

Prof. Dr. Samina Khalil
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INTRODUCTION

INTRODUCTION

The Applied Economics Research Centre (AERC) was established in 1973, with initial funding from the Ford Foundation, USA, and the Provincial Government of Sindh. The AERC was recognized by the Higher Education Commission (HEC), Government of Pakistan as an *"Institution of National Capability in Applied Economics"*. The AERC has its own Board of Governors, with representation from federal and provincial governments, State Bank of Pakistan, FPCCI, Representatives of Syndicate, Academic Council of the University and members from other institutions. Since its inception, in 1973 the Centre has undertaken research on issues in applied economics, with special interest being focused in the areas of agriculture, human resources, urban and regional economics, and public finance.

The major functions of the AERC are policy-oriented core/academic research, contract research for national and international clients, postgraduate teaching, and to provide advisory services to various government agencies. The AERC undertakes research on issues in Applied Economics, with focus on urban and regional economics, agriculture economics, human resource development, public finance, poverty, health and nutrition, industrial economics, financial economics, trade, environment and gender issues. The research is based on primary data collection carried out by the AERC itself through surveys and analyses of secondary data from published sources.

Advisory services are being provided to Federal, Provincial and Local governments through participation of the AERC staff in various Advisory Bodies, Working Groups and Tasks Forces. To name a few, like State Bank of Pakistan, and other banks; financial institutions like Asian Development Bank, The World Bank, USAID, United Nations Organization, International Food Policy Research Institute, and many other private organizations have been the clients of the AERC, from time to time.

The Centre also undertakes the thematic research on specific issues and current problems. The Centre's research work is disseminated to policy-makers and interested audience through its publications in the shape of Research Reports and Discussion Papers Series. Moreover, an internationally-refereed bi-annual journal, viz., "Pakistan Journal of Applied Economics", is being published regularly.

TEACHING PROGRAMME

The teaching programme at the AERC started in 1976. It offers M.A.S. / MPhil /PhD degrees with approval from the Advanced Studies and Research Board (ASRB), University of Karachi. The coursework is intensive and spread over four quarters requiring the completion of 42 credit hours of study. The first quarter introduces students to economic theory and quantitative methods. Courses include Microeconomics, Macroeconomics, Econometrics and Mathematics for Economists. The second quarter's orientation is focused on advanced and applied economics and research. Courses cover advanced topics in Microeconomics, Macroeconomics, Econometrics and Development Economics. Third quarter covers topics of General Equilibrium and Welfare Economics, Issues in Pakistan's Economy, Applied Econometrics and Computer Applications, and Research Methodology.

A major component of the degree is training in special fields where students are able to apply the theory and quantitative techniques acquired in the programme to write a thesis. Candidates in the second year are required to write and defend their thesis in one of the special fields. Major areas of such research have been Public Finance, Urban and Regional Economics, Industrial Economics, International Trade, Agricultural Economics, Human Resource Economics, Project Evaluation, Finance and Monetary Economics, Environmental and Natural Resource Economics, Health and Nutrition and Islamic Economics, etc. The teaching programme aims to achieve high professional standard and graduates are readily accepted in research and teaching institutions, government departments, financial and other institutions.
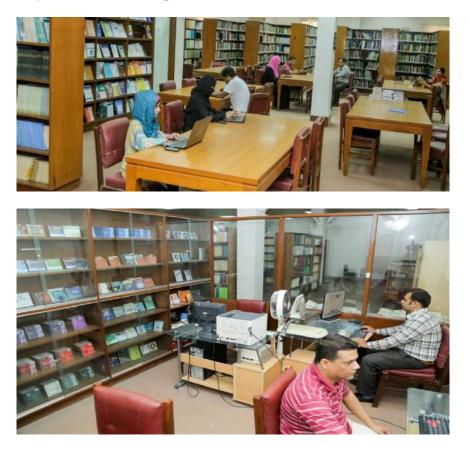
FACILITIES

CLASS ROOMS

Well equipped air conditioned class rooms and a well equipped separate room for PhD Students.

LIBRARY

The Centre maintains a rapidly expanding library in the field of economics with particular emphasis in areas of Economics related to its principal research interests, as well as, a wide range of materials used for the teaching programme. The library, currently subscribes over 359 periodicals in economics and social sciences.

The collection of books number is approximately 31,908. Included in the library is an extensive collection of the government of Pakistan publications which are used by researchers as a valuable source of data. The library has a large collection of working papers of international agencies like the World Bank, IMF, etc., and discussion papers series of universities abroad. The extensive collection of economics books and journals in the State Bank of Pakistan library is also available for use by the Centre's staff. The library has inter-library loan connection with other libraries in the country. The library has been awarded the status of a full depository of the World Bank, since 1995.

IT WING

The AERC has a fully operational computer cell which is equipped with a large number of latest computer models. The cell is intensively utilized for research and training purpose. A large number of software packages are available specially STATA, SPSS, SHAZAM, ESP, LIMDEP, EVIEW, GAUSS, MINI TAB, etc., which enable sophisticated statistical and econometric analysis and handling of large data sets. The Centre has specialized computer programming and data base management staff who are an integral part of research and training activities. A number of data sets on various aspects of the economy are available at the IT wing of the Centre. E-mail and Internet facilities are also available to the staff and students of the Centre.

COUNSELLING SERVICE

Experiencing a problem! Need someone to Share with!

There are times when it is extremely useful to share the problem with an impartial person. The Counselling Service at AERC provides a year-round service for general, academic and career guidance. The Counselling Service is completely confidential.

What issues you can discuss?
The answer is: whatever you want to discuss. However, some of the common issues include:

a)   **General Counselling**

- Anxiety and Depression
- Family Pressure/ issues
- Personal Issues

b)   **Academic Counselling**

- Teachers Conduct
- study related problems, including difficulties with writing, speaking and putting things off (procrastination) and perfectionism

c)   **Career Counselling**

- What options available
- Where most of the alumni are
- How to look for appropriate work

Confidentiality

The counselling unit keep all records highly confidential. This means any verbal or written information will never be disclosed without your permission. Counsellors keep brief handwritten notes on counselling sessions, your contact details and confidential information - stored securely within the Counselling Unit. All records are kept securely with access only available to members of the Counselling Service. Our records will never become part of student's academic, medical and employee records.

Counsellors

- General Counselling: Dr. Shaista Alam and Dr. Uzma Iram
- Academic Counselling: Dr. Ambreen Fatima and Dr. Asghar Ali
- Career Counselling: Dr. Asghar Ali

ADMISSION POLICY

Approved Rules for

Teaching Programme of the AERC
M.A.S. / M.Phil. and Ph.D.
Admission Policy and Criteria

M.A.S./M.Phil. Programme

Eligibility

Masters / 4 years Bachelors degree in Economics, Economics and Finance, Business Administration, Commerce, Mathematics, Statistics or related equivalent degree from the HEC recognized University / Institution with at least 2nd Division.

Applicant seeking admission on the basis of degree other than those awarded by the Public Sector Universities of Pakistan must submit the Equivalence Certificate issued by the Equivalence Committee of the University of Karachi.

Candidates awaiting their final exam results can also apply. They have to submit attested copy of final transcript before the commencement of 2nd Quarter. Devoid this, admission will be cancelled.

The eligible candidates are required to qualify an admission test (sample test papers are available on the AERC's website). GAT (Subject) conducted by NTS or GRE (Advanced Economics) Test scores in the last two years may be acceptable in lieu of the test.

Part-I: M.A.S.
Course Structure (Spring Programme)

Part-I of the MPhil programme (spring) extends over FOUR quarters of three months each. Following compulsory and optional courses are offered.

Course Number	Course Title	Course Number	Course Title
First Quarter (Compulsory)		**Fourth Quarter (any two optional)**	
701	Microeconomics-I	713-A	Agriculture Economics
702	Macroeconomics-I	713-C	Economic Finance
703	Econometrics-I	713-D	Industrial Economics
704	Mathematics for Economists	713-E	Islamic Economics
Second Quarter (Compulsory)		713-F	International Trade
705	Microeconomics-II	713-G	Public Finance
706	Macroeconomics-II	713-H	Project Evaluation
707	Econometrics-II	713-I	Urban Economics
708	Development Economics	713-J	Monetary Economics
Third Quarter (Compulsory)		713-K	Environmental & Natural Resource Economics
709	General Equilibrium & Welfare Economics	713-L	Portfolio Management & Investment Analysis
710	Issues in Pakistan's Economy	713-M	Microfinance
711	Applied Econometrics & Computer Applications	713-N	International Economics
712	Research Methodology	713-O	Health Economics
		713-P	Economic Though & Political Economy
		713-Q	Labor Economics

Note: Students are entitled to audit additional courses in the 4th quarter in consultation with the concerned teacher.

Part-I: M.A.S.
Course Structure (Fall Programme)

The Part-I of MPhil programme (fall) extends over FIVE quarters of three months each. Following compulsory and optional courses are offered.

Course Number	Course Title	Course Number	Course Title
First Quarter (Compulsory)		**Fifth Quarter (any two optional)**	
701	Microeconomics-I	713-A	Agriculture Economics
702	Macroeconomics-I	713-C	Economic Finance
704	Mathematics for Economists	713-D	Industrial Economics
Second Quarter (Compulsory)		713-E	Islamic Economics
703	Econometrics-I	713-F	International Trade
705	Microeconomics-II	713-G	Public Finance
706	Macroeconomics-II	713-H	Project Evaluation
Third Quarter (Compulsory)		713-I	Urban Economics
707	Econometrics-II	713-J	Monetary Economics
708	Development Economics	713-K	Environment & Natural Resource Economics
709	General Equilibrium & Welfare Economics	713-L	Portfolio Management & Investment Analysis
Fourth Quarter		713-M	Microfinance
710	Issues in Pakistan's Economy	713-N	International Economics
711	Applied Econometrics & Computer Applications	713-O	Health Economics
712	Research Methodology	713-P	Economic Though & Political Economy
		713-Q	Labor Economics

Note: *Students are entitled to audit additional courses in the 5th quarter in consultation with the concerned teacher.*

The optional courses offered, depend upon the availability of qualified faculty and minimum 3 students for one course. Thirty-six credit hours are earned through compulsory courses and the remaining six credit hours through optional courses. Optional course will first be approved by the Academic Committee of AERC and subsequently a seminar series on Issues in Pakistan's Economy in all four quarters as mandatory events for students. In exceptional cases, the Academic

Committee of AERC may grant credit transfers for comparable coursework elsewhere but only upon final approval by the University of Karachi's Equivalence Committee.

ATTENDANCE

i.   The attendance of students admitted in the AERC is reported / considered from the 1st day of the first quarter and not from the date of admission.

ii. If a student fails to attend classes continuously for two weeks, after the commencement of the first quarter, his/her admission will stand cancelled automatically without any notice.

iii. If a student is unable to attend classes continuously for 10 days or more without informing the concerned teacher and Incharge, Graduate Studies Programme (GSP) in writing, his/her admission will also stand cancelled. In case of illness or other similar situation, application along with a medical certificate from a registered medical practitioner duly verified by the Senior Medical Officer of the University of Karachi must be submitted within two days after the incident. All leaves except for medical reasons have to be approved by the Incharge, GSP, prior to availing it.

iv. Only those students who have a cumulative aggregate attendance of at least 75% in a particular course in each quarter are allowed to sit in the final examination.

v.   If a student has been ill and provides a medical certificate, he/she will be allowed to sit in the final examinations only if he/she has about 50% attendance in that particular quarter.

Continuation of Programme

Those students who fall sick and present medical evidence, may be granted permission by the GSC to continue the programme, if they desire so, and seek permission in writing. However, his/her stipend will not be released for the quarters for which they are short of attendance.

All coursework has to be completed within two academic years failing which the enrollment as MPhil candidate will be cancelled.

Passing Grades

Successful completion of coursework requires at least an overall average of 'B' grade [earning a minimum Grade Point Average (GPA) of 3 overall in all the fourteen courses and at least a "D" (or grade point equal to 1.00) in each course. If an overall average grade in the coursework is less than B, the candidate has the option to repeat one or more courses to fulfill this requirement. The courses selected for repeating will have to be approved by the Graduate Studies Committee (GSC) / Incharge Graduate Studies Programme. A student has to repeat a compulsory course in which he/she fails to obtain a minimum of 'D' Grade. However, in case of failure in any optional course, the candidate has a choice to repeat the same course (provided it is being offered) or opts for a new optional course. The candidate has only one chance / attempt to improve a grade which has to be availed within one academic year, following the original coursework. If a course is deferred due to any genuine reason e.g., sickness, the student has a chance to repeat it. GSC will judge the validity of reason of deferment. If a student fails to complete the coursework requirements of Part-I in two academic years, his/her admission will be cancelled.

GRADE POINT TABLE

Numeric Score	Alphabetic Grade	Grade Point
90 & above	A+	4.0
85-89	A	4.0
80-84	A-	3.8
75-79	B+	3.4
71-74	B	3.0
68-70	B-	2.8
64-67	C+	2.4
61-63	C	2.0
57-60	C-	1.8
53-56	D+	1.4
50-52	D	1.0
BELOW 50	FAILS	0.0

CALCULATION OF AVERAGES

A cumulative grade point average is calculated as an indicator of overall academic performance in the programme and is used as a criterion for academic progression, graduation requirements.

Grade Point Average (GPA) and a Cumulative Grade Point Average (CGPA).

Course	Credits	Letter Grade	Grade Points	Credits x Grade Point
701	3.0	A-	3.80	11.40
702	3.0	C	2.00	6.00
703	3.0	B+	3.40	10.20
704	3.0	A	4.00	12.00
Total Credits	**12.0**			**39.60**

CGPA = Sum of (credits x grade points) / Total number of credits attempted

Thus, CGPA =[39.60 / 12.0] = 3.30

FEE AND FELLOWSHIP (SPRING PROGRAMME)

i.   Candidates joining the programme are required to pay the Admission and Tuition fee.

ii.   **Admission fee** is **Rs. 5,000/-** (Five thousand only) payable to the 'AERC at the beginning of the programme.

ii.   **Tuition fee** is **Rs.4000/- (Four thousand only)** per month during the first year, payable to the AERC before the 10th of each month.

iii.   In addition, caution money of **Rs. 1,000/-** (refundable) is charged at the time of admission.

iv.   The above fee is in addition to the registration, examination, synopsis submission, thesis and viva voce examination fee payable to the University of Karachi, from time to time, during the study period.

v.   Position Holders and Need Based students are exempted from the tuition fee and may be eligible for a fellowship depending on their academic performance and Financial Needs. Out of station candidates may be provided an additional allowance.

vi.   Limited number of students may be eligible for out of station allowance (only for out of Karachi students).

vii.   For continued payment of fee waiver and stipend, student has to be a full-time resident student at the AERC. He/she must have a cumulative aggregate attendance of at least **90%**. Relaxation in this regard can only be made by the Incharge, GSP in consultation with the concerned instructor.

GOLD, SILVER & BRONZE MEDALS

The top three positions in the coursework of M.Phil programmme will be awarded with *TARIQ HASAN Gold Medal* for *1st position*, *Silver Medal* for *2nd position* and *Bronze Medal* with *3rd position* along with *certificates of merit*.

FEE STRUCTURE (FALL PROGRAMME)

i.   Candidates joining the programme are required to pay admission fee and tuition fee.

ii.   Admission fee is Rs.10,000/- (ten thousand only) payable to the 'AERC Fall Programme' at the beginning of the programme.

iii.   Tuition fee is Rs.12,000/- (twelve thousand only) per course, payable before the beginning of each quarter.

iv.   In addition, caution money is also charged i.e., Rs.10,000/- (refundable) at the time of admission.

v.   Repeater Students are also required to pay the prevailing tuition fee per course.

vi.   The above fee is in addition to registration, examination, synopsis submission, thesis and viva voce examination fee payable to the University of Karachi at different stages.

Employment Status

Qualified candidates have to submit an affidavit for non-employment. Incase if any candidate is in service (public/private), he/she must submit two years leave letter from the respective employer prior to joining the M.A.S / MPhil programme.

Note: This will not applicable to the fall programme students

PART-II
M.PHIL. PROGRAMME

Thesis Requirements

After successful completion of coursework, the candidates are required to present a research proposal before the faculty. Following this, the Incharge, GSP, in consultation with the candidate, will constitute a dissertation committee. This Committee will consist of at least two members not below the rank of Research Economist/Assistant Professor (with atleast MPhil degree), one of which will serve as the Principal Advisor (PA). The student is also required to show the progress of his/her work in consecutive seminar in the next years.

The PA must be a PhD and at least one of the Committee members must be from the Teaching and Research Staff of the Centre.

The thesis proposal together with the Committee's recommendations will be forwarded for consideration and approval of the ASRB, University of Karachi.

The thesis requires at least one year's study and research prior to its formal submission to ASRB, for evaluation. It will carry 12 credit hours. The candidate is required to submit seven copies of his/her thesis, which must be written in English, along with an abstract not exceeding 1000 words.

The thesis is examined by a committee of examiners which consists of two members of the candidate's thesis committee and one external examiner from outside the AERC. He/She has to be an expert in the subject. The external examiner gets appointed by the ASRB from amongst ten names which are recommended by the Principal Supervisor.

The candidate is also required to defend his/her thesis orally before a Defense Committee which consists of at least two of the above three examiners of the thesis and the Incharge, GSP as a non-voting member. The award of degree is contingent upon satisfactory report of the external examiner on the thesis and positive recommendation of at least two members of the Defense Committee, one of whom must be from outside the University of Karachi/AERC.

Duration of the Study

The maximum period of submission of MPhil thesis is five academic years. The period is counted from the date of admission at the AERC.

Residency Requirements

All MPhil students are required to do Part-I of the programme as full time students at the AERC. During Part-II, the residency requirements are regulated in accordance with advice of the Principal Advisor, in consultation with the Incharge, GSP.

Those candidates who are granted credit transfers are required to remain full-time students at the AERC for at least one academic year.

M.A.S. Degree Requirements

Those candidates, who complete all requirements of Part-I of MPhil but do not complete any requirement of Part-II, are entitled for the degree of Masters in Applied Science (M.A.S.) in Economics. However, this is based on written request of the candidate for a terminal M.A.S. degree and discontinuation of MPhil programme.

Fresh Admission on Expiry

Student of M.Phil can apply for a fresh admission on expiry of his/her admission on the recommendation of ASRB from the date of such expiry with the following conditions:

i.   The candidate needs to submit new admission form along with processing fee.

ii.   The candidate's Entrance Test/Interview and already passed coursework with 3.00 CGPA will be exempted.

iii.   The candidate has to submit admission fee etc. according to the current admission policy.

iv.   The candidate has to submit research synopsis, bibliography and 05 copies of one page abstract duly forwarded by the Research Supervisor, Chairman and Dean Concerned alongwith date of renewal of proformas issued by the Semester Examination Section.

v.   The candidate has to apply for new enrolment.

vi.   The duration of M.Phil will be minimum two years from the date of fresh admission. However, the duration of PhD. Candidate will be minimum three years from the date of fresh admission.

vii.   The candidate is required to submit synopsis immediately after Provisional Admission letter and if the candidate has already submitted synopsis, he/she will have to start research work.

viii.   First Time of Readmission, Coursework Exemption Fee Rs. 25000/- & Second Time of Readmission, Coursework Exemption Fee Rs. 50,000/- payable to AERC.

PhD. PROGRAMME

Requirements of Admission

Candidates possessing M.Phil degree in Economics from HEC recognized University OR M.Phil/MS (Economics) from reputed foreign University OR Equivalent degree (Need to provide equivalency certificate by Karachi University).

The eligible candidates are required to qualify an Admission Test and Interview.

PhD Degree Requirements

For the award of PhD degree in Economics, candidates have to complete all requirements of Part I and Part II, as specified below:

PART-I

Requirements in Part-I of the PhD programme consist of earning 54 credit hours through coursework which includes 42 credit hours of MPhil coursework. PhD candidate has to pass successfully, the four courses of three credit hours each from the following courses.

(Three of these i.e., Advanced Microeconomics, Advanced Macroeconomics and Advanced Econometrics are compulsory and one optional course. These courses are based on two semesters per academic year).

PhD Coursework (18 credit hours)

Course Number	Course Title
First Semester (Compulsory Courses)	
801	Advanced Microeconomics
802	Advance Macroeconomics
803	Advanced Econometrics

Applicants for PhD are required to pass the interview by a Committee.
Tentative Research Proposal / Concept Paper is called for the interview.

Second Semester (Optional Courses)

Courses offered in MPhil course work are also offered for PhD coursework as advanced version. Each student is required to develop a Research Proposal of six (06) credit hours for a national and international funding agency in consultation with the research supervisor.

Courses listed from 1 to 3 in the first semester are offered as compulsory, whereas all other are optional courses. The optional courses offered, depend on availability of the qualified faculty. Nine credit hours could be earned through compulsory courses and the remaining three credit hours through optional courses. Optional course first gets approved by the Academic Committee of the AERC and subsequently by the Board of Governors of the AERC, University of Karachi.

In exceptional cases, the Academic Committee of the AERC may grant credit transfers for comparable coursework elsewhere but only upon final approval by the University of Karachi's Equivalence Committee.

Passing Grades

A student should obtain an overall grade 'B' in all the courses. To obtain a minimum of 'C' Grade he / she is required to repeat a compulsory course, in which he/she fails, however in case of an optional course the candidate has a choice to repeat the same course (provided it is offered) or opt for a new optional course. The candidates have to repeat one (or more) courses if the average grade of coursework is less than 'B'.

Academic Committee of the AERC determines the equivalence and grants credit transfers for the coursework elsewhere in light of the rules and regulations of the University of Karachi.

All examinations will be conducted by the AERC.

Comprehensive Examination

On successful completion of coursework, the candidate will have to qualify written comprehensive examination in Microeconomics, Macroeconomics, and one fields of his/her choice. The candidate must pass all three papers (securing at least a **"C"** grade in each paper) and have an overall minimum average of **"B"** grade in PhD comprehensive exam. If a candidate does not earn an average **"B"** grade, he /she will be entitled to one more chance to appear at the said examination but only in subjects in which he/she has failed to earn atleast a **"B"** grade in the first attempt.

All examination will be conducted by the AERC.

Dissertation (22 Credit Hours)

The Doctoral Programme Committee (DPC) appoints a Principal Advisor from among its faculty members (if available) who provides main guideline to the candidate in his/her research; the supervisor could also be from outside AERC. Candidates are required to submit their field of interest to the GSP Office / Convenor DPC, who circulates it among the faculty members.

DPC then constitutes a Dissertation Committee. All members of this committee must have a PhD in Economics. The committee members ordinarily are from teaching and research staff of the AERC.

The dissertation proposal together with the Committee's recommendations is forwarded for consideration and approval of the Advanced Studies and Research Board (ASRB), University of Karachi. The candidate is then required to submit four copies of his/her dissertation which must be written in English, along with an abstract, not exceeding 1000 words.

The dissertation is examined as per ASRB Rules.

Fee Structure

Description	Amount (Rs.)
Admission Test Fee	2,500/-
Semester Fee (per six months)*	16,975/-
Caution Money	3,025

* Payable for a period of 03 years.

Employment Status

Qualified candidates have to submit an affidavit for non-employment. Incase if any candidate is in service (public/private), he/she must submit two years leave letter from the respective employer prior to joining the PhD programme.

Duration of Study

The minimum period for submission of PhD thesis is three years which begins from the date of admission in PhD programme. The maximum period for submitting the thesis is eight years failing which the candidate has to get an extension from the DPC / ASRB.

Residency Requirements

All PhD students are required to do Part-I of the PhD programme as full-time students of the AERC. During Part-II period, the residency requirement is regulated in accordance with advice of the Principal Advisor, in consultation with the Head of PhD programme / Convenor, DPC.

Fresh Admission on Expiry

After expiry of 08 years the student has to adopt the same procedure for fresh admission as mentioned in M.Phil. programme.

1. Microeconomics-I (701)

Understanding individual market, Consumer behavior and utility maximization. Application of the theory of choice; Exchange, expected utility and risk. The Economics of information; Production functions, Cost of production, Profit maximization and Alternative models of the firm. Perfect competition, Partial equilibrium models of competitive price, Information, Market adjustment and competitive equilibrium. Imperfect competition, Models of monopoly markets, Pricing in imperfectly competitive markets.

2. Macroeconomics-I (702)

National income accounting, Business cycles, Growth and inflation. Aggregate demand, Aggregate expenditure and income, Money and interest rate, Monetary and fiscal policy. Aggregate supply; Labor market, Unemployment, Capital and economic growth. Inflation, Interest rate and Exchange rate, Public and Private deficits and debts. Topics in New macroeconomics, Economics of Keynes, New classical and New Keynesian.

3. Econometrics-I (703)

Review of Basic Statistics: Descriptive Statistics Measures of Central Tendency & measures of Dispersion, Presentation of Data, Inferential Statistics, Normal Distribution, Probability Theories, Permutation, Combination, Additive Rule of Probability, Conditional Probability, Multiplicative Rule of Probability, **Introduction to Econometrics**: Some Basic Concepts, Linearity in the Variable & in the Parameters, Population Regression Function (PRF), Sample Regression Function (SRF), **Two Variables Regression Analysis:** The Problem of Estimation, Method of Ordinary Least Squares (OLS), The Classical Linear Regression Model, Properties of Least Squares Estimators, Coefficient of Determination (R^2), Method of Maximum Likelihood (ML), Point & Interval Estimation, Hypothesis Testing, Analysis of Variance, Extension of the Two Variables Linear Regression Model, Regression through Origin, Coefficient of Determination for Regression through Origin, Scaling and Units of Measurement, Functional forms of Regression model, **Multiple**

Regression Analysis: Assumptions of the model, OLS Estimation, Properties of OLS estimators, Maximum Likelihood Estimators, The Multiple Coefficient of Determination (R^2), Hypothesis Testing, Testing the Overall Significance, Analysis of Variance, Testing of appropriate functional form.

4. **Mathematics for Economists (704)**

Graphical Representation; Straight Line, Non-Linear Curves, Quadratic Curves. Matrix Algebra; Determinant of a Matrix, Properties of a Determinant, Inverse of Matrices, Solution of Simultaneous Linear Equations, Characteristics Roots and Vectors of a Matrix. Differential Calculus; Limits, Derivatives, Rules of Differentiation, Higher Order Derivatives, Partial Differentiation, Optimization; Simple, Unconstrained and Constrained. Linear Programming; Graphical Solution, Simplex Method and Duality. Introduction to Integration, First Order Differential Equations, Higher Order Difference Equations.

5. **Microeconomics-II (705)**

Game theory; Pay-off matrix, Nash equilibrium, Equilibrium in mixed strategies. Properties of consumer demand system, Duality in consumer theory, Separable and additive utility functions, Duality and production. Estimation of consumer demand function Estimation of system of demand equations, The linear expenditure system, Estimation of production and cost functions, Uncertainty, Expected utility maximization, Risk and insurance, Modeling of tax evasion. Dynamic optimization; Multiperiod consumption, Investment theory, Exhaustible resources, Human capital.

6. **Macroeconomics-II (706)**

Advanced topics in macroeconomics. Recent issues and development in macroeconomic theory. Various macroeconomic models including the IS-LM and aggregate demand/aggregate supply framework, Tools of macroeconomics analysis to develop full understanding and to analyze critically various macroeconomics theories. Topics include income and interest rate determination, inflation, the underlying behavioral relationship embodied in consumption, saving and investment, and asset demand functions; Saving and investment in the open economy. Developments of business cycles, exchange rate determination, Economics growth and government behavior.

7. **Econometrics-II (707)**

Review of Simple Linear Statistical Model; Estimation, Statistical Inference and Prediction. General Linear Statistical Model; Model Specification and Estimation, Derivation and Interpretation, Statistical Inference and Functional forms. Data Problem; Collinear Economic Variables, Omitted Relevant Variables, Irrelevant Variables, Measurement Error and Dummy Variables Linear Statistical Model with a General Error Covariance Matrix, Heteroscedastic Errors, An Auto-correlated Error Model. Models with Discrete Dependence Variable, Model Choice and Specification Analysis.

8. **Development Economics (708)**

Development has been one of the liveliest and thought provoking areas in the Economics. Over the past two decades there have been advances in economic methods and economic theory, which have allowed Development Economics to reformulate some age-old questions. The objective of the course is to provide an in-depth understanding of the process of economic growth and development. A majority of the world's population lives on less than $2/day. The course is designed to better understand the lives of the world's poor. What are their lives like*? **Why do they remain poor? Specifically, what price distortions and market failures hinder their quest to improve their wellbeing? Is there scope for policy to help the world's poor? We do not get answers to these questions with anecdotes and abstract theory**. Rather, we will examine detailed survey data of the world's poor, and look at policies that have been attempted and evaluated scientifically. This requires a solid understanding of how to read and interpret statistics.
Issues in Development Economics: They are related to problems of growth and development in developing countries. Issues initiating with the origin of Development Economics in historical perspective: Western view of the non-Western world; approaches to development; Measuring international disparities; Evolution and causes of disparities; Patterns of development; Theories of growth (neo-classical and structuralism); Empirical analysis of growth determinant; poverty, Income distribution and development; Technology choice, Capital goods industry and technological capability; Trade policies; Governments and markets in post-war development experience.

9. **General Equilibrium and Welfare Economics (709)**

The Exchange Economy; The Edgeworth Box, Contract Curve, Pareto Efficient Allocation, Walra's Lane, Core of the Economy, Existence of Equilibrium, Equilibrium and efficiency and Welfare theorems. The Exchange Economy with Production. Aggregation of References, Social Welfare Function, Utilitarian and Rawlsian Social Welfare Function. Efficiency of Competitive Markets, Failure of Competition, Incomplete Markets, Information Failures. Public Goods, Implications of Private Provision, Efficiency Conditions, Free Riding, Demand Revelation as Lindahl Equilibriums. Public Choice, Choice Axioms, Aggregation of Choices. The Median Voter Principle. Types of externalities, Consequences of externalities, The Coase Theorem, Private Solution to Externalities, Public Remedies.

10. **Issues In Pakistan's Economy (710)**

Understanding of the key macroeconomics and regional issues confronting the country, its implications on the economy and possible remedial measures and /or available policy options for adequately addressing the issues. Identification of the critical issues in Pakistan's economy and discusses them in length, historical evaluation of the trends followed by key contemporary problems, public finance, international trade, industry, agriculture, human resource, poverty, taxation/tariff reforms, corruption, smuggling etc

11. **Applied Econometrics and Computer Applications (711)**

Empirical research in economics is based on the application of econometric techniques on the complex data sets available. An increasing number of alternative estimation approaches are available for the investigation of a problem. The overflow of data and estimation techniques make it difficult for a researcher to select the best modeling strategy. This course covers a range of econometrics techniques that are widely used in applied microeconomics, macroeconomics, financial economics, public finance and in other fields of economics. The course is aimed at preparing students for carrying out empirical research and gives emphasis on the relationship between economic models and observable data.

The course presents an advanced treatment of econometric principles for cross-sectional, time-series and panel datasets. Specifically, starting with the quick review of ordinary least square regression the course jumps to

Two Stage Least Square Regression (TSLS), Instrumental Variable (IV) Regression, Binary Choice Models, Discrete Choice Models (covering Order Probit, Bivariate Probit, Sequential Probit and Multinomial Probit Models), Limited Dependent Variable Models (covering Truncation, Censoring – Tobit and Heckman Selection Models), Time Series Analysis (covering VAR and ARDL techniques) and Panel Data Models (covering Least Square Dummy Variable Regression, First Difference, Fixed and Random Effect Models). In addition to these some issues concerning repeated cross sectional datasets (Pseudo Panel Technique), Generalized Method of Moment (GMM) and Economics for Evaluation are also covered at this level.

An econometrics project or a term report is required to accomplish the course. The project is designed to provide an opportunity to each student to do applied econometric analysis and to evaluate students' ability to do so.

12.   Research Methodology (712)

Research process and scientific methods applied to problems, in Economics, Selection and definition of problem. Review of related literature, Formulation and statement of hypotheses. Preparation and evaluation of a research plan, Sources of data, Selection of sample, Sampling procedure, Questionnaire design, Field organization for collection of primary data, Data analysis and interpretation, Descriptive statistics, Inferential statistics, Preparation of research report.

Optional Courses

1.   Agriculture Economics (713-A)

The role of agriculture in the development process. Theories explaining agricultural development.   Sources of agricultural growth process. Production and profit functions for agricultural outputs and production. Farm and water management. Optimization analysis and applications to agriculture.   Risk analysis.   Agricultural pricing policies and supply response functions.   Agrarian structure and land tenure and Agrarian development process. Tenancy and agrarian reforms. Role of cooperatives and provision of physical and social infrastructure for the development of the agricultural system.

2. **Economic Finance (713-C)**

   Introduction of Financial system, Consumption and investment, Investment decision, utility theory given uncertainty and choices involving risk. Portfolio selection for investment purposes in the form of securities or productive facilities. Capital asset prices, Equilibrium in a Capital asset market, Theory of optimal investment decision, Cost of capital and the theory of Firm. Market imperfections, Agency problem and Capital structure, Dividend policy, Growth and the valuation of shares, Dividend and taxes. The effects of personal taxes and dividend on capital assets prices – Theory and Empirical Evidences. Pakistan Financial System, Financial reforms in context of developing countries – Capital Market Development, Portfolio choice and new commodities – Various Studies and Experiences.

3. **Industrial Economics (713-D)**

   Concepts and tools of Industrial economics; Firm existence, Determinants of size and structure, Sources of finance, Ownership and control. Theories of firms; Statics, Growth and behavioral theories. Investment decisions, Advertising decision. The structure-conduct-performance framework; Industrial concentration, costs, Barriers to entry, and product differentiation. Market structures and profitability, Innovation and advertising is privatization and deregulation. State Industrial Policy; Competition Policy, Restructuring Policy and De-industrialization.

4. **Islamic Economics (713-E)**

   Quranic concepts of scarcity, wants and postulates of human behaviour. Islamic values, like Adl, Ihsan, Social justice, equality trusteeship. Islamic institutions, Zakat, Infaq, Nafaqat, Inheritance, property rights, lending and borrowing, Mudarbah and Musharkah, Social security, speculation, land ownership, tenure Ushr, share cropping and profit sharing. Role of markets in determination of factor prices, and its distribution between capital and entrepreneurship under Islam. Islamic regulations with regard to various market structures. Review of earlier Islamic economic systems. Analysis of economic functions of an Islamic state and major instruments to perform these functions. Islamic economics related to elimination of Riba, and Riba-e-fadl; re-organisation of stock markets, indexation, inflation, unemployment and pricing of capital.

5. **International Trade (713-F)**

Importance of International Trade, International Trade and the Nation's Standard of Living, Why nations Trade? What is the basis of trade? What are the gains from Trade? Who gains from trade? International Trade Theories: Mercantilist view, Theory of Absolute Advantage, Law of Comparative Advantage, Construction of Production possibility frontier under constant opportunity cost and under increasing opportunity cost, The Heckscher-Ohlin model, and augmented Heckscher-Ohlin-Samuleson models, Leontief Paradox. Modern Theories of Trade. International factor movements and multinational corporations. Demand and Supply, Offer Curves and Terms of Trade: The equilibrium-Relative Commodity Price with Trade: The partial Equilibrium Analysis, Offer Curves, Derivation and Shape of Offer Curve of Nations, The equilibrium-Relative Commodity Price with Trade: The General Equilibrium Analysis, Relationship between General and Partial Equilibrium Analysis, Terms of Trade. Economies of Scale and International Trade, The Welfare Gains from Trade, Economic Growth and International trade: Growth and Development over Time, Trade Theory and Economic Development, The Contribution of Trade to Development, The Terms of Trade and Economic Development, Trade Liberalization and Growth in Developing Countries, Current Problems Facing Developing Countries. Economic Analysis of tariffs and non-tariff barriers. The measurement of protection. The political economy of trade policy, transition and economic development. The theory of economic integration. Regionalism and multilateralism. The General Agreement on Tariff and Trade (GATT), Role of WTO in International Trade.

6. **Public Finance (713-G)**

Theory of taxation, Public expenditure, Theory of public goods and externalities. Background relating to the taxation structure of Pakistan along with a description of each major tax sources. Theory of taxation and economic efficiency, Incidence of taxes and optimal taxation. Elasticity and buoyancy of taxes, Revenue sharing, Impact of fiscal incentives, Tax evasion and black economy, The budgetary system of Pakistan and future directions of tax reforms and resource mobilization. State and Local Government.

7. **Project Evaluation (713-H)**

Philosophy and methodology of Project Evaluation – a branch of applied

welfare economics. Current knowledge of the economics of the public policy – what some have called "Social Cost Benefit Analysis". Working understanding of several analytical methods, that are being used increasingly as means of choosing among alternative investment options to guide national planners. Applications of economic theory to resources management problems with a view of assessing existing and alternative resource management policies. Techniques and methods in evaluating all varieties of government activities, including investment, in the economy.

8.   **Urban Economics (713-I)**

Historical and theoretical overview, Trends and development. Theory of urban residential location, Urban business location. Economic theory and housing, Demand and supply of housing, Low income housing in developing countries, Residential mobility and location behavior. Economics of transportation, Urbanization and planning in Third World, Rural urban migration, Urban informal sector in Third World. Urbanization and Environment.

9.   **Monetary Economics (713-J)**

The role of money in an economy. Functions of money as unit of account, store of wealth and standard or deferred payment. Commodity money and fiat money. Legal tenders, credit money, banks and other financial intermediaries. The transactions demand for money. The Quantity theory as a theory of transactions demand. Dependence of transactions balances on transaction costs and interest rates. Money as an asset. Uncertainty and risk aversion and portfolio balance. Monetary neutrality and super-neutrality. The welfare costs of inflation and hyper-inflation seignior age and indexation. Budget deficit, inflationary finance and stabilization policies. The principles of financial intermediation, Banks and non-bank financial intermediaries. Controlling the supply of money. Monetary models. Real business cycle theory and stylized facts. Transmission mechanism of monetary policies. Monetary policy and Central bank independence. The term structure of interest rates. Money, interest rates and exchange rates. PPP, price levels and exchange rates. Output and exchange rates. Fixed exchange rates and currency crises. History of exchange rate systems.

10.   **Environmental and Natural Resource Economics (713-K)**

What it Environmental Economics, its economic analysis. The design of

environmental policy, cost and benefit analysis of environment, environment and growth, the environment as an economic and social asset, types of pollutants. Analytical tools including aggregate demand willingness to pay, the equi-marginal principal, marginal cost and supply, economic efficiency and equity, market and social efficiency and equity, market and social efficiency, external costs and benefits, pollution damages and a general model of pollution control, abatement costs, the efficient level of emission, enforcement costs.

The equi-marginal principle applied to emission reductions, environmental analysis, frame work of analysis including impact analysis, cost effectiveness analysis, damage assessment, risk analysis, direct and indirect methods of willingness to pay, opportunity cost of single facilities, cost of social regulation, environmental policy including efficiency, fairness, enforceability and government failure laws, property right moral suasion, command and control strategies, incentive based strategies, such as emission charges and subsidies, economic development and the environment.

11.   **Portfolio Management & Investment Analysis (713-L)**

This course introduces the theory and practice of investment analysis and portfolio management. Specifically the course surveys various quantitative applications and asset valuation models and their use in constructing profitable investment portfolios. Topics include designing portfolios, risk diversification, market structure and market efficiency, security valuation models, setting investment goals and policies, equity and fixed income portfolio strategies and portfolio performance.

12.   **Microfinance (713-M)**

Rationales for intervention in credit market: Rationale for intervention, agency problem, moral hazard. The roots of microfinance: ROSCAs and credit cooperatives. Group lending: The group lending methodology, mitigating adverse selection, over-coming moral hazard, evidence on groups and contracts, limits to group lending. Gender: Why are women better consumers, why many impacts be greater when lending to women, gender empowerment. Measuring impacts: how microfinance affects households, the selection problem. Subsidy and sustainability: The "sustainability" approach versus the "public finance" approach. Cost and benefits of subsidies: The institutions: Importance of institutions attributes of good institution. Institutional types: formal financial institutions, semi

financial institutions, informal financial provider. Institutional growth and transformation, institutional capacity building. Managing Microfinance.

13.   **International Economics (713-N)**

The world is integrating in many ways through trade, finance, investment and migration flows. This process of integration is called Globalization. International Economics is the study of the structure and dynamics of globalization. Recent theoretical developments and empirical evidences indicate that international trade and factor flows are complementary. Therefore, the significance of International economics has increased as it studies these flows in an integrated manner.

14.   **Health Economics (713-O)**

Health economics is a field of study that applies the theoretical concepts and empirical methods of economic analysis to various issues throughout the health sector, ranging from understanding underlying insurer, provider and patient behaviors to evaluating various healthcare interventions. The purpose of this course is to develop/strengthen the student's ability to use economic concepts and theories to analyze health care issues and to inform decision making and policy development. Health is the most fundamental measure of economic progress. There is increasing interest in health and health care as well as the role of government in securing these. The course builds a theoretical framework which provides the tools for examining the main problems in the health care sector and the challenges faced in the design of public policy aimed at improving the delivery and effectiveness of health care.   The course will provide an overall understanding of the definitions of health and health care and will explore into the economic theories or models necessary to evaluate the efficiency of the market for, and the efficient allocation of scarce resources in, health and health care. Examples of possible topics to be covered are the nature of the market, supply and demand of health care services, asymmetries of information, analyzing medical care markets and economic evaluation. This course will also provide an analytical framework for the assessment and evaluation of the government interventions and the institutional environment for the national health care system and health policy from an economic perspective to inform decision making and policy development.

15. Economic Thought and Political Economy (713-P)

The economic thought and political economy, deals with different thinkers and theories in the subject that became political economy and economies, from the ancient world to the present day. It encompasses many disparate schools of economic thought. Ancient Greek writers such as the philosopher Aristotle examined ideas about the art of wealth acquisition, and questioned whether property is the best left in private or public hands. In medieval times, scholasticists, such as Thomas Aquinas argued that it was a moral obligation of business to sell goods at a just price.

The course of Political Economy most commonly refers to interdisciplinary studies drawing upon economics, sociology, and political science in explaining how institutions in Pakistan like political institutions, the political environment, and the economic system – capitalist, socialist, or mixed – influence each other. The Journal of Economic Literature classification codes associate political economy with three subareas: the role of government and/or power relationship in resource allocation for each type of economic system, international political economy, which studies the economic impacts of international relations, and economic models of political processes. The last area, derived from public choice theory and dating from the 1960s, models voters, politicians, and bureaucrats as behaving in mainly self-interested ways, in contrast to a view, ascribed to earlier economists, of government officials trying to maximize individual utilities from some kind of social welfare functions. An early and continuing focus of that research program is what came to be called Constitutional political economy.

16. Labour Economics (713-Q)

The course covers the recent advances in Labor Economics by emphasizing empirical applications. The aim is to introduce students to economic models of the labour market. The course will first discuss the theories of labor supply and demand and proceeds to analyze the equilibrium in labour market i.e. wage determination. The course also provides an intensive discussion on economic research analyzing human capital accumulation, wage inequality, wage differential, labour market discrimination, the effect of migration on labor market outcomes, incentive pay, the role of labour Unions and Government Legislation and Regulations – impact of policies such as minimum wage law and welfare reforms. It also highlights some macro issues such as labor productivity and unemployment. After completing this course, students will be able to describe the key concepts of labour economics, understand the structure of the labour market, analyze the models of the labour market to make predictions concerning the impact of public policy, and evaluate existing data related to these predictions.

RESEARCH AND TEACHING FACULTY

FULL TIME RESEARCH AND TEACHING FACULTY

Director and Research Professor

Prof. Dr. Samina Khalil,
PhD., University of York, U.K.,
MPhil (Economics of Developing Countries),
 University of Cambridge, U.K.
Areas of Interest: Environmental and Natural Resource Economics,
Sustainable Development, Governance and Institutional Economics,
Human Development, Poverty, Gender.

Senior Research Economists / Associate Professors

Dr. Shaista Alam,
Post Doctorate from University of Nottingham, U.K.,
PhD., University of Karachi, Karachi,
MPhil., AERC, University of Karachi.
Areas of Interest: International Trade, Energy Economics,
Econometrics, Applied Econometrics, Human Development
and Sustainable Economic Development.

Dr. Ambreen Fatima,
PhD., Nottingham University, U.K.,
MPhil., University of Karachi, Karachi.
Areas of Interest: Agricultural Economics, Gender and
Development, Labour Economics.

Research Economists / Assistant Professors

Minhajuddin Siddiqui,
PhD (candidate), AERC, University of Karachi,
M.A.S., AERC, University of Karachi.
Areas of Interest: Public Finance, Econometrics,
Poverty and Gender.

Dr. Uzma Iram,
Ph D., University of Kent, U.K.,
MPhil., AERC, University of Karachi.
Areas of Interest: Microeconomics, Health and Nutrition.

Dr. Syed Faizan Iftikhar,
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MSc., University of Karachi, Karachi.
Areas of Interest: Finance, International Trade and
Macroeconomics.

Dr. Asghar Ali,
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M.A.S., AERC, University of Karachi.
Areas of Interest: Macroeconomics, Development Economics,
Labor Economics, Education and Social Sectors.

Dr. Noman Saeed,
PhD., Jilin University, China,
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Areas of Interest: Public Finance, General Equilibrium and
Welfare Economics, Microeconomics.

Dr. Tehseen Jawaid,
PhD, University of Karachi, Karachi,
MPhil., AERC, University of Karachi, Karachi.
Areas of Interest: International Trade, Growth and Development,
Financial Economics, Economic Modeling.

Dr. Aamir Hussain Siddiqui,
Ph D Institute of Business Management,
MPhil., University of Karachi, Karachi.
Areas of Interest: International Trade, Globalization World Trade
Organization (WTO).

Dr. Faisal Sultan Qadri,
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MPhil., AERC, University of Karachi, Karachi.
Areas of Interest: Human Capital, Growth and Development,
Macroeconomics, Public Finance, Economic Modeling.

Dr. Syed Ammad Ali,
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MPhil., AERC, University of Karachi, Karachi.
Areas of Interest: Public Economics, Development Economics,
Applied Microeconomics.

Dr. Khurram Iftikhar,
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M.A.S., AERC, University of Karachi, Karachi.
Areas of Interest: Trade, Industry, Econometric**.**

Dr. Fouzia Sohail
PhD, AERC, University of Karachi, Karachi,
M.A.S., AERC, University of Karachi, Karachi.
Areas of Interest: Industrial Economics.

Dr. Syed Zia Abbas Rizvi,
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MPhil., AERC, University of Karachi, Karachi.
Areas of Interest: Development Economics, Public Finance.

Dr. Sadaf Majeed,
PhD , University of Karachi, Karachi,
MPhil., AERC, University of Karachi, Karachi.
Areas of Interest: International Trade, Macroeconomics,
Financial Economics, Economic Growth and Development.

Dr. Tehseen Iqbal,
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Areas of Interest: Monetary Economics, Macroeconomics.

Dr. Nigar Zehra,
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M.A.S., AERC, University of Karachi, Karachi.
Areas of Interest: Macroeconomics,

Dr. Syed Kamran Abbas Naqvi,
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M.A.S., AERC, University of Karachi, Karachi.
Areas of Interest: Microeconomics, Monetary Economics.

STAFF ECONOMISTS / LECTURERS

Syed Roshan Ali Shah,
PhD (candidate), AERC, University of Karachi, Karachi,
M.A.S., AERC, University of Karachi, Karachi.
Areas of Interest: Agriculture, Education, Health and Gender.

Sohail Javed,
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MPhil, AERC, University of Karachi, Karachi,
Areas of Interest: Labour Economics, Poverty and
Social Sectors.

Research Assistants

Humera Sultana,
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MPhil, University of Karachi, Karachi.
Areas of Interest: Labour Economics, Gender Development.

Lubna Naz, *(on study leave),*
PhD (candidate), AERC, University of Karachi, Karachi,
MPhil, AERC, University of Karachi, Karachi.
Areas of Interest: International Trade and Labor Economics.

Uzma Tabassum, *(on study leave),*
PhD (candidate), AERC, University of Karachi, Karachi,
MPhil., AERC, University of Karachi, Karachi.
Areas of Interest: Urban Economics, International Trade and
Development.

Narjis Khatoon, *(on study leave),*
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MPhil., AERC, University of Karachi, Karachi,
Areas of Interest: Labour Economics.

ASSOCIATE FACULTY

Dr. Hafiz A. PASHA
PhD, Stanford University, USA
Area of Interest: Micro Economics, Public Finance, Urban Economics

Dr. Shaghil AHMED,
Ph.D., University of Rochester, U.S.A.
Area of Interest: Monetary Economics, Growth, Trade, Econometrics.

Mr. Syed Mohammad ALI,
M.A.S., Applied Economics Research Centre, University of Karachi.
Ph. D. (candidate), University of Maastricht, Netherlands.
Area of Interest: Economic Growth, Productivity and Technological Change.

Dr. Abdul WAHEED
PhD, Nagoia University, Japan
Area of Interest: Economic Modeling, International Development, International Trade, Trade Liberalization

Dr. Naved AHMAD
PhD, Northeastern University, USA
Area of Interest: Economic Growth, Economics of Technological Change, Banking and Finance, Development Economics

Dr. Shamim Ahmed SIDDIQUI
PhD, University of Temple, U.S.A
Area of Interest: Islamic Economics, Macroeconomics

Dr. Zeeshan ATEEQ
PhD, Manchester University, UK
Area of Interest: Macroeconomics And Econometrics

Dr. Mehboob-ul-HASAN
PhD, Nagoya City University, Japan
Area of Interest: Islamic Economics

Dr. Aly Alp ERCELAN,
Ph.D., Vanderbilt, USA.
Area of Interest: Poverty, Development, Urban Economics, Microeconomics

Dr. Syed Akbar ZAIDI,
Ph.D Cambridge
Area of Interest: Political Economy, Social Sector Development, Health

Dr. Syed Waqar HUSSAIN
PhD, Georgia, USA
Area of Interest: Productivity Analysis, Public Finance, Growth, Econometric

Dr. Anjum SIDDIQUI
PhD, Simon Fraser University, Canada
Area of Interest: Macroeconomics, Monetary Economics, International Trade, Development Economics

Dr. Qazi Masood AHMED
PhD, University of Bath, U.K
Area of Interest: Public Finance, Macroeconomics

Mr. Haroon JAMAL
M.A.S, Karachi
Area of Interest: Econometrics, Poverty, Gender

Dr. Muhammad OMER
PhD, University of Groningen, Netherland
Area of Interest: Monetary Economics

ADMINISTRATIVE WING

Graduate Studies Programme (GSP) Staff

Zeeshan Kifayat
Graduate Program Officer

Ghazal Mukhtar
Assistant to
Graduate Program Officer

Syed Irfan Ali Shah
Assistant to GSP Office

Graduate Studies Programme (GSP) Office provides administrative support to **M.A.S./M.Phil./Ph.D.** Students, and maintain all the academic records. The office provides guidance in financial assistance, teaching assistance and, Coordinates with Advanced Studies and Research Board (ASRB), and Semester Examination Section (SES), University of Karachi.

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Manager Accounts

Laiq Ahmed Khan
Account Officer

Rais Ahmed
Account Officer

Administration Staff

Shahzad Mumtaz
Manager Administration

Sharafatullah Faheem
Human Resource Officer

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Ilyas Khan
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Pervez Kifayat
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Urma Ali
Assistant

Ammar Ozair
Assistant Publication

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Raqib Ahmed Khan
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P.S. To Joint Director

Amir Taj
Store Keeper/
Publication Assistant

Syed Askari Hassan Rizvi
Steno-Typist-cum-Computer
Operator

Muhammad Waqas
Assistant Machine Operator

PAKISTAN JOURNAL OF APPLIED ECONOMICS

INTERNATIONAL ADVISORY BOARD

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PJAE covers the applied research areas like agriculture, credit, finance, savings and investment, economic policies, education, health and nutrition, industry, manpower and employment, monetary and fiscal, population, rural and urban development, trade and aid, environment, transport and communication, water and power, etc. Papers with empirical work, which are helpful for policy making issues on the Developing Countries, are preferred. The target group of readers is the economists in academia, research institutions, government, etc., both local and international.

Editorial Objectives

Since its inception in 1982, the Pakistan Journal of Applied Economics aims to provide its readers a unique forum for exchange and sharing of information in the complex area of economics. The journal presents the social-economic problems, as expressed by economists, philosophers, political scientists, historians and business academics. It publishes original contributions on applied issues in micro and macroeconomics. The primary criteria for selecting papers are quality and importance for the field. Papers based on well-motivated research problems that make a concrete contribution to empirical economics or applied theory are especially encouraged. It particularly fosters quantitative studies; the results of which are of use in the practical field, and thus helps to bring economic theory, near to reality.

Editorial Criteria

We welcome those articles which are written by professional scholars in Economics. Some of the larger topics which fall within the purview of Applied Economics are as follows: Economics and Ethics, Economics of Education/Health Care, Socio-economic problems of developing countries, Environmental Problems, and Globalization.

Coverage

The Pakistan Journal of Applied Economics covers the complex economic areas, such as: Environmental and Natural Resource Economics,International Economics, Labor Economics, Finance, Money and Banking, Growth, Public Finance, Political Economy, Law and Economics.

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The Pakistan Journal of Applied Economics offers the wide-ranging studies of the economic systems. The journal is an invaluable resource for keeping academicians and practitioners, aware of new trends, theories and developments.
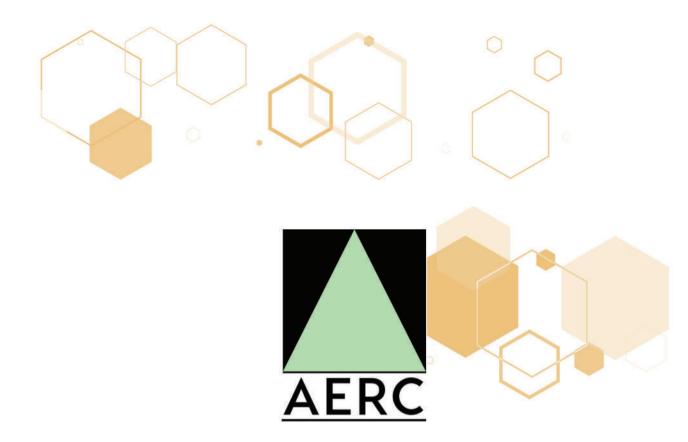
Key Journal Audiences

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