COMSATS University Islamabad

GRADUATE PROSPECTUS
2019-20

Disclaimer:

Every effort has been made to ensure that the information in this Graduate Prospectus 2019-20 is correct at the time of compilation. The COMSATS University Islamabad, however, reserves the right to make changes wherever and whenever necessary. In the event of inconsistency between the information contained in this prospectus and the University regulations or programs, or where an interpretation of the prospectus is required, the decision of the University shall be final. The prospectus does not form any part of a contract between any person and the Institute.

Graduate Prospectus 2019-20

Prof. Dr. Raheel Qamar, T.I.
Rector

Greetings from the Rector

Welcome!

Today's world is changing inexorably fast. Computing speeds are now measured in Xenottabytes (1 000 000 000 000 000 000 000 000 000 Bytes) and Yottabytes (1000 000 000 000 000 000 000 000 000 Bytes). So unless we fiercely strive to keep pace with these breakneck changes of the modern-day world we would soon find ourselves becoming irrelevant. As such, how we learn and respond to the changing world around us is going to be most critical for our future successes. A safe and secure future therefore belongs to those making it now, and choosing the right higher education institution is going to be a pivotal decision you will make at this stage of your life. I therefore warmly welcome you to COMSATS University Islamabad, popularly abbreviated as CUI, a vibrant and exciting home to around 35,000 students.

CUI is rather short on history, chartered only in 2000, yet by grace of Allah is quite tall on achievements which makes it a natural destination of choice for the aspiring students. It offers the right learning environment, where every CUI student receives a personalized, transformative, and well-rounded learning experience. CUI presents a happy blend of excellence in teaching, research and engagement. At CUI students not only earn a degree of their own choosing but also a unique and exceptional learning experience. With close to 100 undergraduate and graduate degree programs to choose from students are mentored by over 2,650 faculty members of whom close to 1,200 have doctoral degrees earned from around the world. In fact, CUI stakes its claim to have a highly internationalized faculty body on this count.

The strength of our academic programs mainly lies in their rigor and quality independently assessed and certified by both national and international bodies which continually rank order universities nationally, regionally, globally, and based on different knowledge domains. CUI's ranking badges are interspersed throughout this Prospectus. However, briefly the Higher Education Commission (HEC) of Pakistan has been consistently placing CUI amongst the top five best universities in the country out of a pool of close to 190 universities. Internationally Times Higher Education (THE) of London in its most updated rankings has placed CUI among the world's top 601-800 universities; in Asia at 131st position; in the subject domain of Engineering & Technology among world's top 301-400 universities; in the Computer Science and Life Sciences among the top 401-500 and in Physical Sciences domain among the top 501-600 pool of universities. Shanghai Rankings has also ranked CUI 1st in Pakistan in 2018. CUI has also been recipient of two Global Good Governance Awards which include 3G Excellence in Higher Education Award 2019, and 3G Award for Research Excellence 2018.

CUI's track record of its faculty research publications in the internationally abstracted journals has also been phenomenal given its very brief history. With a most modest beginning of just 172 research publications in 2005, within one decade CUI became the first ever Pakistani university to break the psychological barrier of publishing more than 1,000 research papers in calendar year 2015 in the country; then went on to producing 1,500 publications in 2016; and most recently scaled above 2,000 research publications in the calendar year 2017 and 2,200 in 2018. It has also won 9 research awards at 6th HEC outstanding Research award 2018.

Let me therefore welcome you and wish you the very best during your stay at one of CUI's seven campuses dotted across Pakistan!

Prof. Dr. Raheel Qamar, T.I.
Rector

Contents

Chapter 1: Introduction

Chapter 2: Campuses

Chapter 3: Admissions and Academics

***subject to approval from concerned statutory body**

CHAPTER 1
Introduction

Why Choose COMSATS University Islamabad?

COMSATS University Islamabad (CUI), a leading Degree Awarding Institution of higher education in Pakistan, is among the Centers of Excellence of Commission on Science and Technology for Sustainable Development in the South (COMSATS) www.comsats.org.

Established in 1998, CUI is one of the fast growing research - based institutions in Pakistan, with a wide range of academic programs (ranging from basic sciences to cutting edge emerging technologies) and a network of inter-disciplinary research centers making it an ideal place for higher studies leading to MS and PhD degrees.

Since its establishment, CUI has made multi-faceted growth in terms of campuses (currently it has eight fully functional campuses), number of students, faculty members, academic programs, research output, and public outreach, to accomplish its three-fold stated mission, i.e., Research and Discovery, Teaching and Learning, and Outreach and Public Service, which makes it a popular choice for undergraduate as well as graduate programs.

Quality of Research at CUI

The Institute has an excellent reputation for the quality of its research degree programs with 2,600 qualified faculty members, mostly with foreign qualifications to their credit. CUI faculty is committed to ensure that graduate students receive appropriate training and guidance to nurture their drive for innovation, creativity and skills to explore new horizons in their respective fields. The research activity within the Institute is vast and extends across the Faculties and Departments, often crossing traditional subject boundaries. Research activities cover both theoretical and applied research, as well as specific or contract research projects undertaken on behalf of outside bodies such as government, industry and research funding agencies.

To enhance research culture among the faculty, the Research and Development (R&D) Division was established at CUI in January 2005, realizing the acute shortage of highly qualified researchers and scientists. Since its inception, the R&D Division under the dynamic and visionary leadership of the Rector CUI is playing an active role to enhance and encourage the faulty to contribute and share in promoting the research activities by means of research papers, proposals, projects, etc. in all market-driven disciplines.

In March 2011, R&D Division was transformed into the Office of Research, Innovation and Commercialization (ORIC), to transmute pure knowledge into products and production processes with ultimate goal to uplift the research spectrum with more vibrant and strong stature. The mission of the ORIC is to establish a strong research culture, commercialization and innovation within a dynamic, efficient and effective team of scientists and researchers and to motivate them to play an active role to plan, strategize and to materialize the vision and mission of the CUI. Moreover, the ORIC welcomes and creates good working relationship with other higher learning institutions, industries and donor agencies especially HEC, PSF, British Council and ICT R&D Funds etc., to enhance initiatives regarding entrepreneurship, academic and research excellence. It also focuses towards achieving technological competitive edge and a world class status for the University.

To encourage and appreciate the graduate students for undertaking research, an incentive in term of “Cash Award” is offered for each publication. The incentive of doing

research is particularly important for young emerging faculty. To encourage the research graduates and young faculty, the CUI has established “CUI Research Grant Program” under which research grants up to Rs.500,000/- are available for research projects of short duration. CUI's faculty members are active in research in their respective fields and the total number of 11,361 research articles has been published by CUI faculty members till 2017. The year-wise detail of research publications is as under:

Year	Research Papers
2005	31
2006	97
2007	140
2008	183
2009	378
2010	383
2011	707
2012	603
2013	940
2014	907
2015	1,263
2016	1,500
2017	2,029
2018	2,200
Total	11,361

Summary of patents application filed and granted by the CUI faculty is as below:

#	Application No	Country	Patent No	Title
Granted Patents				
1	14/098067	US	91,679,71	Heart Murmur extraction and heart impairments identification using fuzzy controller
2	14/041978	US	91,692,21	Dihydro 1,4-Benzoxazines and method of synthesizing the same using Sulfonium salts
3	13/049843	US	93,404,34	Recovery of Nickel from industrial pickling acid solutions
4	13/918,407	US	94,488,05	Software controlled data prefetch buffering
5	11/953035	US	95,120,12	Novel sonoelectrolysis for metal removal
6	262/2013	PK	142414	A novel and efficient synthesis of Dehydro 1, 4-benzoxazines using sulfonium salts
7	14/536650	US	96,29,055	System and method for uninterrupted communication across black spots for multiinterface mobile nodes
8	14/844435	US	9,634,459	Generation of high power pulse-laser using field generated coherence
9	14/932195	US	9,758,377	Extraction of Hydroxyapatitle from fish scales employing Ionic liquids
10	15/683,989	US	10,096,469	Sn doped ZnS nanowires for white light source material
11	15/783,783	US	10,093,667	Novel Coumarinyl-Thiazole-Sulfonyl Conjugate and Preparation Thereof
12	296/2017	PK	142974	Novel Coumarinyl-Thiazole-Sulfonyl conjugate and preparation thereof
13	545/2015	PK	142836	Synthesis and application of Formaldehyde free Melanine Glutamate
14	307/2016	PK	143050	Bioelectrotrophic synthesis of polyhydroxyalkonates from waste molasses and carbon dioxide
Filed Patents				
01	13/918,431	US		Software controlled instruction prefetch buffering
02	154/2014	PK		Method for preparing PEGylated Protamine-Recombinant Human Interleukin-24 Nanoparticles
03	435/2014	PK		Drinking water alert test: An innovative solution to test pathogens in drinking water
04	641/2014	PK		Bio harvesting of greenhouse gases and renewable energy to biochemicals

5	424/2015	PK		Extraction of Hydroxyapatite from fish scales employing Ionic liquids
6	635/2015	PK		Nondestructive moisture measurement of signal wheat grain using substrate integrated waveguide cavity resonator
7	22/2016	PK		Catalyst driven optical properties of the self – assembled ZnS nanostructures
8	197/2016	PK		A Novel Compact Beam Scanning Leaky Wave Antenna
9	339/2016	PK		Quantum dots-based enzyme linked sandwich immunosorbent assay (QELISA) microfluidic device design for drug level monitoring
10	370/2016	PK		A Square shaped multi slotted 2.45GHz wearable antenna
11	377/2016	PK		FPGA based parameterized architecture implementation for SENSE (a Parallel MRI algorithm) reconstruction
12	378/2016	PK		Graphical Processing Unit (GPU) Implementation of Magnetic Resonance Fingerprinting (MRF)
13	379/2016	PK		GPU based Implementation of SENSE (a Parallel MRI algorithm) using Left Inverse Method
14	380/2016	PK		GPU based Implementation of SENSE (a Parallel MRI algorithm) using QR Decomposition
15	15/243,184	US		Synthesis and application of Formaldehyde free Melanine Glutamate
16	520/2016	PK		Sn doped ZnS nanowires for white light source material
17	617/2016	PK		Polymer Nanocomposite Comprising of Polyhydroxyalkanoates Reinforced with The Surface Modified/Functionalized Phyllosilicate
18	727/2016	PK		Biocompatible hemostatic water-soluble chitosan material and preparation thereof
19	15/401803	US		Method for the synthesis of catalyst self-doped ZnS nanostructures
20	GB1703656.7	UK		Wound healing medicament
21	134/2017	PK		A Frequency and Similar Digraph (FSD) based Urdu Keyboard
22	15/479,236	US		Tapered Microstrip Leaky Wave Antenna
23	15/587,064	US		Material and Preparation of Biocompatible hemostatic water soluble chitosan
24	15/619,096	US		Quantum dots based enzyme linked sandwich immunosorbent assay (QELISA) microfluidic device design for drug level monitoring
25	15/626,536	US		A Square shaped multi slotted 2.45GHz wearable antenna
26	15/626,760	US		FPGA based parameterized architecture implementation for SENSE (a Parallel MRI algorithm) reconstruction
27	15/627,605	US		GPU based Implementation of SENSE (a Parallel MRI algorithm) using QR Decomposition

28	15/629,412	US		Graphical Processing Unit (GPU) Implementation of Magnetic Resonance Fingerprinting (MRF)
29	15/629,500	US		GPU based Implementation of SENSE (a Parallel MRI algorithm) using Left Inverse Method
30	408/2017	PK		Colorimetric filter paper assay for rapid monitoring of cholesterol level
31	538/2017	PK		Post Quantum Cryptographic Communication Protocol
32	15/871,853	US		Post Quantum Cryptographic Communication Protocol
33	133/2018	PK		Wound healing medicament
34	PCT/GB2018/050579	PCT		Wound healing medicament
35	152/2018	PK		Injectable Chitosan Composite Materials Containing Thyroxin for Tissue Regeneration, their Preparation and Applications thereof
36	213/2018	PK		Epilepsy monitoring glove
37	228/2018	PK		One-step Dual Heater Based Flow Synthesis Setup for Synthesis of Inorganic Particles in Near Ambient Conditions
38	348/2018	PK		A surveillance system with enhanced Sound Receiving Method Integrated with Video Surveillance Equipment
39	15/991,572	US		Colorimetric filter paper assay for rapid monitoring of cholesterol level
40	378/2018	PK		One-step Single Heater Based Flow Synthesis Setup for Synthesis of Inorganic Particles in Near Ambient Conditions
41	394/2018	PK		Epilepsy monitoring ear device
42	490/2018	PK		Method for Making Capsule Shells using Regenerated Bacterial Cellulose
43	491/2018	PK		A Pro-angiogenic Gel and Method of Preparation Thereof
44	16/047,006	US		Synthesis and application of Formaldehyde free Melanine Glutamate
45	16/057,801	US		Sn Doped Zns Nanowires for White Light Source Material
46	642/2018	PK		A Microscope for High-pressure/Low-Temperature Micro spectroscopy in the broad spectral range
47	16/190,150	US		A surveillance system
48	769/2018	PK		Hydrogel dressing and preparation thereof
49	120/2019	PK		A composition comprising Auraptene, for Alcohol Withdrawal

Research Centers

For institutions of higher learning, the centers of excellence are symbol of pride and recognition. The centers represent the underlying strength in various disciplines to carry out world class research and development. The CUI has established following research centers and a few are in the developing stage:

- Center for Advanced Studies in Telecommunication (CAST)
- Interdisciplinary Research Center in Biomedical Materials (IRCBM)
- China Study Center (CSC)
- Center for Policy Studies (CPS)
- Business Incubation Center (BIC)
- Center for Climate Research and Development (CCRD)
- Center of Advance Drug Research (CADR)
- Energy Research Center (ERC)

Center for Advanced Studies in Telecommunication

Center for Advanced Studies in Telecommunications (CAST) has been developed with the aim to provide an interface between university-based telecommunication activities and regional telecom industry, IT industry, software developers, government, community groups and so on. CAST from its inception has been focused on developing strong industry links, with specific regard to the practical implementation and realization of telecommunication technologies. It provide service to society by promoting quality research in ICT by virtue of its highly competent faculty and staff, sate-of-the-art research facilities, synergistic relationships with regional industry and by providing an intellectually stimulating environment for problem – based research.

The Center also aims to conduct research and consultancy with an emphasis on application of knowledge in collaboration with government, industry, commerce, the professions and other community groups. Hence, CAST is a dynamic research Center drawing in talented researchers from all over the world and reacting rapidly to the changing technology. Undergraduate students can also undertake their final year projects under the supervision of the research scholars working in CAST.

Interdisciplinary Research Center in Biomedical Materials

The interdisciplinary Research Center in Biomedical Materials (IRCBM) was setup in 2008 at CUI, Lahore Campus as a center of excellence with multi-disciplinary approach to Biomaterials. The center works beyond the subject boundaries with the aim of transforming fundamental research to clinical care.

The scientists at IRCBM are carrying out research in the field of Bio-ceramics, Polymer Chemistry, Nanotechnology and Tissue Engineering. They are looking for new ways of

synthesizing novel bone fixation and bone replacement materials in order to improve the biological properties. Bio-performance is determined via in-vivo and in-vitro biological testing and some of Pakistan's leading surgeons are associated with the center.

China Study Center

The vision of this center is to promote China as the most significant geopolitical and economic partner of Pakistan. The mission of the center is to develop an understanding and appreciation of socio-cultural and economic intricacies pertaining to the peoples of Republic of China. The China Study Center at CUI seeks to promote Pak - China friendship; promote cooperation in scientific, economic, cultural, educational, and other related fields. The major activities of China Study Center are:

- To provide a critical interface for the University's relations with business, government and non - governmental institutions involved with China.
- To carry out and coordinate China related research projects within and outside the center.
- To arrange conferences, public lectures and workshops, develop media promotional strategies and work with various stakeholders to promote Chinese language and culture in Pakistan and collaborative initiatives in the scientific and economic fields.
- To provide customized consultancy services and training programs.
- To promote understanding through exchange programs of students, researchers and faculty.

Center for Policy Studies

Center for Policy Studies (CPS) was established to offer academic programs and research studies in policy areas which could benefit the government and society at large. The center intends to synchronize the expertise of the policy makers and practitioners with the academics and researchers. The center aims to play a supportive and advisory role for the policy makers by offering timely recommendations and policy alternatives duly supported by sound theoretical research and empirical surveys.

CPS plans to frame and offer timely, coherent and practicable responses on issues of public interest for policy makers through empirical research, in-depth analysis and consultative process with relevant stakeholders. It aims to bridge the gap between academia, Government, industry and civil society on various contemporary issues through a multi-disciplinary approach. Moreover, it will undertake short-term and medium-term training modules for capacity building programs in public and private sectors. The prime objectives of CPS are:

- To provide rigorous and multi-disciplinary research and policy prescriptions.
- To offer education for aspiring and practicing public policy professionals and citizens.
- To offer high-quality scholarly research for promoting public understanding of contemporary public policy issues like energy crisis, terrorism, governance issues, low technology based production and export profile, low tax to GDP ratio, low agricultural productivity, water and food security, climate issues, other natural and man-

made disasters preparedness etc.
- To create awareness about dynamics issues in Pakistan's neighborhood that impinges upon its security.

The CPS has already started functioning apart from launching Research Studies in a few important areas including climate change, impact of cellular phones on Pakistan's economy, policy formulation and implementation mapping in Pakistan, human and natural design systems, and strategic issues in post US exit from Afghanistan etc. Other activities of the center including executive training programs, seminars and conferences and partnerships with renowned research centers are also underway.

Center for Climate Research and Development (CCRD)

There is growing recognition that no nation will be immune to the impacts of the changing climate system. Today across the globe climate centers have been established to help understand and address the challenges of climate change. The case for Pakistan is compelling, as South Asia is regarded by the global community as a region highly vulnerable to climate change. The need for building climate resilience is critical. Work on climate vulnerability, adaptation, GHG mitigation and disaster risk management has become equally important. For this purpose, CUI has set up a Center for Climate Research and Development (CCRD).

The creation of CCRD is a manifestation of the realization that there is an urgent need to develop Pakistan's capacity to enhance understanding of climate change, develop relevant technical research capacity, establish knowledge networks and links in the region and internationally, and promotes the teaching of climate sciences.

Pakistan needs to increasingly look at its development work through a 'climate lens' to ensure adaptability and sustainability. Hence an important aspect of the work of CCRD would focus on mainstreaming climate change into development policy and community- based adaptation to climate change across the country.

Major areas of work of CCRD will be as following:
- Study extreme weather conditions and associated environmental challenges by improving capabilities for scientific research,
- Assess climatic conditions and climate variability in the region,
- Conduct research on the consequences of climate change, leading to formulation of mitigation and adaptation strategies,
- Provide support to institutions in Pakistan for designing policies and programs in the framework of the national Climate Change Policy.

CCRD's main office is located at CUI Islamabad, with the technical resource center located at the CUI campus in Abbottabad.

Following are the main research expertise relevant to the Climate Change group at CUI Abbottabad.

- Climate change and glaciers monitoring
- Snow and glacier hydrology
- Water resources management
- Biodiversity and conservation
- Nitrogen Cycling (global warming)
- Climate change and ecosystem functioning

Center of Advance Drug Research (CADR)

The purpose of CADR is to conduct interdisciplinary research and development projects in the field of pharmacy, chemistry and biological sciences. The development of new drugs is a major goal of research center and represents an important engine of progress in the life sciences. Through recent research, based on the human genome project, the pharmaceutical research has gained importance especially the development of novel therapeutics. Thus, the decoding of the human genome has led to a dramatic increase in knowledge in terms of the number of potential targets for drugs (drug targets). The main aim of research center is the therapeutic principles and the development of innovative therapeutic approaches. They include the development of new drugs, the study of mechanisms of action, as well as the research and development of experimental therapies. For example, for the efficient implementation to achieve basic research into new drugs and therapies, the networking of all relevant stakeholders in this process is essential. The research center is therefore a strategic relationship both between basic biomedical research and the pharmaceutical industry, biotechnology companies.

Energy Research Center (ERC)

The Energy Research Center (ERC) has been established at the CUI Lahore since November 2014. The scope of the work to be done at the ERC will comprise of scientific research in laboratories in various faculties and campuses of the CUI. In addition, theoretical research on energy policy, energy economics, energy laws and regulatory issues will also be conducted by the ERC. Some of the major scientific research areas will include Industrial Energy Efficiency, Coal Based Power Generation, Smart Grids, Decentralized Energy Solutions, Energy Conservation, Fuel cell, and Membrane development, Solar Technology etc. Through an industrial outreach program, the Centre will work alongside with the industry to focus on bringing about energy efficiency in the industry. Research is required to develop and understand new technological options and how this could support innovations in and around energy sector. The ERC can play an important role in preparing comprehensive policy proposals focusing on cost-cutting specific policy areas and technologies.

Meeting the demand for reliable and affordable energy for a growing population in ways that are economically and environmentally feasible is a big challenge for Pakistan's socio-economic progress and stability. Fostering research in the energy sector is an important step forward to be followed up by the results of research to support innovation. The ERC aims to be a Center of excellence for the researchers to contribute for offering solutions to meet the energy crisis. The proposed projects also intend to help CUI to establish teaching and multidisciplinary research facilities of high standards to enable our graduates for advanced level research in the field of environmental and energy areas in a global perspective. The Center will provide excellent opportunities for the students and researchers to conduct research in emerging energy technologies especially in areas like wind energy, solar energy, smart grid, smart metering, energy conservation, etc. It will equip the students and researchers with necessary knowledge and hands-on experience to fill various energy related assignments in the public and private sectors. Through its emphasis on maintaining a close liaison with the industry, the ERC will act as a bridge between the academia and the industry and will also open doors for future careers for our students in the power sector and other industries.

Upgradation to University

Established in 1998 as COMSATS Institute of Information Technology (CIIT) and later granted status of Degree Awarding Institute (DAI) by the federal Government of Pakistan on August 12,2000, it has been upgraded to a Federally Chartered University in April 2018 under the

COMSATS University Islamabad Act 2018.

Authorities of the University

CUI functions under the following three authorities

Senate: Senate is responsible for the governance of the University and the Chancellor is the chairperson of this body. The Senate has general supervision over the University and holds the Rector and the Authorities accountable for all the function of the University.

Syndicate: The syndicate is the executive body of the University and exercise general supervision over the affairs and management of the university. The rector is the Chairperson of the syndicate.

Academic Council: The academic council is the principal academic body of the university. it lays down proper standards of the instruction, research and examinations and regulates and promotes the academic life of the University and the colleges. The Rector is the Chairperson of academic council.

Historical Perspective

The CUI was Initially established as COMSATS Institute of Information Technology in 1998 as a project of the commission on Science and Technology for Sustainable Development in the South (COMSATS), which is an inter-governmental organization with 27 member states in three continents; Asia, Africa and Latin America. Currently, CUI has the status of a public sector degree awarding higher education institution.

COMSATS itself came into being in 1994 as an organization, dedicated to highlight the role of S&T in the development plans of the South and the facilitation of South-South and North-South cooperation for capacity building in S&T. An excellent arrangement for S&T cooperation is provided through a network of 16 Centers of Excellence affiliated with COMSATS in various member countries including the CUI in Pakistan.

Bangladesh	Jordan	Sri Lanka	China
Kazakhstan	Sudan	Colombia	Korea (DPR)
Syria	Egypt	Nigeria	Tanzania
Ghana	Pakistan	Tunisia	Iran
Philippines	Uganda	Jamaica	Senegal
Zimbabwe	Palestine	Morocco	Gambia
Somalia	Turkey	Yemen	

Vision

CUI aspires to be both one of the top research institutions and one of the best higher education providers in the country. It envisages becoming a university by the name of "COMSATS University", for which the legal documentation is under process with the Government of Pakistan. The vision being pursued by the CUI is to become one of the top 100 universities in the developing world. The CUI further intends to earn a place among the top 500 universities of the world by the year 2020.

Mission

The CUI is dedicated to the search for truth through advancement of learning and extending the frontiers of knowledge; to the sharing of knowledge through education in academically diverse disciplines and the application of this knowledge for the benefit of the people of Pakistan in particular, and the Muslim Ummah and the world, in general. The Institute's mission is threefold:

- **Research and Discovery**

Generate and preserve knowledge, understanding and creativity by instigating enquiry, conducting high-quality research and promoting scholarship, that benefit students, scholars and communities across the country, the Muslim Ummah and the World, at large

- **Teaching and Learning**

Share the knowledge, understanding and creativity by providing a broad range of educational programs among a diverse community of learners and teachers and prepare graduate, professional and undergraduate students as well as non-degree seeking students interested in continuing education and lifelong learning for active roles in competitive and culturally diverse environments.

- **Outreach and Public Service**

Extend, apply and exchange knowledge between the institute and society by applying scholarly expertise to intellectual, social and technological problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the institute accessible to the citizens. Using the resources of its multiple campuses in an integrated fashion, the Institute vies to strengthen the services to the state through the education of a modern work force, research and development, technology commercialization and partnership with business, government and community groups

Rankings

Since its inception, independent entities have evaluated CUI and the quality of its programs, such as the Higher Education Commission (HEC), Pakistan Engineering Council (PEC), National Computing Education Accreditation Council (NCEAC), Pakistan Pharmacy Council (PPC), and the Institute of Scientific Information (ISI) Web of Knowledge. It is a matter of pride for the CUI that it has been able to record remarkable achievements in terms of ranking of its Engineering degree programs as well as research productivity of the faculty members.

In the newly announced international rankings, CUI yet again nailed its position as one of the leading Institutions for higher education. CUI is ranked # 301-400 in 2018 Times Higher Education (THE) Engineering & Technology subject ranking, # 401-500 in Life Sciences & Computer Science and 501-600 in Physical Sciences subject ranking. While in THE world universities rankings, CUI has been placed among 601-800 world best universities, and ranked 1st in Pakistan. Moreover, it was ranked 137th in THE Emerging Economies Rankings 2019, 125th in THE Asian University Rankings 2018, and was among 150-200 THE top young world universities 2018. Recently CUI was also ranked at 301+ in THE University Impact Rankings 2019 and was ranked among top 5 universities of Pakistan.

The CUI was also ranked among 751-800 world best

universities as per QS World Universities Rankings 2019. The Institute has also been ranked 135th in QS Asian Universities Rankings 2019. In addition, CUI was also ranked first in Pakistan and amongst 601-700 ranked university of the world by Academic Ranking of World Universities (ARWU) prestigious Shanghai Rankings 2018. Besides, CUI has also been recipient of two Global Good Governance Awards which include 3G Excellence in Higher Education Award 2019, and 3G Award for Research Excellence 2018.

Another achievement for CUI was when HEC ranked it at number 03 in Pakistan in General Category in 2016. The contribution of CUI in research is evident from the fact that it published more than 2000 impact factor publications in 2017 (the only university in Pakistan), and 2200 in 2018. It has also won 9 research awards at 6th HEC Outstanding Research awards 2018, has secured 4 projects out of 10 for funding under Pakistan Science Foundation (PSF) and Ministry of Science, Research and Technology (MSRT), Iran call of proposals. This success is a manifestation of its undeterred commitment and has led to an unprecedented number of applicants for securing admission in CUI every year. CUI also holds the privilege of being ranked at # 1 during 2018 based on nature index.

Earlier in 2012, CUI was ranked as number one (1) university of Pakistan in Computer Science and IT among all 132 universities of Pakistan. This ranking was announced by HEC based on QS ranking format and for enhancing Quality and Research based Rankings of Pakistani Higher Education Institutes.

QS 03 Star Ranking In September 2013 CUI applied for star rating and is proud to announce the results by the QS Intelligence Unit:

Five Stars in Teaching

CUI students can expect an excellent faculty – student ratio as well as high student satisfaction and opportunities for further study

Five Stars in Learning Facilities

CUI students can expect access to excellent sports, medical and library facilities as well as IT Infrastructure.

Five Stars in Engagement

CUI students have a unique opportunity to be involved in academic activities that directly benefit community investment and development. They will also be part of the CUI vision towards a more sustainable environment.

Three Stars in Internationalisation

CUI students have the opportunity to engage with high level, collaborative academic research with partner institutions across the globe.

Overall, CUI was rated as a THREE STAR (***) Institution.

Campuses

Besides its principal campus at Islamabad, the CUI has six other fully functional campuses at Lahore, Abbottabad, Wah, Attock, Sahiwal, and Vehari, along with a Virtual Campus while few more campuses are also in the pipeline.

Friendly Campus Environment

The institutions of higher learning are the places to generate and create new knowledge through a friendly, free environment conducive for freedom of thought, expression and reasoning. The CUI is promoting these virtues and

culture by providing a friendly atmosphere to interact with the students of diverse backgrounds due to which a great sense of fraternity and cultural mixing is seen on the campus. The CUI is providing confidence and trust among the students by providing friendly and fearless environment. Our graduates have great confidence and trust on their abilities and a great desire to deliver in their future career as they are wiser and more knowledgeable.

Diverse Community

CUI is an equal opportunity institution for the students, so it always welcomes students from all the corners of Pakistan and around the globe. This brings in the diverse community together, which generates great qualities of consideration, tolerance, understanding and fellow feeling among the graduates. The graduates of CUI are overwhelmed with research, teaching and a spirit of serving across the country and the globe.

International Linkages

Realizing that Research and Development activities in this era of tough competition and globalization cannot take place in isolation, the CUI has established linkages with reputed national and international organizations. The CUI in its brief history has made land mark achievements by signing more than 150 Memoranda of Understanding (MoUs) with national and the world's renowned educational institutions. The nucleus rationale of getting into linkages is to encourage exchange of students and faculty to pursue higher education, to organize joint conferences, workshops and seminars, to arrange joint research activities, to work out on staff development programs, and other academic related activities.

Faculties, Departments, Research Centers and Graduate Programs

The CUI at present comprises the 06 Faculties, 20 Departments and 10 Research Centers. Presently around 100 undergraduate and graduate degree programs are on offer.

Faculty Distinction

More than 1,129 faculty members and academic managers holding PhD qualification are currently serving the CUI. The remaining has MS / MPhil in relevant fields.

Graduate Output

CUI has proudly produced more than 61,346 graduates since its inception in 2000. So far, 130 convocations have been organized in its campuses.

Students

Total	34,648
Undergraduate	28,372
Master of Science	5,334
PhD	944

Faculty

Total	2,600

Faculty Development

More than 578 faculty and staff members are undergoing advanced education/training leading to MS and PhD degrees and post-doctoral research in USA, UK, China, France, Sweden, Australia, Austria, Germany, Canada, Malaysia, Finland, Korea, Netherlands, etc. The funding for advanced education has come from CUI Scholarships, HEC Scholarships and a few from self-sponsorships.

Services

- Academic Faculties
- Teaching Departments
- Specialized Research Laboratories
- Students Counseling Centers
- Career Development Cells
- COMSATS Technologies
- Edward De Bono Foundation
- Inter - Islamic Network on Information Technology (INIT)
- CISCO Academy
- National Testing Service (NTS)
- Center of Excellence in Information and Communication Technologies
- Faculty Development Academy

Graduate Programs 2019-20

Islamabad Campus

Department of Computer Science
- MS in Computer Science
- MS in Software Engineering
- MS in Information Security
- PhD in Computer Science

Department of Health Informatics
- MS in Health Informatics

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- MS in Computer Engineering
- PhD in Electrical Engineering
- PhD in Computer Engineering

Department of Management Sciences
- MS in Management Sciences
- MS in Project Management
- MS in Energy Management
- MS in Banking and Finance
- PhD in Management Sciences
- Master of Business Administration*

Department of Economics
- MS in Economics

Department of Humanities
- MS in International Relations
- MS in English (Linguistic and Literature)

Department of Mathematics
- MS in Mathematics
- PhD in Mathematics

Department of Biosciences
- MS in Biosciences
- MS in Bioinformatics
- MS in Biochemistry and Molecular Biology
- MS in Molecular Genetics
- MS in Microbiology and Immunology
- MS in Molecular Virology
- PhD in Biosciences
- PhD in Biochemistry and Molecular Biology
- PhD in Molecular Genetics
- PhD in Microbiology and Immunology

Department of Meteorology
- MS in Meteorology
- MS in Remote Sensing and GIS
- PhD in Meteorology

Department of Physics
- MS in Physics

- PhD in Physics

Department of Chemistry
- MS in Chemistry
- PhD in Chemistry

Abbottabad Campus

Department of Computer Science
- MS in Computer Science
- MS in Cyber Security
- PhD in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- PhD in Electrical Engineering

Department of Civil Engineering
- MS in Environmental Engineering
- MS in Civil Engineering

Department of Management Sciences
- Master of Business Administration*
- MS in Management Sciences
- MS in Project Management
- MS in Banking and Finance
- PhD in Management Sciences
- MS in Economic

Department of Development Studies
- MS in Development Studies

Department of Environmental Sciences
- MS in Biotechnology
- MS in Environmental Sciences
- PhD in Biotechnology
- PhD in Environmental Sciences

Department of Mathematics
- MS in Mathematics

Department of Chemistry
- MS in Chemistry
- PhD in Chemistry

Department of Pharmacy
- MS in Pharmacy
- PhD in Pharmacy

Department of Earth Science
- MS in Earth Sciences (Applied Geology/Applied Geophysics)

Wah Campus

Department of Computer Science
- MS in Computer Science
- PhD in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- PhD in Electrical Engineering

Department of Civil Engineering
- MS in Civil Engineering

Department of Mechanical Engineering
- MS in Mechanical Engineering

Department of Management Sciences
- Master of Business Administration*
- MS in Management Sciences
- MS in Banking and Finance
- MS in Project Management
- PhD in Management Sciences

Department of Mathematics
- MS in Mathematics

Lahore Campus

Department of Computer Science
- MS in Computer Science
- PhD in Computer Science

Department of Electrical and Computer Engineering

- MS in Electrical Engineering
- PhD in Electrical Engineering

Department of Chemical Engineering
- MS in Chemical Engineering
- PhD in Chemical Engineering

Department of Management Science
- MS in Management Sciences
- MS in Project Management
- PhD in Management Sciences
- Master of Business Administration*

Department of Economics
- MS in Economics

Department of Mathematics
- MS in Mathematics
- PhD in Mathematics

Department of Humanities
- MS in English (Linguistic and Literature)

Department of Statistics
- MS in Statistics
- PhD in Statistics

Department of Physics
- MS in Physics
- PhD in Physics

Department of Chemistry
- MS in Chemistry
- PhD in Chemistry

Attock Campus

Department of Computer Science
- MS in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering

Department of Management Sciences
- MS in Management Sciences
- Master of Business Administration*

Department of Mathematics
- MS in Mathematics

Sahiwal Campus

Department of Computer Science
- MS in Computer Science

Department of Mechanical Engineering
- MS in Mechanical Engineering

Department of Management Sciences
- MS in Management Sciences
- Master of Business Administration*

Department of Biosciences
- MS in Biosciences

Vehari Campus

Department of Management Sciences
- MS in Management Sciences

Department of Economics
- MS in Economics

Department of Environmental Sciences
- MS in Environmental Sciences

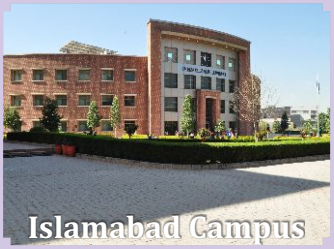
Department of Mathematics
- MS in Mathematics

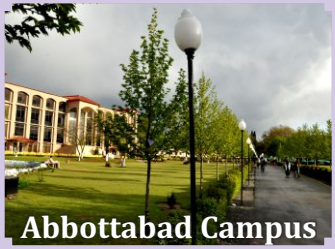
***subject to approval from concerned statutory body**

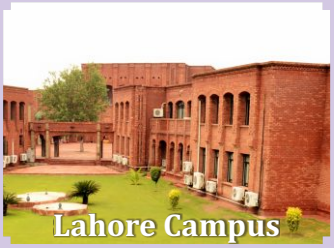
CHAPTER 2
CAMPUSES

CUI Campuses

The CUI is a multi-campus center of higher learning. Currently, it has eight fully functional campuses, along with Virtual Campus, at the following places:


Islamabad Campus


Abbottabad Campus


Lahore Campus

Wah Campus


Attock Campus


Sahiwal Campus


Vehari Campus


Virtual Campus

A few more campuses are in advance stages of establishment. Presently the student strength of CUI is 34,648 full time students with faculty strength Around 2,600. Specifically, the strength of MS students is about 5,334 and that of PhD is 944.

Facilities at CUI Campuses

Lecture Rooms

All CUI campuses have spacious lecture theatres which are IT enabled, air-conditioned, well furnished, and well maintained.

Laboratories

CUI has deployed state-of-the-art IT infrastructure in all the laboratories of its campuses. Availability of top notch equipment and computers in the laboratories is a prime example of CUI's commitment to providing its students with optimum learning facilities. All workstations are networked to CUI's LAN and a high bandwidth connection provides connectivity to internet round the clock.

Library

The libraries at CUI are spacious, well planned, and offer

tranquil environment. They are richest information resource centers for the students. The libraries house an open shelf collection that includes books, films, CDs, journals and newspapers. The library staff provides one-on-one training and group instruction. If students need help in finding books, identifying authors or titles, the library staff is always available to assist

Students also have complete access to online books and high quality, peer-reviewed journals, conference proceedings and articles through 21 different online databases under the HEC's National Digital Library Program. Students and faculty can access these resources from inside and outside the campus through VPN.

The e-books support program allows researchers to access most of the important test and reference books electronically in a variety of subject areas. Apart from this more than 15,000 e-books and video lectures on different subject areas are currently available on the CUI E-Library which is in an ever-growing/developing stage and will become more and more exemplary/perfect with the passage of time.

An inter-library searching option is also available in the library. Users can search material available in the libraries of different campuses of CUI, through Union Catalogue, and can request for desired literature from them. Users can request library staff to help them in getting their required literature from other libraries through inter-library loan.
Libraries provide facility for international lending and photocopying service through British Library Document Supply Center in UK and Library of Congress in USA. This service provides users an opportunity to access books, journals and information resources which are not available locally. They also provide facility of photocopying for those items which are within the provisions of the Copyright Ac..

Hostels

All CUI campuses have the hostels facilities. It is prime concern of the Institute to provide students a home away from home with all the necessary facilities.

Common Room for Girls

To facilitate the female students, the campuses have established spacious and comfortable common rooms. This provides female students with a place to relax, offer prayers, study, have informal discussions in free time available. Daily newspapers, magazines, periodical and journals are available for leisure reading.

Cafeteria

A food-street style catering service consisting of shops and kiosks having a wide range of quality snacks and meals, at modest prices, is available throughout the day on CUI campuses. Students can relax and enjoy their breaks over a cup of coffee or tea.

Mosque

All campuses have mosque to offer regular prayers.

Photocopying Facility

The photocopy centers are working on subsidized rates. They also provide the facility of spiral binding, stapler binding and hard binding.

Islamabad Campus

CUI Islamabad was established in 1998 to promote Information Technology and to reduce the ever-growing gap between the developed and developing world through useful applications of science and technology. During the first year of its establishment, the Institute offered only a few certificate courses and a postgraduate diploma in computer studies with a single class room and limited resources. Islamabad Campus of CUI is situated at Chak Shahazad, Islamabad. Currently 9,397 students are enrolled in various degree programs at this Campus.

Islamabad Campus provides what a discerning student is looking for in a learning environment, academic excellence, quality teaching, and constructive leisure activities. We appreciate that it is crucial for today's student to work in a physical environment conducive to study. Here the faculty not only teaches but mentors the young and impressionable minds. The newly built campus is fully equipped with facilities of international standards. It is a marvel of modern architecture surrounded by lush green environment and peaceful surroundings.

Graduate Programs

Islamabad Campus

Department of Computer Science
- MS in Computer Science
- MS in Software Engineering
- MS in Information Security
- PhD in Computer Science

Department of Health Informatics
- MS in Health Informatics

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- MS in Computer Engineering
- PhD in Electrical Engineering
- PhD in Computer Engineering

Department of Management Sciences
- MS in Management Sciences
- MS in Project Management
- MS in Energy Management
- MS in Banking and Finance
- PhD in Management Sciences
- Master of Business Administration

Department of Economics
- MS in Economics

Department of Humanities
- MS in International Relations
- MS in English (Linguistic and Literature)

Department of Mathematics
- MS in Mathematics
- PhD in Mathematics

Department of Biosciences
- MS in Biosciences
- MS in Bioinformatics
- MS in Biochemistry and Molecular Biology
- MS in Molecular Genetics
- MS in Microbiology and Immunology
- MS in Molecular Virology
- PhD in Biosciences
- PhD in Biochemistry and Molecular Biology
- PhD in Molecular Genetics
- PhD in Microbiology and Immunology

Department of Meteorology
- MS in Meteorology
- MS in Remote Sensing and GIS
- PhD in Meteorology

Department of Physics
- MS in Physics
- PhD in Physics

Department of Chemistry
- MS in Chemistry
- PhD in Chemistry

Extra-Curricular Activities

Extensive extra-curricular activities are a way to soften tough and grilling academic rigor. It also provides opportunities to make new friends. Islamabad campus is very active in extra-curricular activities, as would be evident in the following paragraphs.

Adventure Club

The Adventure Club organizes adventurous activities for students. The activities include excursions, hiking and trekking, visits to historical places, hill stations and geological sites. The Adventure Club currently has more than 250 student members. Here the adventurous will find good company to give vent to their unbridled spirits.

Bazm-e-Adab

Public speaking is a rewarding art that one acquires through sheer practice. The objective of having the Bazm-e-Adab is to create interest in public speaking in the students by instilling in them confidence, self-assuredness and enhancing presentation skills. Each semester, members take part in intramural and external competitions and events.

Computer Science Society (CSS)

Computer Science Society was established to provide a platform for CUI students to keep themselves updated with developments in the computing industry. For this purpose, software competitions and seminars are organized regularly. Our students are encouraged to acquire new skills by attending workshops and short courses in contemporary computing areas. Members have brought back several prizes won at competitions, held in other institutions.

Dramatics Club

An exciting variety of musical programs, exhibitions and dramas are organized by Dramatics Club, throughout the year. This provides fun time for students.

Electronics Society

Electronic Society provides opportunities to students to take part in internal, regional and national activities. It aims to develop the concepts of our students by linking theoretical knowledge to practical experience by executing many activities that are part of the Society's function. This greatly helps our students to carve a niche for themselves in the market as professionals. The Electronics Society also organizes industrial visits as well as exhibitions to display electronics projects of the students.

English Literary Society

Effective speaking skills combined with sound knowledge are key ingredients to professional success. Providing assistance to students in developing English Language skills is the main objective of our English Literary Society, which is very active in various English language and literary activities on campus.

Fine Arts and Photographic Club

The Fine Arts and Photographic Club was formed in 2001 to enhance the creative skills of students and develop their aesthetic sense. The Club focuses on sketching, poster painting, portraits, landscapes and photography.

Sports Club

Sports Club arranges all sorts of sports competitions to channel boundless energies of our students. It provides opportunities for sports enthusiasts to share their interests and participate in events. Sports Club organizes tournaments in Cricket, Football, Badminton, Table Tennis, Hockey and Athletics, etc. Besides regular sports activities in each semester, the club also organizes friendly, inter-campus matches from time to time.

Telecom Society

Telecom Society has been established to provide a platform to the students to pursue their interest in the field of telecommunication beyond academics. Through various activities this society aims to increase in its members. The understanding on dynamic developments taking place in the telecommunication industry and also understanding of ways and means to benefit from it. Core activity areas are participation and organization of seminars and exhibitions, establishment of career advisory center for students and arrangements for jobs and internships.

Career Development Center

Wherever you are in your academic career, freshmen through PhD, we are here to help you navigate your career during your years at CUI, from choosing a major, to exploring different career options, to finding internships, to looking for part-time and full-time employment through Career Development Center. COMSATS University Islamabad, through Career Development Center, aspires to cater the personal, academic and professional needs of its students. The principal pivot around which the core dogma of CDC revolves is the veracity and actuality that careers are not established by mere degrees and diplomas. It is much more than that, much broader in spectrum and much holistic in disposition. At CUI's CDC, we tend to channel our vigor, energy and efforts for the career development of student in a way that they shine out to be an employee of an employer choice. For the said, we aim to initiate career development processes for students which embrace objects like career awareness, career exploration, career preparation, and work experience. Our purpose is to expose the students to the options that best fit their individual career needs. To that end, our services include:

- Personal, academic and professional help
- Part-time and full-time job listings
- Internships and placement
- Personality development
- Job fairs
- Etiquette workshops
- Résumé and interview preparation
- In-house trainings
- Campus interviews and employer contacts

Student Center

A new facility, with the name of Student Centre has been provided on the ground floor of Faculty Block II, where student's queries are answered under one roof. The Student Centre is being managed by the department of Students Affairs and Career Development Centre. Student Financial Assistance office is also part of the Student Centre and deals with any financial support requests of students. State of the art equipment and computer applications are available not only to assist students but also the working staff. All queries of student are dealt here with the slogan of one window operation. The Student Centre works as a bridge between students and other departments. Students submit their requests within friendly atmosphere of the Student Centre and a ticket is issued in response to their query for future reference. The staff at the Student Centre not only provides appropriate guidance to students but also forwards their requests to the concerned departments. In case requests are dealt with by other departments, the outcome is communicated to the students and usually the entire cycle of application processing completes within forty eight hours.

Cubator 1ne

The Cubator 1ne (COMSATS University Incubator 1) is a venture of CUI. With a capacity to incubate 35 firms, Cubator 1ne provides impetus to business ideas by giving them a conducive environment, expert advice, mobilization of resources as well as the right networking opportunities.

Your business endeavor will hatch out of its shell and will become a growing and thriving venture once we help you 'match' the right amount of – ideas, money, hard work, networking, publicity and advice. CUI's success story is a

telling example that this is possible.

- **Vision**

Our vision is to be 'the 1st choice' of entrepreneurs for a wide range of business services and facilities creating a beneficial atmosphere.

- **What we are looking for?**

If you are an innovator and have a business idea or a start-up company that is working or planning to work in the following areas then do not wait just join us. Let's Hatch and Match!

i) IT, ICT and Security Products and Services
ii) Engineering and Alternate Power Energy
iii) Agriculture, Food, and Dairy Products and Services
iv) General Category

Call (051) 9240417 or email cubator@comsats.edu.pk

Student Start-up Business Center

Entrepreneurship and innovation are viewed as key contributors to global economic and social development of a country. University-based entrepreneurship ecosystems provide a supportive context in which entrepreneurship and innovation can thrive.

With an aim to instill spirit of entrepreneurship among CUI students, Student Startup Business Centers (SSBC's) have been established at six CUI campuses till date, with its principle office operational at CUI Islamabad. The goal of this program is promotion of talented students' entrepreneurship and enhancement of their practical learning experience at the Institute. The overarching objective of this Centre is to promote student startup businesses by offering necessary support both in the form of mentorship and through initial financial funding.

The SSBC provides a continuous stream of student led businesses and innovations at CUI. It provides a way to bridge students' academic learning with practical implementation of acquired skills in industrial settings; through application of technical knowledge and scientific tools. The existence of SSBC within University ensures that after graduation, students with entrepreneurial zeal and zest take on bold strides into practical life, backed by knowledge and experience. The goal is to have CUI graduates become valuable members of society and contribute towards knowledge economy.

The student startups enrolled into SSBC are benefitted through:

- Free co-working space
- Seed Grants
- Access to all CUI facilities
- Networking
- Mentoring by faculty and practicing entrepreneurs
- Use of CUI brand name
- Opportunity to participate in national/international start-up events
- Cash award for top program graduates

The objectives of SSBC are to:

- Foster an entrepreneurial culture at a national level that facilitates and supports innovation and its translation into benefits for our society and our economy
- Serve as a platform for students to think creatively and develop latest applications and innovative technology based-solutions that can be commercialized and converted into viable products and services
- Bring the Industry on board for regular mentorship to students for advice, counseling and sharing of practical experience thereby also marketing the potential of our students to the industry.
- Identify and attract sources of financial assistance from businesses, donors, and pro-bono services to assist students in their startups
- Establish a Student Entrepreneurship Fund to support all talented students' startups

A dedicated team of staff, faculty members and entrepreneurs from industry are available across all SSBC's to help and guide startups in their Business plan development. They provide networking opportunities and mentorship to ensure that startups succeed in realizing their potential and are equipped to learn and relearn strategies to become successful entrepreneurs

Abbottabad Campus

The Abbottabad Campus became functional in July 2001, and the first academic session started in September 2001. This campus is ideally situated and built on 308 Kanals of land. The natural climatically advantages of Abbottabad city, large land area, sports and recreational facilities and above all, a secure and friendly environment have all combined to make the Abbottabad campus more of a resort.

The campus is an ideal place to study, live and work. The majority of the campus area encompasses parks, orchards, lush green grounds, blossoming flower beds and trees. Set in these environs with panoramic background view of Thandiani and Galiat mountains makes CUI Campus at Abbottabad, an awe inspiring modern day place of learning.

The first academic session started with student strength of 121 and only three undergraduate programs. Soon CUI Abbottabad emerged as a leading institute of the region. Today it has 11 departments, and more than 5,900 students, and qualified faculty strength of 460 including 221 PhDs. Our physical infrastructure emulates the best educational institutions of the country. The campus area also encompasses parks, orchards and grounds, the lush green grounds, blooming flowerbeds and trees.

The academic culture and environment are both challenging and exciting and since its inception, the Campus has maintained a fast pace of development and is now an ideal place for learning, research, and recreation. It has truly emerged as a regional leader in hands-on learning and innovation in many areas of science and technology.

Graduate Programs

Abbottabad Campus

Department of Computer Science
- MS in Computer Science
- MS in Cyber Security
- PhD in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- PhD in Electrical Engineering

Department of Civil Engineering
- MS in Environmental Engineering
- MS in Civil Engineering

Department of Management Sciences
- Master of Business Administration
- MS in Management Sciences
- MS in Project Management
- MS in Banking and Finance
- PhD in Management Sciences

Department of Economics
- MS in Economics

Department of Development Studies
- MS in Development Studies

Department of Environmental Sciences
- MS in Biotechnology
- MS in Environmental Sciences
- PhD in Biotechnology
- PhD in Environmental Sciences

Department of Mathematics
- MS in Mathematics

Department of Chemistry
- MS in Chemistry
- PhD in Chemistry

Department of Pharmacy
- MS in Pharmacy
- PhD in Pharmacy

Department of Earth Science
- MS in Earth Sciences (Applied Geology/Applied Geophysics)

COMSATS Community Development Unit (CCDU)

COMSATS Community Development Unit (CCDU) is an integral part of Abbottabad Campus. CCDU is engaged in the provision of quality consultancy services to different organizations in the specialized fields of management, organizational development, finance, re-structuring, information technology, software-development, assistance in the planning and implementation, monitoring and evaluation of organizational activities, and, importantly, in - house capacity building through the provision of specifically tailored training workshops.

COMSATS Information Technology Center (CITC)

CITC is a well-sized technology concern having a large number of skilled professionals. CITC has a successful history of projects and a long list of satisfied clients. CITC promotes, develops, delivers and facilitates the use of information technology services and resources, including application and web development, data warehousing, network design and configuration, inter access, corporate training,

Office of Development

The aim of Office of Development is to support students in optimizing the value of their academic experience and in achieving successful transitions to the workforce and further educational endeavors. This center provides quality career development programs and employment-related services in order to empower students to actively engage in the integration and implementation of their academic and employment choices. This center develops positive faculty, staff and employer relations that result in access to career information and career opportunities for the students. The long-term objective is to achieve a high status among our competitors.

Extra-Curricular Activities

Extra-Curricular Activities are a vital part of any educational process. Sports, drama, creative writing, etc, all help individuals to develop balanced personalities by taking healthy breaks from academic rigors. Teamwork and competition also help in building character. Students' week is held annually at the campus. This student week is dedicated to competitions and tournaments held among different classes and departmental teams. As a tradition, faculty and the student body enthusiastically participate in this weeklong event.

Clubs and Societies

Clubs and societies are very important for creative activities on campus. A large number of clubs and societies are active at the Abbottabad Campus. These societies are involved in literary, dramatic, scientific, software and photographic activities. The societies regularly organize poetry reading competitions, debates, quiz shows, concerts, Naat and Qirat competition, photographic competitions and scientific gatherings. Presently, Software Development Society, IT Society, Dramatics Society named as 'Funkada', COMSATS Literary Society, Bazm-e-Adab, Art and Painting Society, Photography Society, Qirat and Naat Society, Eco-Adventure Club, Cricket Club, Football Club, Athletics Club, Badminton Club, Table Tennis Club, Girls Sports Club, Volleyball Club, Green Thumb Society, Entrepreneurial Society are quite popular among students.

Wah Campus

The opening of COMSATS University Islamabad (CUI) in the historical and industrial town of Wah was a joint effort of the CUI and Pakistan Ordnance Factories (POFs) Wah Cantt. CUI started its campus at Wah in a record period of 70 days. The then Minister for Science and Technology/Chancellor CUI formally inaugurated the Institute on September 14, 2001. Initially CUI Wah started its operation in small guest house of POFs. In 2003 two purposes built academic blocks were handed over to CUI on long term lease period by POFs. CUI Wah extended its academic facilities by purchasing land contiguous to existing campus in 2012 measuring 96 Kanals. The campus has also acquired 20 Acres of land near Brahma Bahtar Interchange on Motorway (M-1) to meet its future academic requirements. The campus is ideally suited for students who wish to seek education in a conducive environment.

The Campus is situated at G. T. Road, Wah Cantt. Due to its location, it is easily accessible to the students coming from Wah, Taxila, Rawalpindi, Hassanabdal, Haripur and other surrounding areas. Wah Cantt is considered as the hub of industrial activity in the region. It is a place having high potential for the utilization of Technology and its incorporation in the industry. POF itself is a market with very high potential. CUI being a world class institute in the region has paved the way for knowledge and learning, thus proving its worth and adding value to the region and to the country as a whole.

The campus is the first of its kind in Wah Cantt since the time of its establishment. It has a modern infrastructure and highly professional faculty members. CUI Wah is fully equipped to handle the dynamics of the fast paced IT and engineering industry and to meet the challenges of the future. Here the dedicated Faculty ensures students to succeed and encourages them to benefit from the innovative education.

Graduate Programs

Wah Campus

Department of Computer Science
- MS in Computer Science
- PhD in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- PhD in Electrical Engineering

Department of Civil Engineering
- MS in Civil Engineering

Department of Mechanical Engineering
- MS in Mechanical Engineering

Department of Management Sciences
- Master of Business Administration
- MS in Management Sciences
- MS in Banking and Finance
- MS in Project Management
- PhD in Management Sciences

Department of Mathematics
- MS in Mathematics

Extra-Curricular Activities

CUI Wah provides an excellent academic atmosphere to its students together with a lot of opportunities for extra-curricular activities. The faculty puts in maximum efforts to groom and nourish young scholars placed under their care. We at Wah try our best to contribute significantly to build healthy minds in healthy bodies. Many events are organized to involve young minds ensuring full participation in character building activities and personality development. In order to broaden the vision of students, the institute arranges the industrial trips for students.

Students' Week

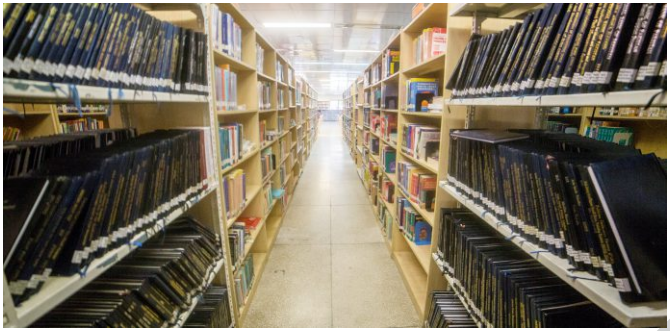
Considering the importance of sports in an academic institution, there are a number of activities organized at Wah. Every semester, a Student Week is organized where competitions in volleyball, football, basketball, badminton, table tennis, cricket, squash, athletics, Naat, Qirat, and Urdu/English Debates including "Culture Day" are arranged. The Institute also actively participates at national level mega events and has earned many laurels.

Adventure Club

Adventure club has been established at CUI Wah that arranges a variety of outdoor activities. Different clubs have been created under adventure club such as hiking, trekking, photography, shooting, camping and rowing, etc.

Visio Spark

The Computer Science Department of this institute conducts its annual national level mega event titled 'Visio Spark. The students from various national educational universities/institutions participate. The aim of conduct of event is to provide opportunity to students to upgrade, polish, discuss and enhance their intellectual and research skills. Visio Spark also provides a platform to students where they share their research work, ideas and views. CUI Wah Campus is a center of excellence in computing where rigorous software development activities are part of daily routine. This mega event is a step towards enforcing the commitment of CUI Wah Campus for the development of information Technology and other Computer Science related fields in Pakistan.



Lahore Campus

The campus consists of one administration block, five academic blocks, five workshops, a big mosque, hostels for boys and girls and a number of residential units for the employees. The location of the campus is strategically chosen to provide the students with an ideal environment, which is not only conducive for their educational pursuits but would also ensure that the students are well abreast of the latest developments in the IT sector. Currently, 7,046 students are enrolled in different degree programs.

Graduate Programs

Lahore Campus

Department of Computer Science
- MS in Computer Science
- PhD in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering
- PhD in Electrical Engineering

Department of Chemical Engineering
- MS in Chemical Engineering
- PhD in Chemical Engineering

Department of Management Science
- MS in Management Sciences
- MS in Project Management
- PhD in Management Sciences
- Master of Business Administration

Department of Economics
- MS in Economics

Department of Mathematics
- MS in Mathematics
- PhD in Mathematics

Department of Humanities
- MS in English (Linguistic and Literature)

Department of Statistics
- MS in Statistics
- PhD in Statistics

Department of Physics
- MS in Physics
- PhD in Physics

Department of Chemistry
- MS in Chemistry
- PhD in Chemistry

Students Services Center (SSC) and Job Placement Cell (JPC)

Students Services Center has been established at CUI Lahore Campus to provide students with a range of services designed to help and assist in adjusting with university life and to achieve potential in terms of their personal, educational, social and professional goals. Highly skilled staff is specialized in providing students with comprehensive solutions to their everyday problems, including their adjustment to university environment, handling of academic as well as peer pressure etc. SSC achieves these goals through implementation of many programs, both within and outside the campus. SSC arranges many co-curricular and extra-curricular activities in order to bring the best out of students and prepare them for the rigors of competition and fair play.

The mission of the Job Placement Cell (JPC) is to facilitate students in finding employment through a variety of services and also assisting them in locating employment opportunities. JPC offers students grooming session for developing job hunting skills, job data bank, resume development, interview sessions and students profile directory.

Extra-Curricular Activities

CUI Lahore Debating Society

CUI Lahore Debating Society is a student run society that aims to promote communication, analytical and team working skills important for the future career growth of the students. It aims to include members from all disciplines and to create a more diverse population of students participating in the rational exchange of ideas, representing CUI Lahore at various inter-university debating formats.

Attrayant Community

The aim of the society is to organize all sorts of social services and co-curricular activities. Among the social services Attrayant Community facilitates charity collection, fund collection and helping the students. With its motive of "Together We Can" Attrayant society believes in helping and promoting new talent. Co-curricular activities encompass different sports and quiz competitions, debates and seminars.

Islamic Cultural Society

The purpose of the society is to promote our religious culture through Islamic events such as naat and qirat competitions, Islamic seminars, milad etc. The society looks forward to enlighten the young minds and souls of the students.

CUI Lahore Music Society

CUI Lahore Music Society is a platform providing an opportunity to the rising talents in the field of music. Every semester the society organizes talent hunts to explore the upcoming vocalists, musicians, bands, and performers.

CUI Lahore IT Society

The idea behind CUI Lahore IT Society is to teach and bringing awareness to students about the latest technologies, to improve their IT knowledge polishing their skills and conducting workshops, seminars and competitions inviting IT professionals.

Sports Society

The Sports Society organizes competitions in cricket, football, table tennis, badminton, basketball, chess and athletics. The Society facilitates both male and female students' participation in the sports events.

COMSMAG

An annual magazine reflecting the whole academic year activities in a nutshell is a newest addition. The pages of the magazine depict the essence of artistic and academic abilities harbored by the students of Lahore. Newsletter is a semester wise output that focuses on day-to-day milestones reached during each semester. It also highlights various events related to academic and extra-curricular activities.

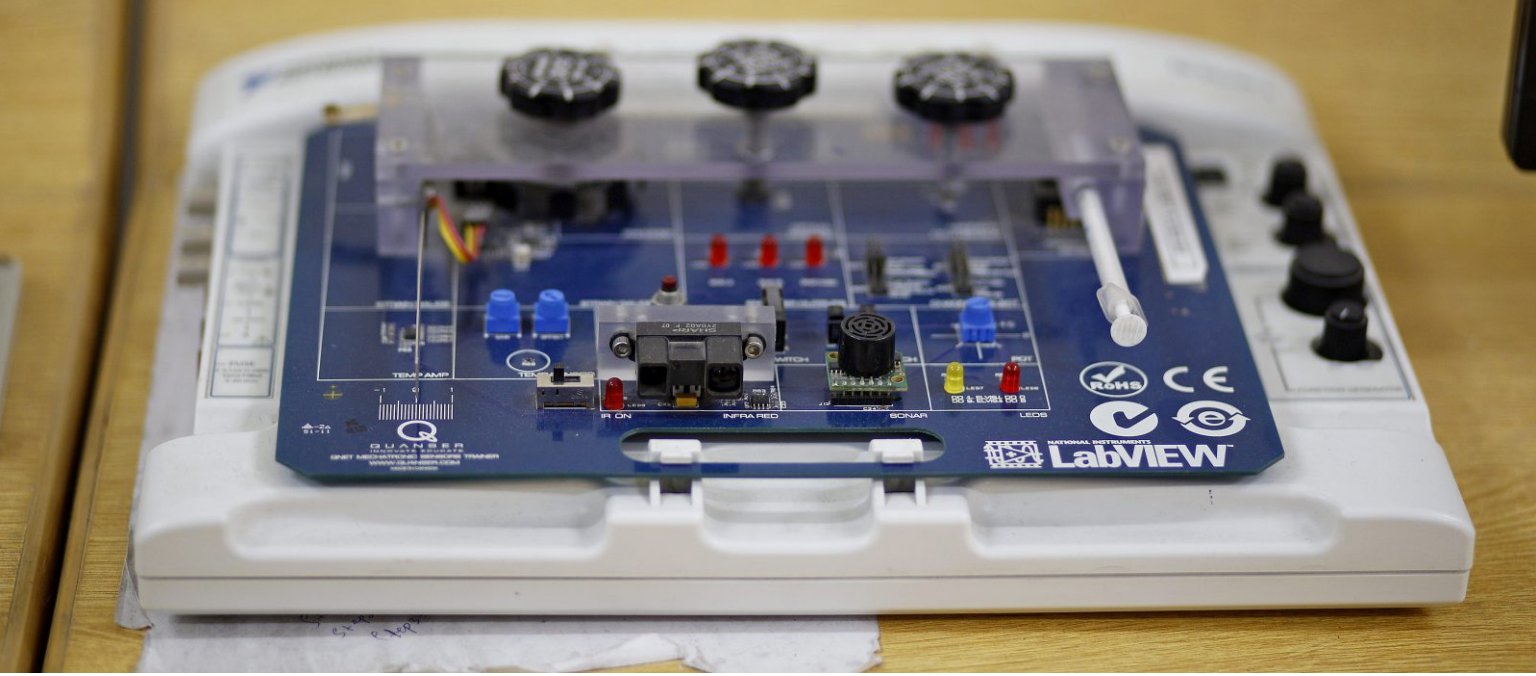
Seminars

One of the key features of education at CUI is a visionary approach of constantly providing practical exposure to the students regarding the course contents. To achieve this objective, guest speakers from corporate and industrial sectors are regularly invited to the campus in order to share their practical wisdom and experiences with the students.

Attock Campus

April 04, 2004 was a historic day for the residents of Attock city when a new Campus of the CUI was launched, to make it possible for the students of the far flung and under developed areas to take advantage of the opportunities of state-of-the-art education. The event was important for both CUI and Attock city because the dream of an IT institute was a distant dream come true. CUI's presence in Attock has ensured the availability of professional academic skills not only to the locals of Punjab but also the adjoining areas of Khyber Pukhtoonkhawa. It throws open an opportunity to the city of Attock becoming a hub of burgeoning jobs and business ventures entirely on its own strength in the near future.

The Attock Campus has gained a commendable reputation in a short time. Attock's good teaching reputation ensures that brilliant academicians are attracted to work here. This subsequently enables our academic departments to offer innovative and exciting teaching environment, led by experts at the cutting edge of their varied specializations.



Graduate Programs

Attock Campus

Department of Computer Science
- MS in Computer Science

Department of Electrical and Computer Engineering
- MS in Electrical Engineering

Department of Management Sciences
- MS in Management Sciences
- Master of Business Administration

Department of Mathematics
- MS in Mathematics

Extra-Curricular Activities

Outdoor Sports Facilities

Among all its campuses only Attock Campus has Cricket Ground of international standard and Attock Campus has an honor to organize 1st Inter-campuses T-20 Cricket Tournament in March 2012. In 2013 Attock Campus extended its outdoor sports facilities by establishing foot ground, multipurpose court for Volley Ball and Tennis.

Indoor Sports Facilities

An indoor gym has been established for the faculty and students of CUI Attock Campus which is equipped with state of art exercise machines. There is also facility of playing table tennis indoor.

Funfairs

Funfairs at the campus are organized annually. Students as well as outside vendors set up stalls to display food items, handicrafts, etc., which students set up semester projects. Sports activities and drama club events are also an integral part of these funfairs.

Sahiwal Campus

The establishment of CUI Campus in September 2007 at Sahiwal besides providing higher education facilities in the highly demanded market oriented disciplines also provided state-of-the-art facility for research and development activities. Sahiwal campus intends to augment the academic and socio-economic role in imparting quality education with the help of cutting-edge technology and contemporary managerial practices.

Sahiwal Campus has surfaced as the most vibrant educational institution in Sahiwal. It has been able to fetch the record high intake ever witnessed at any CUI Campus for its pioneer batch. It started with the enrolment of 100 students with quite an attractive 30 percent ratio of female students. Currently, the campus has a total enrolment of 3,359 students.

Graduate Programs

Sahiwal Campus

Department of Computer Science
- MS in Computer Science

Department of Mechanical Engineering
- MS in Mechanical Engineering

Department of Management Sciences
- MS in Management Sciences
- Master of Business Administration

Department of Biosciences
- MS in Biosciences

Extra-Curricular Activities

CUI Sahiwal provides numerous opportunities to its students for grooming them mentally and physically these facilities include formation of clubs/societies which organize a wide range of different extra-curricular activities like adventure club, sports club, magazine committee, debating society, and many more.

Vehari Campus

Established in 2008, Vehari campus is one of the fast growing campuses of the COMSATS Institute of Information Technology. Vehari campus started with 45 students enrolled in one program and now it has more than 2,519 students, 190 faculty members, 16 programs. Stretched over an area of 52 acres, the campus is an excellent avenue to provide quality education to the students. CUI Vehari is constantly making efforts to provide students the quality education and personality development to transform its students into capable professionals, sensible intellectual and responsible citizens. CUI Vehari aims to instill a research culture for economic human Resource Development in this region driven by market forces, technological revolution and globalization.

Graduate Programs

Vehari Campus

Department of Management Sciences
- MS in Management Sciences

Department of Economics
- MS in Economics

Department of Environmental Sciences
- MS in Environmental Sciences

Department of Mathematics
- MS in Mathematics

Extra-Curricular Activities

Vehari Campus offers each student a future of significance - not only education of sheer prestige but also provides opportunities to its students for sprucing them mentally and physically. For this purpose, guilds are made for organizing different extra-curricular activities, like sports club, adventure club, the debating society and magazine committee. Thus, student's time at CUI can never be dull. On the contrary, it is difficult to choose which activity to join. Whatever their level of expertise, they can become involved in any club or society that interests them. In addition, industrial tours are arranged for the students so they may learn how commercial and industrial undertaking works.

Career Development Cell

All employers hire people who are well-qualified, passionate and interested to work in a challenging environment, who want to achieve targets and take full responsibility. This applies across the board, from large multinational corporations to small NGOs. Studying at Vehari Campus will equip students to demonstrate passion, interest, achievement and responsibility. The specific subject they study should be one they are passionate about and want to enhance that passion in their practical lives. Vehari Campus establishes a Job Development Cell (JDC) to assist students for internship and jobs in leading public and private organizations in the country.

CHAPTER 3
ADMISSIONS AND ACADEMICS

At CUI the admissions into the graduate programs are offered on merit. The merit is determined on the basis of the academic record, GRE/NTS-GAT score and interview.

General Eligibility Criteria

Pre-requisites

MS Programs

- A 16 years degree in the relevant field from an accredited educational institution, with minimum First division (annual system) or CGPA 2.5/4.0 (semester system) and no third division (annual system) or 'D' grade (semester system) throughout the academic career.
- NTS GAT (General) with minimum score of 50.

PhD Programs

- An MS/M.Phil degree with Thesis of 06 credit hours or its equivalent degree with Thesis of 06 credit hours, in the relevant field from an accredited educational institution, with minimum CGPA of 3.0/4.0 (semester system) or 70% marks (annual system), and no third division (annual system) or 'D' grade (semester system) throughout the academic career.
- GRE (subject) as per HEC policy or NTS GAT (subject) with minimum score of 60.

Programs Duration

MS Programs

- The duration of studies for MS degree shall normally be, not less than two years and not more than four years.

PhD Programs

- The duration of studies for PhD degree shall normally be, not less than three years and not more than five years.

Course Wok

MS Programs

An MS scholar will have to complete minimum of 30 credit hours by undertaking 24 credit hours course work from approved Scheme of Studies and 6 credit hours of MS Thesis.

PhD Programs

- A PhD scholar shall have to complete 18 credit hours of graduate level course work from approved Scheme of Studies and 9 credit hours of PhD Thesis.
- The registration of PhD Thesis of 09 credit hours shall be allowed after the completion of coursework for PhD degree.

If the scheme of courses completed by candidates for their last degree in the relevant field does not provide adequate background for the PhD program into which they are seeking admissions, they may be required to rectify the deficiency by taking one or more additional courses proposed by the departmental Advisory Committee.

How to Apply

Admission to various degree programs at CUI is open to all eligible candidates without discrimination of any kind and with equal opportunities for all; hence all admissions are regulated on the basis of merit.

Application Procedure

Applications are made in response to the admission notices in the press. Admissions are conducted according to an admission schedule, which is prominently displayed in these admissions notices. The procedure consists of following steps:

1) Online Admission Application

- Candidates are required to apply on CUI Online Admission System by following the link http://admissions.comsats.edu.pk.
- After submitting the online application, the copy of the same along with the required documents, as mentioned in Online Admission Portal, must be submitted online within due date of admissions.
- All admissions at CUI will be offered provisionally and will

be confirmed once all the desired formalities are met and all the required documents are submitted by the student.

- Admission applications must be submitted within due date advertised at the time of admission. Late submission shall not be entertained.
- Candidates must check the eligibility criteria before submitting their online application forms to confirm that they are academically eligible for admission into the program of their choice.

2) Entrance Test

Applicants are needed to have valid relevant NTS Test score (GAT General/ Subject) at the time of application. However, after the last date of submission of Admission Forms, entrance test will be conducted by NTS according to the admission schedule OR on a given date as notified by NTS through their website www.nts.org.pk as well as in the admission advertisements. All admissions shall be regulated on the basis of merit determined by the weightage criteria as mentioned below:

Degree Programs	Percentage Weightage
For Master of Science Degree	
Matric or equivalent	05%
Intermediate or equivalent	10%
Graduate Degree (2 years)	10%
Master Degree (2 years) or	15%
Graduate Degree (4 years)	25%
GAT/GRE Test Score	40%
Interview*	20%
For PhD Degree	
Matric or equivalent	05%
Intermediate or equivalent	05%
Graduate Degree (2 years)	05%
Master Degree (2 years) or	10%
Graduate Degree (4 years)	15%
MS/MPhil	20%
GAT/GRE Test Score	25%
Interview*	30%

*The passing marks will be 60%. However, those failed in interview will not be offered admission at CUI.

3) Interview and Preliminary Selection

List of applicants selected for interview is displayed on specified dates on the campus notice boards as well as on the CUI website. The overall merit list is prepared by combining the weighted marks obtained in the previous public examinations with the marks obtained in the relevant NTS test and interview.

The candidates are required to appear before the Departmental Graduate Admission Committee for interview and preliminary selection as per specified schedule. The applicants are asked to bring original academic certificates/degrees at the time of interview for verification.

4) Display of Merit List and Provisional Admission Offer Letter

The recommendations of the Departmental Graduate Admission Committees are scrutinized by the Campus Graduate Admission Committee, which finally approves the provisional admissions. The final merit list is displayed on the departmental notice boards as well as on CUI website and selected applicants shall be issued "Provisional Admission Offer Letter" along with a Bank Challan Form for payment of dues.

5) Acceptance of Provisional Admission Offer

Selected candidates are required to accept their Provisional Admission Offer by submitting the signed letter in this regard together with paying the non-refundable admission and tuition fee within the specified dates. Provisional admission will only be confirmed, through a letter, once the payment of fee is confirmed, all the desired documents have been submitted by the student, verified by concerned Campus that candidate has been found eligible for admission and approved by BASAR. If candidates fail to confirm enrolment by the given deadline, selection will stand cancelled and the seat will be offered to the next candidate on the waiting list.

Grading and DI Policy

- To be eligible for award of degree for any Graduate Program, maximum of one (01) course with C grade, out of all required courses as per Scheme of Studies, will be allowed.
- If a Graduate student obtains C or lower grade in One (1) course, in the First Semester examination, and wants to avail the only chance for improvement of the result of courses with C or lower grade, he/she will be allowed to register the same course in the second or any subsequent semester; however, his status in the result card will be reflected with probation (PB).
- If a Graduate student obtains C or lower grade in more than one (1) course, in the First Semester examination, S/he will be dismissed (DI) from studies and his/ her admission shall stand cancelled.
- If a Graduate student obtains or accumulates C or lower grade in more than two (2) courses in a graduate program, in the second or any subsequent Semester examination, he/she will be dismissed (DI) from studies and his/her admission shall stand cancelled.
- If a Graduate student having C or lower grade in One (1) course, in the First or any other semester examination results, gets C or lower grade in one (1) more course during subsequent semesters, resulting in the accumulation of C or lower grade in maximum of two (2) courses, he/she will be allowed to register in the next semester, with probation (PB) status, and will have only one chance to improve the result of courses with C or lower grades, if the only chance of improvement has not been availed previously.
- The student will remain on probation status if he/she obtained C or lower grade in one course and his probation status will be cleared at the time of declaration

of final result, if he passes all remaining courses, as per scheme of studies, in higher grades than C.

- The student will have to pass/improve the same course in which he/she was previously registered and cannot register any other course in lieu of previous course, which he/she intends to pass/improve grade.
- The correspondence between letter grades, grade points, and percentage marks shall be as follows:

Letter Grade	Grade Points	Percentage Marks
A+	4.0	90 & above
A	3.95	89
	3.90	88
	3.85	87
	3.85	86
	3.75	85
	3.70	84
	3.65	83
	3.65	82
	3.55	81
	3.50	80
B	3.45	79
	3.40	78
	3.35	77
	3.30	76
	3.25	75
	3.20	74
	3.15	73
	3.10	72
	3.05	71
	3.00	70
C	2.95	69
	2.90	68
	2.85	67
	2.80	66
	2.75	65
	2.70	64
	2.65	63
	2.60	62
	2.55	61
	2.50	60
F	0.0	59 & below

Financial Support

CUI is providing various opportunities for winning fully funded scholarships and financial support to its students, admitted in the degree programs on purely merit basis. Financial Support Programs (FSPs) at CUI support various categories of students in the form of scholarships, stipends, financial support, etc. The University takes special care of its students and plays vital role to resolve the financial problems of its students. Financial Assistance is available to all students who prove to be needy regardless of race, religion, color, national origin, age or sex. The various types of Financial Assistance Programs being provided at CUI, for its students are as follows:

1. Need Based Financial Support Program (NBFSP)

- NTS Need-Based Scholarship
- Workers Welfare Board Scholarship
- Chief Minister Education Endowment Fund (CMEEF) Scholarship, KPK (Islamabad and Abbottabad)
- Punjab Education Endowment Fund (PEEF) Master Level Scholarships
- Shahbaz Sharif Merit Scholarship (SSMS) Masters Level Scholarships
- Prime Minister Fee Reimbursement Scheme for Less Developed Areas of Pakistan
- Financial Assistant for walk in Needy Students (FAWNS).

2. CUI Pecuniary Program (CPP): Kinship / Siblings Pecuniary

When two or more siblings are concurrently students of CUI, the siblings will be financially supported. A financial support of up to Rs. 8,000/- per semester will be provided to all the siblings provided the parents cannot afford to pay the fee and the students show good academic performance. Such cases will be decided by the Financial Support Program Committee (FSPC) at respective Campus.

3. Meezan Bank Qarz-e-Hasna (Interest Free Loan)

The needy students can also apply for the Meezan Bank Qarze Hasna Scheme (Ihsan Trust). This is lucrative interest free loan for the deserving students studying in all CUI campuses. After the completion of the education, the repayment of Qarze Hasna is adjusted according to the income of the student. During the study period, the student has to pay a nominal, token repayment amount (depending upon the financial position of the candidates, his/her parents/guardians monthly income) to the Ihsan Trust repayment.

Note: Please contact campus SFAO offices for more campus-specific details of financial support programs.

International Students

International students are the central point of focus of CUI's internationalization policy and it welcomes international students from across the world. CUI offers various facilities to international students which include state-of-the-art laboratories, highly qualified faculty, on campus medical assistance, well equipped sports centers and international standard accommodation (subject to availability).

The International Office is the first point of contact for international students. The head office located in Islamabad handles all international applications as well as provides support services to student at CUI. Subsidiary International Admission Unit (IAU) offices set up in each campus cater to the academic and social needs of students in each CUI location.

International students are welcome for enrolment in different graduate and undergraduate degree programs in CUI system. Currently more than 450 international students from 22 different countries are enrolled in Computer Science, Electrical and computer Engineering, Mathematics, Meteorology, Management Sciences, Physics, Pharmacy, International Relations and Bio-sciences departments and belongs to Afghanistan, Cameroon, China, Ethiopia, Egypt, Gambia, Iran, Iraq, Jordan, Nepal, Nigeria, Palestine, Somalia, Sudan, Tanzania and USA.

For Admission and application procedure please visit **www.comsats.edu.pk** and select International Students tab or **http://ww3.comsats.edu.pk/internationalstudents/**

- **Eligibility Criteria for Degree Programs:** The degree programs eligibility criteria for international students is as follows:
- **PhD programs:** 18 years Master's degree in the relevant field from accredited National/ International University with minimum score CGPA 3.00 out of 4.00 in semester system or possess marks more than 70% secured in annual examination system with no third division (annual system) or grade 'D' (semester system) during their academic career.
- **Master of Science programs:** 16 years Bachelor's degree in the relevant field from accredited International University with CGPA 2.5/4.0 (semester system) or not less than 60% in annual system with no third division (annual system) or grade 'D' (semester system) during their academic career.

Application Procedure:

Students may apply online at International Students web portal **http://ww3.comsats.edu.pk/internationalstudents/**

Documents Required:

- Completed admission application form
- Statement of Purpose or Research Plan
- Scans of degrees and transcripts of all post-secondary degrees (with English translation where required)
- Latest passport size 2 photograph with blue background
- Scan of valid passport (must be valid for the duration of program)
- Evidence showing proficiency in English language

Statement of Purpose (Research Plan):

The statement of purpose is a critical part of the application process for graduate admission, which helps in ascertaining seriousness and aptitude of the applicant. It is the only part of the process that you have complete control over; you cannot change your Grades/GPA, but you can determine the finished product of your statement. It should demonstrate excellence in writing and clarity of thinking. It is a chance to introduce yourself and describe who you are; what your background; and what is important to you. More importantly, the statement of purpose is an opportunity for an applicant to describe your purpose in pursuing graduate study; why this university and/or this specific program is your preferred choice; what are your reasons for graduate study, and what is your plan in pursuing this degree. It should state how well you know the university and justify your reason for studying at CUI.

Visa Requirement:

International students who wish to study in Pakistan need to obtain a Study Visa before travelling to Pakistan. Once you have been issued a provisional admission letter, you should immediately apply for a study visa for Pakistan by sending copies of admission letter, passport and other relevant documents to the nearest Pakistani High Commission/ embassy in your country of residence or a neighboring country.

Letters of Reference:
Two reference letters typed in double space may accompany your application dossier. Ideally one letter may be from a faculty member of your alma mater, while the second one may be from an employer. Both letters may bring out clearly your suitability for the selected program. Alternatively, both letters could be from your former teachers.

English Language Test Requirements:
CUI Pakistan accepts the following credentials of international students to satisfy the minimum English Language requirements for entry to undergraduate degree programs:

- TOEFL Internet-based test - overall minimum score 60 (iBT), or
- IELTS minimum 5.0 band or
- English Proficiency Certificate from the Last attended Institution

Only original and valid TOEFL or IELTS (Academics) certificates (not more than two years old from last date of application submission) will be accepted.

Visiting Scholars:
CUI provides excellent facilities and research opportunities to International Scholars from accredited international universities and institutions of higher education, who wants to spend 1-2 semesters at CUI for study or research. Application form and detail information is available at http://ww3.comsats.edu.pk/internationalstudents/.

Accommodation:
Accommodation would be provided by CUI to international students in some campuses (if available). This will provide an opportunity to interact, live and study with students from different backgrounds and many of whom will become friends for life. CUI offers conducive living and studying environment for the students. (accommodation is subject to availability of space).

Orientation and Registration:
Orientation is your chance to learn about the University, ask questions, register your courses, get to know your fellow classmates, meet with an academic advisor/faculty member and begin your adventure as a new student. A formal orientation program is designed to welcome and introduce International students to CUI and to help them adjust to life at CUI before the official start date of classes. There will be social events where students will have the opportunity to make new friends, meet CUI faculty & staff. It is essential for all new international students to attend the orientation, as they will need to register with the CUI Medical Centre and fulfil other requirements as well.

Scholarships Opportunities:
In order to attract international students and to provide opportunities to get quality higher education, CUI offer partial scholarships for graduate programs to nominees of various foreign governments i.e. Governments of Afghanistan, Azerbaijan, Bhutan, Belarus, Gambia, Mauritius, Madagascar / Seychelles, Maldives, Myanmar, Nepal, Senegal, Sri Lanka and Kenya and organizations i.e. Organization of Islamic Conference (OIC), COMSATS Headquarters, Islamic Educational Scientific & Cultural Organization (ISESCO), Federation of the Universities of the Islamic World (FUIW), African-Asian Rural Development Organization (AARDO) at CUI Pakistan. Further, Association of Commonwealth Countries (ACU) allocated number of scholarships tenable at CUI Pakistan to the students of ACU member countries. CUI also offers postgraduate and postdoctoral fellowships each year in association with TWAS (The World Academy of Sciences).

Faculty of Information Sciences and Technology

Dean's Message

Greetings! I welcome you on the behalf of the faculty and staff. These are exciting times for computer scientists as the discipline is now widely recognized as an essential source of tools and techniques for advancements in nearly all spheres of human endeavor.

Our students get competitive skills in effective development and application of modern technology. We see our students as excellent programmers, outstanding researchers, extra ordinary analysts, and innovative designers. We are aware of everyday breakthroughs in modern technology and thus are committed to equip you with advanced competencies required to manage the growing needs of science and technology; especially computer science, in almost every professional field today. Research activities have been given high priority within the department resulting in a high impact factor of research publications.

The faculty of Information Science and Technology offers competitive degrees in rapidly expanding areas of study. Our highly qualified faculty and excellent facilities ensure that you have a solid technical grasp on different subjects so that you apply this knowledge in practical work settings. Our fruitful linkages with the Higher Education Commission, Ministry of Science and Technology and top ranking foreign universities help us keep up-to-date with new policy initiatives and market driven incentives being unrolled by the government and private sectors.

Prof. Dr. Asad Hussain

Department of Computer Science

The Department of Computer Science was established in 1999 at Islamabad and enrolled the pioneer batch of students in Fall 1999. The department made a modest beginning and is now proud of its excellent facilities and internationally qualified faculty members along with its presence at all Campuses of CUI.

The department aims to impart competitive skills in effective development and application of modern technology to groom its students as excellent programmers, outstanding researchers, extra ordinary analysts and innovative designers. It is aware of everyday breakthroughs in modern technology and thus committed to equipping and imparting our students with advanced competencies required for managing the growing needs of science and technology, especially computer science, in almost every professional field today.

Research activities have been given high priority within the department. This has resulted in national and international recognition for faculty and students alike. A number of research papers of national and international repute have been published in leading journals and presented at conferences all over the world. The department has dedicated research groups working in the areas of Databases, Software Engineering, Artificial Intelligence, Computer Vision and Security Systems and networks.
Computer science is increasingly concerned with the application of core techniques and methods to challenging real-world problems, for examples, in banking, aerospace, manufacturing, defense, medicine, telecommunications, pharmaceutical industries, consumer products, biomedical Systems, finance, insurance, health care and much more. This shift is reflected in the research we conduct and in the graduate and postgraduate programs we offer. The graduate and postgraduate programs comprise of Master of Science in Computer Science, Master of Science in Software Engineering, Master of Science in Information Security, and Doctor of Philosophy in Computer Science.

Research Environment:

Conducive atmosphere for research exists at the Computer Science department which encourages MS and PhD students to participate and engage themselves with devotion and commitment to research. Senior faculty members provide requisite lead to their junior partners resulting in full-fledged research activities wherein both faculty as well as the students eagerly participates. The quality of research meets the international standards.

State of the Art Laboratories:

The well-equipped computer Laboratories and other practical facilities are open to carry out research work. A high bandwidth connection of Internet is available round the clock over wired and wireless LANs. This connectivity becomes further productive when research scholars use HEC sponsored access to digital libraries and numerous research journals.

Furthermore, the Embedded Software Laboratory, based at the Computer Science department facilitates software development for embedded systems. The laboratory contains embedded kits with varying processing power and available resources. These include kits with and without memory management unit and also the DSP processor based kits. All of these kits run a variant of Linux as the core embedded kernel. Therefore students learn the embedded development environment through student projects. The experiments done over the Intel based systems will be deployed to the embedded kits.

CERN Collaboration:

The European Organization for Nuclear Research (CERN), is one of the world's largest and most respected centers for scientific research. At CERN, the world's largest and most complex scientific instruments are being used to study the basic constituents of matter the fundamental particles. By studying what happens when these particles collide,

physicists learn about the laws of nature. The instruments used at CERN are particle accelerators and detectors. Accelerators boost beams of particles to high energies before they are made to collide with each other or with stationary targets. Huge array of detectors observe and record the results of these collisions. Founded in 1954, the CERN Laboratory sits astride the Franco–Swiss border near Geneva. It was one of Europe's first joint ventures and now has 20 Member States. Study of huge collision data needs excessive computing resources which are arranged by using Universal grid, of which CUI setup is a part. In February 2009, COMSATS is listed among the grid computing sites for ALICE Experiment. Currently, CUI is expanding the size of Grid which will make it the largest Grid in Asia. CUI Islamabad has also established its own Data Centre in which CERN Grid is placed and to work on High Performance Computing.

HAIER-CUI International Smart Education Experience Centre:

The CUI Islamabad with the collaboration of HAIER has established a state of the art smart classroom in partnership with Microsoft. It has an interactive 65 inch Haier LED and 32 Haier Y11B Laptops which is a 'Next-Generation Class' solution offering a fresh perspective on education technology, with unique user-friendly products. Italso features a comprehensive educational cloud platform and includes monitoring cloud, lecture capture cloud, video cloud, learning space cloud and internet of cloud classroom, along with multilingual content for individual and international teaching formats.

Specialization at a Glance:

Numerous areas of research are offered by the department under the supervision of foreign qualified PhD faculty members such as Database Systems, Business Intelligence, Artificial Intelligence, Software Engineering, Semantic Web, Computer Networks, Communication, Security, Mobile Adhoc Networks, Wireless Networks, Multimedia Technologies, Computer Graphics and Visualization, Natural Language Processing, Image Processing, and Socio Informatics to name but a few.

Islamabad Campus

#	Group Name	Group Leader
1	ComSens (Communication over Sensors)	Dr. Nadeem Javaid
2	Information Security (Isec)	Dr. Abid Khan
3	Network Research Group (NRG)	Dr. Majid Iqbal Khan
4	Mobile Application Development Group	Dr. Naveed Ahmad
5	Real-time and Embedded Systems	Dr. Mukhtar Azeem
6	Software Engineering (SE)	Dr. M. Asim Noor
7	Computer Vision and Pattern Recognition (CVPR)	Dr. Sheikh Ziauddin
8	Performance Evaluation and Enhancement of Computing Systems(PEECS)	Dr. Munam Ali Shah
9	Complex Systems Modeling, Simulation and Engineering (COSMOSE) research group	Dr. Muaz A. Niazi

10	Semantic Web group	Dr. Mansoor Ahmed
11	Data Mining and Business Intelligence	Dr. Khalid Latif
12	Applied Security Engineering Research Group	Dr. Masoom Alam
13	Collaborative Computing research group	Dr. Malik Ahmed Kamran
14	Human Computer Interaction	Dr. Aimal Tariq Rextin

Research Project

#	Project Title	Funding Agency	Group Leader
1	PINET pilot project	NRPU	Dr. Khalid Latif

Abbottabad Campus

Research Groups

#	Group Name	Group Leader
1	Cloud and Grid Computing(CGC)	Dr. Babar Nazir
2	Communication Systems and Innovative Technologies	Dr. Rafi us Shan
3	COMSATS Network Research Group (CNRG)	Dr. Usman Khalid
4	Information Security and Image Processing (ISIP)	Dr. Waqas Jadoon
5	Intelligent Systems and Environments	Dr. Ahmed Din
6	Mining Language Processing and Pattern Analysis (MLPA)	Dr. Sajid Shah
7	Research in Information and Cyber Security	Dr Mazhar Ali

Lahore Campus

Research Groups

#	Group Name	Group Leader
1	Software Engineering	Dr.Ghulam Rasool
2	Web Semantics and Services	Dr.Farukh Zeshan
3	Vision, Image, Graphics & Robotics	Prof. Dr.Zulfiqar Habib
4	Communication Networks	Prof. Dr. Syed Asad Hussain

5	Agent Systems and distributed Artificial Intelligence	Dr. Adnan Ahmad
6	Natural Language Processing and Technology	Dr.Rao Adeel Nawab
7	Database and operational intelligence	Dr. Hamid Turab
8	Intelligent Machines & Robotics	Dr. Wajahat Qazi

Research Projects

#	Project Title	Funding Agency	Group Leader
1	Cloud Computing Infrastructure For Clinical Decision Support System	DOST (Directorate of Science and Technology KPK)	Dr. Babar Nazir
2	Dynamic Connectivity Restoration Protocol For Wireless Sensor And Actuator Networks	Pakistan Higher Education Commission (HEC)	Dr. Babar Nazir
3	Recognition And Verification System For Paper Currency	CUI Research Grant	Mr. Allah Bux Sargano
4	Energy efficient fair path planning for non-holonomic mobile robots	HEC	Prof. Dr. Zulfiqar Habib

Sahiwal Campus

Research Groups

#	Group Name	Group Leader
1	Formal Methods and Software Engineering	Prof. Dr. Nazir Ahmad Zafar
2	Big Data Analytics (BDA)	Dr. Javed Ferzund
3	Mobile and Pervasive Computing	Dr. Majid Hussain
4	Networks and Communications (NetComm)	Dr. Tariq Ali
5	Computer Vision and Image Processing (CVIP)	Dr. Muhammad Shoaib

Attock Campus

Research Groups

#	Group Name	Group Leader
1	Internet, Communication, Network Group	Dr. Peer Azmat Shah
2	Pattern Recognition, Images and Data Engineering Pride	Dr. Khalid Iqbal

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Computer Science

The Master of Science in Computer Science is a quality research program which draws upon a renowned reputation of excellent quality research. It also depends upon the exceptional teaching quality and facilities of the Computer Science Department at the CUI. Industrial links enable us to provide a broad based program at a level beyond that of undergraduate degree. The program combines a wide range of taught advanced courses, with a research project undertaken in academia and industry. It aims to impart a sound understanding of the general principles of computer science. It provides sufficient breadth and depth of experience in up - to - date methodologies and in-depth treatment of selected, leading-edge research topics to significantly advance your career prospects within IT industry and to aid you in undertaking research in computer science. In order to accommodate different needs for further education, recognizing in particular the needs of people in employment, we provide flexible ways of pursuing the MS degree in Computer Science by offering different specializations.

Academically challenging courses are designed to help students acquire these skills. Students must take responsibility for their own learning: a vital skill in such a rapidly developing field. Students begin by learning core areas such as Theory of Computation, Research Methodology in IT and Advanced algorithms analysis before they take advance electives in different areas such as databases, networks, graphics, semantic web, artificial intelligence etc., to create a well-rounded program of study. At the end of the degree program, you will have covered the essential aspects of computer science in breadth and depth. Together with team project and possible work placements, the course provides excellent preparation for professional computer scientists. Crucially we regard enthusiasm, hard work and commitment as essential to meet the intellectual demands of computer science as a subject of academic study in a vibrant research - oriented environment.

Admission requirements, program duration, coursework and thesis/research project details are given at page 43

Offering Campuses

Islamabad, Abbottabad, Wah, Lahore, Attock, and Sahiwal

Master of Science in Software Engineering

The Master of Science in Software Engineering is a specialized program which aims to bridge the gap between computer science theory and its practical applications using different technologies and tools. Program prepares professionals who have an expertise of software development principles, theory, practice, and process to develop high quality software applications and to strive for research solutions against different challenges. Following the said philosophy, the Master of Science in Software Engineering program assists a working professional in software engineering field and students who want to extend their skills not only in software development but in research

also. Advanced courses being taught in this program opens up new avenues for research and development which are crucial in the field of software engineering. All courses being taught at this level includes an extensive teaching, regular classes, practical Laboratory work, and group activities.

Admission requirements, program duration, coursework and thesis/research project details are given at page 43

Offering Campus
Islamabad

Master of Science in Information Security

The Master of Science in Information Security (MSIS) is ideally suited for students who want to assume leadership positions in the information security arena. In 24 months, the program imparts knowledge in Information Security with additional courses in management, information security policy, privacy and other topics essential for the effective development and management of secure information systems. Graduates of the MSIS program become security experts equipped to manage the growing complexities associated with securing data, networks and systems. Through this program, the students will gain a detailed understanding of the interdisciplinary aspects (technical, business, management, policy) of information security, assess the information security risks faced by an organization, design and implement distributed systems with information security in perspective, acquire a detailed understanding of information security challenges in networks and software systems, gain expertise in both theory and practice of information security, manage the development, acquisition and evolution of a secure information infrastructure, and gain expertise to manage the growing complexities associated with securing data and networks.

Admission requirements, program duration coursework and thesis/research project details are given at page 43

Offering Campus
Islamabad

Master of Science in Cyber Security

The Master of Science in Cyber Security program adopts interdisciplinary skill-based approach and it has been designed to deliver the skills and knowledge necessary for the current and next generation of security specialists to deal with the increasing challenges regarding Cyber Security. Courses about digital forensics prepare students to examine, identify and investigate computer crimes. After successful completion of the program, the students can employ state of the art techniques in Cyber Security to ensure the safety and well being of data as well as networks. The graduates of this program have careers in police, military, intelligence agencies, e-businesses, e-government, banking, and information security solution provider organizations. This program will expose the students to the recent most advanced technologies in attacking computer and communication systems as well as preventing attacks. Students will have a solid foundation to conduct research and development in new security technologies which will give them a competitive advantage in the industry.

Admission requirements, program duration, coursework and thesis/research project details are given at page 43

Offering Campus:
Abbottabad

Doctor of Philosophy in Computer Science

The aim of Doctor of Philosophy in Computer Science program is to produce well groomed computer science researchers who are capable of fulfilling the need for computer applications, research, and academia. The program is divided into various stages to make sure that a comprehensive learning is achieved as a strong base for result oriented research in both qualitative and quantitative terms. Furthermore, this program targets to enhance scientific approach for maturing the needs of computing applications in real world scenarios, that's why specific research based, current and future need based, theoretically sound and practical courses are offered. The Doctor of Philosophy in Computer Science Program is challenging and rewarding, which provides training of independent research that enables the scholars to develop real skills in research and subsequently these skills enable our students in career development and in post PhD study.

The Doctor of Philosophy in Computer Science Program has the tendency to motivate the scholars to bring originality in their research thought process. Special emphasis is given to the professional research development of the scholars through many activities/symposiums that are highly appreciated at both national and international level. Additionally, strong collaborations with renowned world class institutes provide them the opportunity to have continuous interactions in area of interest which also enhances their scientific approach. We provide a strong foundation to our students with course work in advance topics of computer science which set their foundation to meet challenges of quality research and to publish their scientific articles in international conferences and journals.

Admission requirements, program duration, coursework and thesis/research project details are given at page 43

Offering Campuses

Islamabad, Abbottabad, Wah, and Lahore

Faculty Members

CUI Islamabad Campus

Professor

- Dr. Sohail Asghar, PhD, Monash University, Australia

Associate Professors

- Dr. Khalid Latif, PhD, Vienna University of Technology, Austria
- Dr. Nadeem Javaid, PhD, Ecole National Superieur Des Telecommunication, France
- Dr. M. Manzoor Illahi Tamimy, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China
- Dr. Muhammad Masoom Alam, PhD, University of Innsbruck, Austria
- Dr. Majid Iqbal Khan, PhD, Technical University, Vienna, Austria

Assistant Professors

- Dr. Farhana Jabeen, PhD, Manchester University, UK
- Dr. Ghufran Ahmed, PhD, Muhammad Ali Jinnah University, Islamabad, Pakistan
- Dr. Abid Khan, PhD, Harbin Institute of Technology, China
- Dr. Amir Hanif Dar, PhD, Beijing Institute of Technology, China
- Dr. Tehseen Zia, PhD, Vienna University of Technology, Austria
- Dr. Muhammad Asim Noor, PhD, Johannes Kepler University Linz, Austria
- Dr. Malik Ahmed Kamran, PhD, Vienna University of Technology, Austria
- Dr. Saif-ur-Rehman Malik, PhD, North Dakota State University, USA
- Dr. Munam Ali Shah, PhD, University of Bedfordshire, UK
- Dr. Naveed Ahmed, PhD, Cambridge University, UK
- Dr. Mubeen Ghafoor, PhD, Muhammad Ali Jinnah University, Islamabad, Pakistan
- Dr. Muhammad Imran, PhD, Southampton University, UK

- Dr. Iftikhar Azim Niaz, PhD, University of Tsukuba, Japan
- Dr. Yasir Faheem, PhD, University of Paris, France
- Dr. Adeel Anjum, PhD, Université de Nantes, France
- Dr. Javed Iqbal, PhD, University of Malaya, Malaysia
- Dr. Muzaffar Khan, PhD, University Technology Petronas, Malaysia
- Dr. Azra Shamim, PhD, University of Malaya, Malaysia
- Dr. Aimal Tariq Rextin, PhD, University of Limerick, Ireland
- Dr. Hasan Ali Khattak, PhD, Politecnico Di Bari, Italy
- Dr. Abdul Wahid, PhD, Kyungpook National University, Korea
- Dr. Zia uddin, PhD, Asian Institution of Technology, Pathum Thani, Thailand
- Dr. Ahmad Raza Shahid, PhD, University of York, UK
- Dr. Mansoor Ahmed Awan, PhD, Technical University, Vienna, Austria
- Dr. Basit Raza, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Zara Hamid, PhD, National University of Science and Technology, Islamabad, Pakistan
- Dr. Syed Sohaib Ali, PhD, Istituto Giannina Gaslini, Genova, Italy
- Dr. Arif Ali Khan, PhD, City University of Hong Kong
- Dr. Rizwana Irfan, PhD, North Dakota State University, Fargo, USA
- Dr. Mukhtar Azeem, PhD, CUI Islamabad Campus, Pakistan
- Dr. Mariam Akbar, PhD, COMSATS IIT, Islamabad
- Dr. Assad Abbas, PhD, North Dakota State University, USA
- Dr. Inayat-ur-Rehman, CUI, Islamabad, Pakistan
- Dr. Uzair Iqbal, PhD, Unversiti Teknologi, Pertonas, Malaysia
- Dr. Zobia Rehman, PhD, Lucian Blaga University of Sibiu, Sibiu, Romania
- Dr. Tahir Mustafa Madni, PhD, Universiti Teknologi Petronas, Malaysia
- Dr. Adnan, PhD, University of Malaya, Malaysia
- Dr. Shahid Hussain, PhD
- Dr. Saif Ul Islam, PhD, University Paul Sabatier Toulouse III, Toulouse, France

Beside 02 advisors, 10 non-PhD Assistant Professors, 48 Lecturers and 06 Research Associates/Teaching Associates are also associated with the department.

CUI, Abbottabad Campus

Associate Professors

- Dr. Imran Ali Khan, PhD, Graduate University of Chinese Academy of Sciences, China
- Dr. Babar Nazir, PhD University Tecknologi Petronas, Malaysia

Assistant Professors

- Dr. Abbas Khalid, PhD, The University of Lancaster, United Kingdom
- Dr. Abdul Nasir Khan, PhD, University of Malaya, Malaysia
- Dr. Ahmad Din, PhD, Politecnico Di Torino, Italy
- Dr. Ahmad Khan, PhD, FAST Islamabad, Pakistan
- Dr. Attiqa Rehman, PhD, Fern University in Hagen, Germany
- Dr. Babar Nazir, PhD, University Tecknologi Petronas, Malaysia
- Dr. Eraj Khan, PhD, The University of Lancaster, United Kingdom
- Dr. Fiaz Gul Khan, PhD, Politecnico Di Torino, Italy
- Dr. Iftikhar Ahmed Khan, PhD, Brunel, West London, UK
- Dr. Junaid Shuja, PhD, University of Malaya, Malaysia
- Dr. Kashif Bilal, PhD, NDSU, United States
- Dr. Mazhar Ali, PhD, North Dakota State University, USA
- Dr. Mudassar Aslam, PhD, Malardalens University, Sweden
- Dr. Muhammad Usman Shahid Khan, PhD, North Dakota State University, USA
- Dr. Osman Khalid, PhD, NDSU, United States
- Dr. Rafi us Shan, PhD, The University of Lancaster, United

Kingdom
- Dr. Raja Wasim Ahmad, PhD, University of Malaya, Malaysia
- Dr. Sajid Shah, PhD, Politecnico de Torino Italy
- Dr. Shahid Raza, PhD, Malardalen University of Sweden
- Dr. Syed Sajid Hussain, PhD, Fern Universitat in Hagen, Germany
- Dr. Tahir Maqsood, PhD, CUI Abbottabad, Pakistan
- Dr. Waqas Jadoon, PhD, Sichuan University, China
- Dr. Zia ur Rehman, PhD, Certtin University, Australia

Besides, 07 non-PhDs, 30 Research Associate 02 are also associated with this department.

CUI, Wah Campus

Associate Professors
- Dr. Ehsan Ullah Munir, PhD, Harbin Institute of Technology, China
- Dr. M. Wasif Nisar, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China
- Dr. Sheraz Anjum, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China
- Dr. Muhammad Sharif, PhD, CUI Islamabad, Pakistan
- Dr. Nadir Shah, PhD, Beijing University, China

Assistant Professors
- Dr. Waqar Mehmood, PhD, Innsbruck University, Austria
- Dr. Tariq Umer, PhD, Lancaster University, UK
- Dr. Mussarat Abdullah, PhD, CUI Islamabad, Pakistan
- Dr. Muhammad Khalil Afzal, PhD, Yeungnam University, South Korea
- Dr. Muhammad Maaz Rehan, PhD, University Technology Petronas, Malaysia
- Dr. Sulma Rashid, PhD, University Technology Malaysia, Malaysia
- Dr. Jamal Hussain Shah, PhD, University of Science and Technology of China, China
- Dr. Tassawar Iqbal, PhD, Vienna University Technology, Austria
- Dr. Faisal Azam, PhD, CUI Islamabad, Pakistan
- Dr. Hikmat Ullah Khan, International Islamic University, Islamabad, Pakistan
- Dr. Saeed ur Rehman, University of Science and Technology of China, China
- Dr. Mudassar Raza, PhD, University of Science and Technology of China, China
- Dr. Saima Gulzar Ahmad, University of Malaya, Malaysia
- Dr. Najmal Ikram Qazi, MAJU, Islamabad
- Dr. Faisal Shafique Butt, Preston University, Islamabad

Besides, 03 non-PhD Assistant Professors, 26 Lecturers and 08 Research Associates are also associated with this department.

CUI, Lahore Campus

Professors
- Dr. Syed Asad Hussain, PhD, Queen's University Belfast, UK
- Dr. Zulfiqar Habib, PhD, Kagoshima University, Japan

Associate Professors
- Dr. Ghulam Rasool, PhD, Technische Universität Ilmenau, Germany
- Dr. Muhammad Waqas Anwar, PhD, Harbin Institute of Technology, China
- Dr. Farooq Ahmad, PhD, Harbin Institute of Technology, China

Assistant Professors
- Dr. Rao M. Adeel Nawab, PhD, University of Sheffield, UK
- Dr. Wajahat Mahmood Qazi, PhD, National College of Business Administration and Economics, Pakistan
- Dr. Usama Ejaz Bajwa, PhD, University of Engineering and Technology, Taxila, Pakistan
- Dr. Ashfaq Ahmad, PhD, University of Chinese Academy of Sciences, China
- Dr. Hamid Turab Mirza, PhD, Zhejiang University, China
- Dr. Muhammad Salman Khan, PhD, Graz University of

Technology, Austria
- Dr. Muhammad Hasan Jamal, PhD, Purdue University, Indiana, USA
- Dr. ZeshanGillani, PhD, King College of London, UK
- Dr. Atifa Athar, PhD, National College of Business Administration and Economics, Pakistan
- Dr. Amjad Ali, PhD, Kyung Hee University, South Korea
- Dr. Furkh Zeshan, PhD, University Technology Malaysia, Malaysia
- Dr. Abid Sohail, PhD, University Technology Petronas, Malaysia
- Dr. Shahbaz Akhtar Abid, PhD, University of Malaya, Malaysia
- Dr. Adnan Ahmad, PhD, Massey University, New Zealand
- Dr. Muhammad Hasnain Ch., PhD, Asian Institution of Technology, Pathum Thani, Thailand
- Dr. Allah Bux Sargano, PhD, The Lancaster University, UK
- Dr. Muhammad Aksam Iftikhar, PhD, Pakistan institute of engineering and applied sciences, Islamabad
- Dr. Faizan Ahmad, PhD, University of Chinese Academy of Sciences, China
- Dr. Muhammad Tayyab Ch., PhD, University Technology Malaysia, Malaysia

Besides, 17 non-PhD Assistant Professors, 40 Lecturers and 02 Research Associates are also associated with this department.

CUI, Attock Campus

Assistant Professors
- Dr. Farman Ali Khan, PhD, University of Vienna, Austria
- Dr. Khalid Iqbal, PhD, University of Science and Technology, Bannu, China
- Dr. Khalid Mehmood Awan, PhD, University Technology Malaysia, Malaysia
- Dr. Muhammad Sardaraz, PhD, Iqra University, Islamabad, Pakistan
- Dr. Muhammad Tahir, PhD, Iqra University, Islamabad, Pakistan
- Dr. Peer Azmat Shah, PhD, University Technology Petronas, Malaysia
- Dr. Rashid Ahmed, PhD, Jeju National University, Korea
- Dr. Sadaf Yasmin, PhD, Capital University of Science and Technology, Pakistan
- Dr. Zahoor-ur-Rehman, PhD, University of Engineering and Technology, Lahore, Pakistan
- Dr. Salabat Khan, PhD, National University of Sciences and Technology, Islamabad, Pakistan
- Dr. Farhan Aadil, PhD, National University of Sciences and Technology, Islamabad, Pakistan
- Dr. Muazzam Maqsood, PhD, U.E.T, Taxila, Pakistan
- Dr. Muhammad Saleem Khan, PhD CUI Islamabad, Pakistan
- Dr. Muhammad Shahzad Faisal, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Muhammad Shahid Iqbal Malik, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Muhammad Sharif, PhD, National University of Computer & Emerging Sciences, Islamabad, Pakistan

Besides, 04 non-PhD Assistant Professors and 18 Lecturers and 01 Research Associate are also associated with this department.

CUI, Sahiwal Campus

Professors
- Dr. Nazir Zafar, PhD, Kyushu University, Fukuoka, Japan

Associate Professors
- Dr. Javed Ferzund, PhD, Graz University of Technology, Graz, Austria

Assistant Professors
- Dr. Tariq Ali, PhD, University Technology Petronas, Malaysia
- Dr. Muhammad Shoaib, PhD, International Islamic University, Islamabad, Pakistan

- Dr. Majid Hussain, PhD, University of Engineering and Technology, Lahore, Pakistan
- Dr. Mazhar Sadiq, PhD, University of Jyvaskyla (Jyvaskylan Yliopisto (JY)), Finland
- Dr. Muhammad Farhan, PhD, Computer Vision and Machine Learning, University of Engineering and Technology, Lahore
- Dr. Khalid Mahmood, PhD, Network Security, International Islamic University Islamabad

Besides, 01 non-PhD Assistant Professor, 27 Lecturers, 05 Lab Engineers 02 Research Associates and 02 Teaching Assistants are also associated with the department.

CUI, Vehari Campus

Assistant Professors

- Dr. Muhammad Rafiq, PhD, Muhammad Ali Jinnah University, Islamabad, Pakistan
- Dr. Aqeel-ur-Rehman, PhD, Chongqing University, China
- Dr. Malik Muhammad Ali Shahid, PhD, University Technology Malaysia, Malaysia
- Dr. Zahid Abbas, PhD, University Technology Malaysia, Malaysia
- Dr. Salman Iqbal Malik,PhD, University of Malaya, Malaysia

Besides, 07 non-PhD Assistant Professors, 30 Lecturers, 10 Research Associates are also associated with the department.

Department of Health Informatics

The Department of Health Informatics was established in 2018 earlier was functioning as Health Informatic Unit. Department offers courses of study ranging from an introductory overview to an intense, full curriculum in Health Informatics, with special emphasis placed on the fields of health information systems, management and health-enabling technologies. Courses of study are offered as part of an innovative curriculum, which involves collaborations with international universities and health care institutions. Health Informatics focuses on the application of computer information systems to health care and public health. It extends beyond simply using the computer as a tool for computation into the process of knowledge acquisition, storage, retrieval, representation and manipulation of data.

Our mission of the multidisciplinary Health Informatics Program is to “Integrate Health care system with I.T." A useful model of the emergence of informatics is to consider different roles of clinicians, management and IT services in health care. Health Informatics is the science of information management in healthcare and it blends clinical practice, decision - making and research. Health Informatics is a body of knowledge and a set of techniques to organize and manage information in support of research, education and patient care.

Career Potential/Career Prospects: After completing Masters in Health Informatics, you will have the capability to apply for a wide variety of posts both in public and private hospitals, pharmaceutical industries, and multi-national Health Care Organizations, N.G.Os and Overseas organizations. Following could be the professional roles:

- Clinician with health Informatics leader
- Health information management and exchange specialist
- Health information privacy and security specialist
- Research and development scientist
- Programmers and software engineer
- Health IT sub-specialist
- Practice work flow and information management redesign specialist
- Clinician / practitioner consultants
- Implementation support specialists
- Implementation managers
- Technical/software support

Strategic Health Informatics Advanced Research:

The Health Information is supporting innovative research to address well-documented problems that impede the adoption of health IT. The knowledge generated and innovations created from this program will accelerate progress toward the meaningful use of IT in health, adaptive and nationwide health care system. The MS students get research opportunities in the fields of Health Informatics, Electronic Health Record, Modeling to Develop a Clinical Practice, Networking, Data Mining, Health Early Warning System, IT skills for health professionals and dispensing of controlled medicines through software, computing for Physicians, Dental Surgeons and Pharmacists are available. Health Informatics Unit and University of Otago, New Zealand are research partners. Students' thesis will be supervised by senior Professor(s) of University of Otago and some other leading overseas universities, in addition to local faculty.

The Health Informatics Unit has following International linkages:

- Member of the International Medical Informatics Association (IMIA) USA
- Global Health Work Force (GHWA) Geneva (Switzerland) a subsidiary of World Health Organization (WHO)
- The Commission on Accreditation for Health Informatics and Management Education (CAHIM) USA
- Global Allied for ICT and Development
- (GAID) approved by the United Nations
- Global Development Network (GDN)
- Health System Action Network (HSAN)
- Health Care Information for All 2015(HIFA)
- Geneva Foundation for Medical Education and Research (GFMER)
- The World Health Organization (WHO), Department of Human Resources for Health,
- Reproductive Health and Research, the Health Professionals Global Network (HPGN)
- Canada's Health Informatics Association (COAH)
- International Network for the availability of Scientific Publications (INASP)
- Health Alliance (USA)
- Community mHealth Working Group (USA)
- Rural and Remote Health(The Electronic Journal Research, Education Practice and Policy)
- National Prevention Information Network(NPIN)
- United Nations Foundation(USA)
- Health Data Management (USA)
- National Coordinator for Health Information Technology (USA)
- Information Technology and Innovation Foundation

National Linkage: (Consortium Research)

- **Health Care Professionals and Researchers**, Shaukat Khanum Memorial Cancer Hospital and Research Centre. 7-A Block R-3 M.A. Johar Town, Lahore Tel: +92 42 3590 5000 Fax: +92 42 3594 5208 UAN: 111 155 555 Toll-free: 0800 11555
- **Dow University of Health Sciences (DUHS) DMC Campus,** Baba-e- Urdu Road, Karachi. Tel: + (92-21)99215754 & 38771000 website: www.duhs.edu.pk
- **DUHS Ojha Campus, Dow University Hospital**, Karachi Tel: + (92- 21)99215754 & 38771111 email: info@duhs.edu.pk.
- **Pakistan Health Research Council (PHRC),** Shah rah-e-Jamhuriat, G-5/2 Islamabad. Tel: 00-92-51-9216793, 00-92-51-9207386, Fax: 00-92-51-9216774. email: rdc.phrc@gmail.com, website: www.nhsrc.gov.pk
- **Pakistan Institute of Medical Sciences (PIMS)** Ibn-e-Sina Rd, G-8, Islamabad. Tel: + (9251) 9261170 Website: www.pims.gov.pk
- **Shaheed Zulfaqar Ali Bhutto Medical College (SZABMU) PIMS,** G-8/3, Islamabad, 4400 Tel: + (9251)9107687, Fax: + (9251)9107719 E-mail: info@szabmu.edu.pk

Graduate Program

Currently, the following graduate program is being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Health Informatics

The Master of Science in Health Informatics program at CUI is designed to deliver advanced training in informatics to the health care professionals who want to redirect their careers to become health informatics researchers, as well as those who are interested in integrating health informatics expertise in their current professional roles. This program is likely to appeal to the so-called "early adopters" within the health care environment, health professionals involved in system implementation and individuals with an interest in conducting related research.

This program requires satisfactory completion of courses of the program and the structure suggested by the department. This includes routine classroom coaching of core and elective courses demonstrated and explained with help of case studies, examples and real life scenarios. Health Informatics Unit offer courses of study ranging from an introductory overview to an intense, full curriculum in Health Informatics, with special emphasis placed on the fields of health information systems, management and health-enabling technologies. Courses of study are offered as part of an innovative curriculum, which involves collaborations with international universities and health care institutions. Health Informatics (HI) focuses on the application of computer information systems to health care and public health. It extends beyond simply using the computer as a tool for computation into the process of knowledge acquisition, storage, retrieval, representation and manipulation of data.

Entry Requirements

- A 16 years degree in relevant field in Biotechnology/ Biochemistry/Molecular Biology/Biosciences /Bioinformatics/Pharm D, BS Nursing, Biology, Physics, Chemistry, Computer Science, Material Science, Pharmacy, Applied Biosciences (Industrial Biotechnology/Plant Biotechnology/Healthcare Biotechnology) with minimum first division (annual system) or CGPA 2.5/4.0 (semester system) or MBBS, BDS with minimum of 50% marks from an accredited educational institution
- No third division (annual system) or D grade (semester system) throughout the academic career
- GAT (General) with minimum of 50% marks.

For International Students:

TOFEL and ILETS or GRE (General) Scholarship available for international Students with state member's countries, OIC, COMSATS, IESCO.

Offering Campus

Islamabad

Faculty Members

CUI, Islamabad Campus

Head of the Department

- Dr. Shafaat A. Khan, M.B.B.Ch (Cairo), M.D, MPH (New York Medical College), USA

Associate Head of the Department

- Dr. Seema Rizvi, M.B.B.S, M.R.C.O.G (UK) MS (Health Informatics)

Professor

- Professor Dr. S.M. Mursalin M.B.B.S (Pak) D.M.R(T), M.S (Geneva) MPH (South Africa)

Associate Professor

- Prof. Dr. Shariq Khoja, M.B.B.S, MS. PhD (e-Health) Calgary University (Canada)

Assistant Professors

- Dr. Fouzia Anwar, M.B.B.S (PAK) MS, (Health Informatics) PhD (Malaysia)
- Dr. Night Sultana, M.B.B.S (PAK) MS, (Public Health)
- Dr. Usman Iqbal. Phram.D (Pak) MBA (Pak), PhD (Taipei Medical University (Taiwan)

Advisory Committee Health Informatics:

- Prof. Dr. Sania Nashtar M.B.B.S, M.R.C.P (U.K) F.R.C.P. PhD (U.K) Health Policy
- Prof. Dr. Asif Zafar, M.B.B.S, MCPS, FCPS, M.D, FRCS (U.K) Surgeon (Telemedicine Expert)
- Prof. Dr. Haroon Roadad Khan, M.B.B.S. M.Sc, PhD (UK)(Clinical Pathologist)
- Prof. Dr. Shakila Zaman, M.B.B.S, FCPS (Pediatrics) M.P.H, PhD (public Health)
- Prof. Dr. Shariq Khoja, M.B.B.S, MS. PhD (e-Health) Calgary University (Canada)
- Prof. Dr. S.M. Mursalin M.B.B.S, D.M.R (T), M.S (Geneva) MPH (S Africa) (HIMS Expert)
- Prof. Dr. Shahzad Ali Khan, MBBS (PAK), MS, PhD (Health Economics)
- Prof. Dr. Farah Rasheed M.B.B.S (Pak), M.S (U.K) (Clinical Research expert)
- Prof. Dr. Mohammad Amjad Chaudhry MBBS, FRCS, FCPS (Pediatrics' Surgery)
- Major General (Retd) Prof. Dr. Farrukh Sahair M.B.B.S, M.Sc, PhD (USA) (Clinical Expert)

Faculty of Engineering

Dean's Message

Engineering at CUI offers unique opportunities for innovative education, and research. At CUI Engineering Education was initiated in 1999 with single discipline and now, after more than fourteen years, Engineering has grown beyond expectations having 07 Engineering disciplines offering 32 programs at undergraduate and graduate levels in different campuses of CUI. It has been consistently ranked among top Engineering Faculties of Pakistan by Higher Education Commission of Pakistan. Times Higher Education (THE) UK ranked Faculty of Engineering at CUI among top 301-400 in the 2018 and 2019 THE Engineering and Technology subject ranking. To date no University or department of any University in Pakistan has been ranked among first 400 in the world by any known international ranking organization.

Since its inception, Faculty of Engineering has been active in recruiting outstanding new faculty members to support their teaching and research activities. Under the umbrella of Faculty development program every year we send our faculty members for higher education and short-term scientific and research training in well reputed International Universities. Our young and highly qualified Faculty members have tremendous potential to change the traditional way of thinking about engineering education, pedagogy and research excellence. I am convinced that as it continues to mature and expand it will emerge as an internationally recognized center of excellence in the field of Engineering.

Since the establishment, we have increased our students to over 8,000 at different campuses of CUI. The Engineering education at CUI is distinguished by the extraordinary quality of its students. Our students represent a rich blend of diverse geographic locations in Pakistan and are ranked among the top tier statistically.

When it comes to career development and planning, students at COMSATS University Islamabad are supported by our career development centers and Industrial Liaison offices at different campuses. The Industrial liaison offices work closely with career development offices to liaise with relevant employers in order to learn their hiring priorities and guide the students accordingly. These arrangements reflect CUI's commitment, enabling all of our students to access the maximum possible range of career opportunities in engineering sectors.

We offer Graduate/undergraduate degree programs at different Campuses of CUI in Telecommunication Engineering, Electronics Engineering, Electrical Power Engineering Computer Engineering, Chemical Engineering, Mechanical Engineering and Civil Engineering. We have launched 4 Engineering programs in collaboration with Lancaster University UK, which is among top ten Universities of UK, and we are also in process of launching few more degree programs in collaboration with International Universities of very good repute. We have established a Center for Advanced Studies in Telecommunication (CAST) at Islamabad Campus in order to conduct state of the art research and development in this area of technology. Similar centers of excellence in other areas of Engineering are going to be established in other campuses of CUI.

Our newly developed campuses are equipped with state-of-art teaching and research Laboratories, libraries (one of the largest in the country), modern teaching aids and supplemented with wide range of facilities for extracurricular activities. Apart from educational excellence, we recognize that the choice of an institution is influenced by practical concerns such as location and cost. Our campuses are located at very convenient places and we are also striving to keep our tuition fee well-below the tuition fee charged by many other institutions of the country.

Our past achievements are a source of pride to CUI and many more exciting changes are planned for the years to come, the changes which are premeditated to ensure that the Faculty of Engineering at CUI remains one of the leading Faculties nationally and internationally. This is the best time to be a student at Engineering departments of CUI and take full advantage of their rich learning environment.

Best Wishes

Prof. Dr. Shahid A Khan

Department of Electrical and Computer Engineering

Department of Electrical and Computer Engineering at CUI Islamabad, Abbottabad and Wah Campuses was established in 2001 and at CUI Lahore, Attock and Sahiwal Campuses in 2002, 2007 and 2012 respectively. During this short span it has made big strides by offering conducive environment for studying various disciplines of Electrical Engineering. The curriculum ensures that the students learn not only the theoretical knowledge required to solve complex engineering problems but at the same time acquaints them with state of the art tools and technique used in practice.

One of the main goals of the department is to actively achieve gender mainstreaming in its programs. Women are doing remarkable work in the engineering field today. Fields such as Computer Engineering, Telecommunication Engineering, Power Engineering and Electronics Engineering are offering congenial work environments for females. As such there is an increased demand from the female students to enroll in the Engineering Department programs. The primary research areas focused in the proposed program are as follows:

- Computer Engineering
- Power and Energy Engineering
- Electronic Systems Engineering
- Photonic System Engineering
- Automation and Control Engineering
- Telecommunications Engineering
- Networks Engineering
- Communication and Radar Technology

COMSATS Electrical Engineering program provides its student with the state of the art laboratories. The Department of Electrical and Computer Engineering at CUI has the following Laboratories for research and development:

- VLSI/ Comp. Architecture Laboratory
- Microprocessor Laboratory
- Communication Laboratory
- Electronics Laboratory
- Microwave Laboratory
- Control Laboratory
- Project Laboratory
- Graduate Laboratory
- Networks Laboratory
- Radio Frequency Laboratory

These Labs are equipped with sophisticated software and hardware technologies. These well-equipped Laboratories are maintained and kept up-to-date so that the students can take up research projects in any of the areas mentioned above.

Research Groups

Mobile Communication and Networks (MCN)

The advancements in Mobile Cellular Communications have revolutionized the concepts of connectivity, reliability and ease of communication. Mobile cellular networks have received wide spread approval and appreciation from masses. However, better Quality of Service (QoS) and resource management requirements have introduced several new challenges for researchers. The group aims to conduct research and development in areas of security, QoS, wireless resource management and mobility management in next generation cellular mobile networks. Currently, work is underway on Adaptive Call Queuing Schemes that prioritize resource distribution among new and handoff calls on the basis of call types (voice, multimedia calls) and user mobility.

Signal Processing for Wireless Communications (SPWCOM)

The Signal Processing Group develops signal processing algorithms that cover a wide variety of application areas including speech and image processing, wireless sensor networks, analog and digital communications, radar and

sonar. Our prime focus is on algorithm development in general, with the applications serving as motivating contexts. Our approach to new algorithms includes some unconventional directions, such as algorithms based on fractal signals, chaotic behavior in nonlinear dynamical systems in addition to the more conventional areas of signal modeling, quantization, parameter estimation, sampling and signal representation.

The group aims:

- To develop new algorithms based on advanced filtering techniques.
- To apply probabilistic modeling in recognition algorithms.
- To enhance the performance of MIMO OFDM systems.
- To develop recent research based CAD Models / Simulations.

Optical and Wireless Communications (OptiCom)

The Optical Communications research group undertakes research on a range of topics applicable to cutting edge optical communications technology. Optical communication systems have successfully rationalized in back bone transmission systems in terms of economic scalability, technology up gradation, protocol transparency, high data rates and logically independent hierarchical connectivity. Optical Communication is a promising source to accomplish the up-coming high bandwidth demands.

The key areas of research in Optical communication are WDM Passive optical networks, free space laser communication, high precision optical measurement technologies, and optical sensors, Free Space Optics (FSO), Fiber Channel Storage Area Networks, Fiber over Wireless (FiWi) networks, Radio-and-Fiber (RandF) and Radio-Over-Fiber (RoF). The research activities in Microwave communications are focused on multiple-element antennas and associated signal process in g techniques, target recognition, Antennas Propagation, Microwave Filters, Mm-wave and Submm-wave (THz) antennas.

The major objectives are:

- To develop an open source graphical user interface (GUI) based software toolkit for the purpose of education, research and design of optical fiber communication systems.
- To develop Computer Aided Design models/simulations for optical communication systems

Multirate Communication Network (MRCN)

With the influx of the internet and multimedia applications in everyday life, the need for a cost effective solution, that offers reliable communication with higher data rates, cannot be overlooked. We can save extra cost and effort involved in setting up a new dedicated network by opting for the “No New Wires” solution for communication networks, such as the digital subscriber line (DSL) and the power lines. However, these wire line media have their share of problems e.g., crosstalk and high noise content in the channel. Application of multi rate signal processing techniques/wavelet transforms in combination with multicarrier Modulation can be utilized to mitigate these channel impairments

The greatest motivation for pursuing Wavelet Multicarrier Modulation (W-MCM) systems lies in the freedom that they provide to communication system designers. By tailoring to the design specifications, a wavelet based system that best suits an engineering requirement could be conceived. The group has the objective to design and implement transceivers based on Multirate signal processing techniques and MCM in hardware.

The future directions for the group are:

- Design and Hardware Implementation of transceivers based on Multirate signal Processing techniques and MCM.
- Wavelet OFDM for wireless communications.
- Discrete wavelet Multitone for PLC and DSL.
- Equalization techniques for discrete wavelet multitone

modulation (DWMT) techniques.

Computer Vision (COMVIS)

Computer vision research is becoming more essential for the technological advancement of a country with an increasing number of applications in civil, defense and industrial sector. Some of the key application areas of computer vision are in public security, e.g., surveillance, biometric authentication, forensic record analysis such as face, finger prints etc., to assist in crime control.

The group primarily focuses on these application areas:

- Applied Basic Research in Image Pattern Recognition: fundamental issues in statistical learning.
- Biometric Recognition: individual identification by analyzing their physiological and behavioral characteristics, including face, iris, fingerprint, palm print, etc.
- Intelligent video processing and understanding: automatic video analysis and understanding to reduce human intervention in surveillance.
- Surveillance (tracking, identification, road safety)
- Object Categorization and sense analysis in natural images (e.g. building extraction, object recognition, camouflage breaking, feature analysis)

Renewable Energy and Power Systems (REPS)

Renewable Energy and Power Systems research group is multidisciplinary group that fosters collaborative research efforts and advances in the areas of efficient and sustainable power system technologies. The group will develop fundamental and applied knowledge that is required for the next generation of low-emission, high–efficiency power generation systems. The objectives of the REPS group are research publications, starting of MSc. in Power and Energy System, Industrial Projects and collaborations, seminars/workshops on MATLAB, ANSYS, MEMS, AutoCAD, etc. The group wants to design and implement Micro Grid Station at CUI using Renewable Technologies. Involvement of Undergraduate/graduate students in implementation of these projects (Photovoltaic System, Micro-Wind Turbine, Biomass, etc.), empower them in design methodology of Power Distribution System.

CUI Islamabad Research Groups

Antenna and Microwave Engineering Research Group

The research group was established in 2005 with a few projects in the area of antennas. Thanks to the large human resource and state of the art equipment, the research group is now actively involved in various applications of microwave engineering. Apart from conventional research work on filters and antennas, we focus our activities towards interdisciplinary research. Group members have a large number of publications on their credit ranging from high impact transactions to international conferences. We specialize in antenna designing and offer a wide range of undergraduate and post graduate projects every year.

The group is currently involved in various antenna focused research projects that involve multiple research students working towards their PhDs. Apart from PhD students we have a number of master students working in the Laboratory. The group also works on RF front-end design involving both active and passive components, electronically tunable band-pass filter and band-stop filter for various wireless communication standards. The present research targets application development in broader microwave, microwave near-field and far-field imaging, dielectric characterization and microwave meta material applications.

Communications Research Group

The Communications Research Group at the Department of Electrical and Computer Engineering works within the broad area of Wireless and Digital Communication systems and theory. Our focus is on investigation of techniques and algorithms at the physical layer of the OSI model that can contribute to reliable high speed communications over the transmission channel.

The group members have been actively involved with developing adaptive/ blind equalization algorithms, near-capacity channel coding, EXIT-Chart analysis of Communication Systems, and measurements and modeling of radio channels for MIMO systems, Sensor Networks, and UWB systems. The group members have published more than 70 research papers in prestigious international peer-reviewed journals and conference papers.

Our current research efforts are on Cooperative Communications, Cognitive Radio, Multi-carrier CDMA and Blind Channel Estimation. Some of the group members have research proposals submitted to local funding agencies while other funding applications are in preparation.

Integrated Circuits and System Research Group

The Integrated Circuits and Systems Research Group targets R&D activities in the areas of Integrated circuits and systems using ASICs and FPGA based prototyping. The three essential activities are to maintain a healthy offering of related courses at the graduate and undergraduate levels to train an adequate number of researchers on an on-going basis. The second priority is practical product design as a result of research. The third initiative is the development of open source curricula and supporting materials using open source software and hardware platforms to aid third world nations achieve a level of engineering education that is globally acceptable. The group is actively engaged in research in quite a few areas like fast prototyping set up to enable product design, HDL/ESL methodologies, computer architecture, clocking and serial links, embedded systems and simulation of mixed-mode systems and digital and analog systems.

Networks Research Group (NRG)

The Networks Research Group (NRG) embraces dynamic and dedicated researchers that carry out research in the future and demanding areas spanning from Wired to the Wireless Communication Networks.

The mission of Network Research group is to study, explore, design, analyze and develop the feasible, economic, reliable, scalable, dynamic, self - healing and self - managing solutions for the wired and wireless futuristic network systems.

Core research of this group includes; 3G/4G Mobile Communication Systems, Next Generation All-IP Network and Systems, Mobile Ad hoc Networks (MANETs), Wireless and Underwater Sensor Networks, Embedded System Design, Wireless Network Planning and Optimization, Real-Time Spam SMS filtering in Wireless Networks, and Seamless Mobility and Bandwidth aggregation in Heterogeneous Network Environment for Multi-interface Mobile devices.

The group aims to publish and discuss its research in various International journals and flagship conferences round the globe.

Robotics and Control Research (RCR) Group

The Robotics and Control Research Group is actively working within the domain of analysis, design and development of robotic mechanisms and control systems. The group has published more than 20 research papers in reputed international conferences and journals and authored one book and a book chapter (Springer).

Research interests are within the domain of design and developmentand analysis of robotic mechanism, Mechatronics systems and Control systems.

Renewable Energy and Power Engineering

The Renewable Energy and Power Engineering Research Group works on the technologies for renewable energy generation, power production and energy management to reduce energy consumption and improve energy efficiency. The research activities are within the area of Power and Energy, Power Electronics, Solar thermal and photovoltaic,

Smart grid, Wind power generation, Machine Design, Power Quality Issues and AC/DC Drives.

Signal Processing Research Group

The Signal Processing Research Group is working on a wide range of topics in signal processing with emphasis on adaptive signal processing, statistical estimation and detection methods, multi-scale analysis, multivariate data driven time-frequency algorithms, and image processing. In addition to working on core algorithms in the above mentioned areas, the group focuses on practical applications of signal processing methods in communications, health care, renewable energy, and source separation.

Currently, a research project funded by HEC is underway which aims to develop robust data and image fusion techniques using multivariate multi-scale data driven algorithms; another research proposal related to signal processing applications in renewable energy is under review in ICT R&D fund.

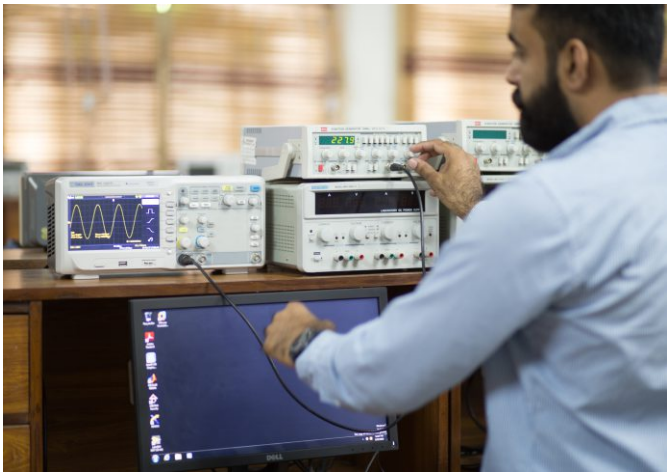
Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Electrical and Computer Engineering

The Master of Science in Electrical Engineering program is designed to prepare students for technically demanding careers in industry as well as for post-master's graduate studies in Electrical Engineering. It allows students to take up rigorous and appropriately structured advanced engineering courses for employment/research in industry. The program includes 24 credit hours of course work and 6 credit hours of research work. MS in Electrical Engineering program focuses on the topics ranging from fundamental techniques to cutting edge technologies in Electrical Engineering. Our primary aim is to provide a learning experience which maximizes our students' employability in a competitive job market and subsequently accelerates their career progression with an excellent preparation for PhD studies.

On successful completion of the course the graduates will have an excellent opportunity in finding employment in areas with a broad, critical and practice based understanding of Electrical Engineering and specialized disciplines. This knowledge makes them ready for a variety of leadership positions in complex contemporary environments and teaching careers in universities.



Specializations in Electrical Engineering include:

- Computer Engineering.
- Power and Energy Engineering.
- Electronic Systems Engineering.
- Photonic Systems Engineering.
- Automation and Control Engineering.
- Telecommunications Engineering.
- Networks Engineering.
- Communication and Radar Technology.
- Bio-Medical Engineering

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

Islamabad, Abbottabad, Wah, Lahore, and Attock

Doctor of Philosophy in Electrical Engineering

The Department of Electrical and Computer Engineering offers Doctor of Philosophy in Electrical Engineering and conducts research in various specialized areas. The quality and impact of the research are demonstrated by many highly cited publications in National/International ISI indexed journals. Students enrolled in the program, complete the required number of courses and then proceed to do research in their area of specialization. Doctor of Philosophy in Electrical Engineering program is usually completed in three to five years and it requires course work as well as research work.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

Islamabad, Abbottabad, Wah, and Lahore

Master of Science in Computer Engineering

The Master of Science in Computer Engineering program has been designed for students who wish to broaden and deepen their understanding of computer engineering. The program provides a unique opportunity to develop cutting edge, in-depth knowledge of specific computer engineering disciplines. MS students are encouraged to participate in research with different research groups. The degree requirements include 24 credit hours of course work and 6 credit hours of research work.

Specializations in Computer Engineering include:

1. Communication Systems
2. Embedded Systems
3. Image and Signal Processing
4. Machine Learning and Artificial Intelligence
5. Computer and Wireless Networks
6. Software Engineering
7. Control Systems

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

Islamabad

Doctor of Philosophy in Computer Engineering

The Department of Electrical and Computer Engineering encouraged by the Ph.D. faculty in the field of Computer Engineering has launched Doctor of Philosophy in Computer Engineering program. The program is aimed to provide highly skilled manpower for the industry, research organizations and universities. The Electrical and Computer Engineering Department has a strong research base reflected by the large number of publications in National/International ISI Indexed Journals. The duration of the program is three to five years which includes course work and research work.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

Islamabad

Faculty Members

CUI, Islamabad Campus

Professors

- Dr. Shahid Ahmed Khan, PhD, University of Portsmouth, UK
- Dr. Nassrullah Khan, PhD, Essex University, UK
- Dr. Junaid Mughal, PhD, University of Birmingham, UK

Associate Professors

- Dr. Raja Ali Riaz, PhD, Southampton University, UK
- Dr. Shurjeel Wyne, PhD, Lunds University, Sweden

Assistant Professors

- Dr. Adnan Iftikhar, PhD, North Dakota State University, USA
- Dr. Rabiah Badar, PhD, CUI Abbottabad, Pakistan
- Dr. Muhammad Aurangzeb Khan, PhD, Lancaster University, UK
- Dr. Junaid Ahmed, PhD, Manchester University, UK
- Dr. Haroon Ahmed Khan, PhD, Lancaster University, UK
- Dr. Adnan Fida, PhD, Universiti Brunei Darussalam, Brunei Darussalam, Brunei
- Dr. Naveed-ur-Rehman, PhD, Imperial College London, UK
- Dr. Bilal Ijaz, PhD, North Dakota State University, USA
- Dr. Kausar Abbas, PhD, Purdue University, Indiana, USA
- Dr. Muhammad Kaleem, PhD, Zhejiang University, China
- Dr. Syed Junaid Nawaz, PhD, Muhammad Ali Jinnah University, Islamabad, Pakistan
- Dr. Amir Rashid Ch., PhD, Lancaster University, UK
- Dr. Adeel Mehmood, PhD, Universite de Technologie de Belfort Montbeliard, France
- Dr. Omar Ahmed, PhD, Politennico Di Torino University of Italy, Italy
- Dr. Jawad Mirza, PhD, Victoria University of Wellington, New Zealand
- Dr. Syed Saud Naqvi, PhD, Victoria University of Wellington, New Zealand
- Dr. Muhammad Faisal Siddiqui, PhD, University of Malaya, Malaysia
- Dr. Shahrukh Agha, PhD, Loughborough University, UK
- Dr. Guftaar Ahmed Sardar Sidhu, PhD, Jacobs University, Germany
- Dr. Hammad Umer, PhD, Imperial College London, UK
- Dr. Moazzam Islam Tiwana, PhD, Institute National Des Telecommunication, France
- Dr. Sana Shuja, PhD, North Dakota State University, USA
- Dr. Muhammad Awais Javed, PhD, University of Newcastle, Australia
- Dr. Ali Arshad, CUI Islamabad, Pakistan
- Dr. Arooj Mubashara Siddiqui, PhD, Lancaster University, UK
- Dr. Adeel Israr, PhD, Technical University Darmstadt, Germany
- Dr. Ali Sohaib, PhD from University of the West of England Bristol, UK
- Dr. Riaz Hussain, PhD, CUI Islamabad Campus
- Dr. Khurram Saleem Alimgeer, PhD, CUI Islamabad Campus
- Dr. Abrar Ahmed, PhD, CUI Islamabad Campus
- Dr. Bakhtiar Ali, PhD, CUI Islamabad Campus
- Dr. Mahmood Qureshi, CUI Islamabad Campus
- Dr. Tariq Bashir, PhD, CUI Islamabad Campus
- Dr. Ali Khaqan, PhD, CUI Islamabad Campus
- Dr. Sardar Muhammad Gulfam, PhD, CUI Islamabad Campus
- Dr. Tariq Mahmood Khan, PhD, Macquarie University, Australia
- Dr. Ahmad Naseem Alvi, PhD, CUI Islamabad Campus
- Dr. Shaista Jabeen, PhD, North Dakota State University, USA

Besides, 21 non-PhD Assistant Professors, 51 Lecturers, 19 Lab Engineers and 17 Research Associates are also part of this department.

CUI, Abbottabad Campus

Professors

- Dr. Laiq Khan, PhD, Power System Control, University of Strathclyde, Glasgow, UK
- Dr. Shahid Khattak, PhD, Technische Universitat Dresden, Germany

Associate Professors

- Dr. Imdad Khan, PhD, University of Birmingham, UK
- Dr. Owais, PhD, Linkoping University, Sweden

Assistant Professors

- Dr. Aamir Shahzad, PhD, University Technology Petronas,

Malaysia
- Dr. Abdul Waheed Malik, PhD, Mid Sweden University, Sweden
- Dr. Ahmad Fayyaz, PhD, North Dakota State University, USA
- Dr. Alam Zaib, PhD, Norwegian University of Science and Technology, Saudi Arabia
- Dr. Ali Zahir, PhD, Politecnico de Torino Italy
- Dr. Arshad Wahab, PhD, North Western Polytechnical, China
- Dr. Bilal Khan, PhD, University of Sheffield, UK
- Dr. Ch. Arshad Mehmood, PhD, North Dakota University, United States
- Dr. Faisal Khan, PhD, University Tun Hussein ONN Malaysia
- Dr. Fazal Wahab Karam, PhD, Norwegian University of Science and Technology, Norway
- Dr. Ghulam Mujtaba, PhD, UK
- Dr. Hazrat Ali, PhD, University of Beijing, China
- Dr. Ihsan Ullah, PhD, Hanyang University, South South Korea
- Dr. Irfanullah, PhD, NDSU, USA
- Dr. Jabran Khan Jadoon, PhD, UNICE France
- Dr. Jamal Nasir, PhD, University Techonology Malaysia
- Dr. Jawad Saleem, PhD, Mittuniversitetet Mid Sweden University, Sweden
- Dr. Mohsin Shahzad, PhD, Vienna University of Technology, Malaysia
- Dr. Muhammad Ali, PhD, North Dakota State University, USA
- Dr. Muhammad Amir Khan, PhD, University Technology Petronas, Malaysia
- Dr. Muhammad Bilal Qureshi, PhD, North Dakota State University, United States
- Dr. Muhammad Fahad, PhD, University of Peshawar, Pakistan
- Dr. Muhammad Shoaib Khaliq, PhD, Politecnico Di Torino, Italy
- Dr. Shoaib Azmat, PhD, Georgia Tech, USA
- Dr. Sohail Razzaq, PhD, The University of Lancaster, United Kingdom
- Dr. Syed Ayaz Ali Shah, PhD, University Technology Petronas, Malaysia

Dr. Uzair Khan, PhD, Hanyang University, South South Korea
Dr. Zahid Mahmood, PhD, North Dakota State University, USA

Besides, 17 non-PhDs, 52 lecturers and 01 Research Associates are also associated with this department.

Engineering Resource Centre, Abbottabad

Assistant Professors
Dr. Abdul Majid, PhD, Mid Sweden University, Sweden

Besides, 11 Lab Engineers are also associated with this department.

CUI, Wah Campus

Associate Professors
- Dr. Muhammad Iqbal, PhD, Beijing University of Posts and Telecommunications, China
- Dr. Nadia Nawaz, PhD, Essex University, UK
- Dr. Rahim Dad Khan, PhD, East China University of Science & Technology, Shanghai, China
- Dr. Muhammad Altaf, PhD, Essex University, UK
- Dr. Muhammad Naeem, PhD, Simon Fraser University, Burnaby, Canada

Assistant Professors
- Dr. Ayaz Ahmad, PhD, Paris Sud University, France
- Dr. Muhammad Kamran, PhD, Graduate University of Chinese Academy of Sciences, Beijing, China
- Dr. Syed Rameez Naqvi, PhD, Vienna University of Technology, Austria
- Dr. Ashfaq Ahmed, PhD, Politecnico di Torino, Italy
- Dr. Muhammad Awais, PhD, Politecnico di Torino, Italy
- Dr. Sajjad Ali Haider, PhD, Chongqing University, China

- Dr. Tallha Akram, PhD, Chongqing University, China
- Dr. Wilayat Khan, PhD, Foscari University of Venice, Italy
- Dr. Zeeshan Kaleem, PhD, Inha University, Korea
- Dr. Aamir Qamar, PhD, School of Electrical Engineering, Chongqing University, China
- Dr. Hafiz Muhammad Omer Chughtai, PhD, University Technology Petronas, Malaysia
- Dr. Zahoor Uddin, COMSATS University Islamabad, Pakistan
- Dr. Umer Javed, Shanghai Jiao Tong University, China

Besides, 01 Principal Engineer, 05 non-PhD Assistant Professors, 10 Lecturers, 04 Research Associates and 03 Lab Engineer are also associated with this department.

CUI, Lahore Campus

Principal Engineer
- Dr. Saleem Akhtar, PhD, Ecole National SuperieurDes Telecommunication, France

Associate Professors
- Dr. Sobia Baig, PhD, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Swabi, Pakistan
- Dr. Ejaz Ahmad Ansari, PhD, Asian Institution of Technology, Pathum Thani, Thailand

Assistant Professors
- Dr. Ali Nawaz Khan, PhD, Harbin Institute of Technology, China
- Dr. Imran Ghous, PhD, Nanjing University, China
- Dr. Muhammad Nadeem Rafiq, PhD, North Dakota State University, USA
- Dr. Muhammad Jawad, PhD, North Dakota State University, USA
- Dr. Jahanzeb Akhtar, PhD, Brunel University London, UK
- Dr. Mirza Tariq Humayun, PhD, University of Leicester, UK
- Dr. Asim Ali Khan, PhD, Manchester University, UK
- Dr. Syed Mujtaba Hussain Jaffery, PhD, University of Surrey, UK
- Dr. Muhammad Mubeen Masud, PhD, North Dakota State University, USA
- Dr. Muhammad Haris Khan, PhD, University of Nottingham, UK
- Dr. Hafiz Muhammad Asif, PhD, Lancaster University, UK
- Dr. Muhammad Naeem Awais, PhD, Jeju National University, South Korea
- Dr. Khurram Ali, PhD, Poltechnico Di Torino, Italy
- Dr. Muhammad Naeem Shehzad, PhD, Université de Nantes, France
- Dr. Ikram Ullah Khosa, PhD, Politennico Di Torino University of Italy, Italy
- Dr. Abbas Javed, PhD, Glasgow Caledonian University, UK
- Dr. Muhammad Yaqoob Javed, PhD, University of Science & Technology, China
- Dr. Ather Hanif, AP, Capital University Islamabad
- Dr. M. Farooq i Azam, PhD, The University of Lancaster, UK

Besides, 06 non-PhD Assistant Professors, 01 PhD Lecturer, 39 Lecturers, 11 Lab Engineers and 03 Research Associates are also associated with this department.

CUI, Attock Campus

Assistant Professors
- Dr. Muhammad Asif Zahoor Raja, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Shujaat Ali Khan Tanoli, PhD, Asian Institute of Technology, Bangkok, Thailand
- Dr. Ata ur Rehman, PhD, Politennico Di Torino University of Italy, Italy
- Dr. Saeed Ehsan Awan, PhD, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Ajmal Khan, PhD, Kyungpook National University, Korea
- Dr. Zuhaib Ashfaq Khan, PhD, Asian Institute of

Technology, Bangkok, Thailand
- Dr. Faiza Nawaz, PhD, University Technology Petronas), Malaysia
- Dr. Farman Ullah, PhD, Korea Aerospace University, South Korea, Korea
- Dr. Saeed ur Rehman, PhD, University Bretagne Sud, France
- Dr. Hafeez Anwar, PhD, Vienna University of Technology, Australia
- Dr. Fawad Zaman, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Syed Hashim Raza Bukhari, PhD CUI, Wah Campus, Pakistan
- Dr. Muhammad Ismail, PhD School of Electrical Engineering and Computer Sciences NUST, Islamabad Pakistan

Besides, 04 non-PhD Assistant Professors and 06 Lecturers and 03 Research Associates are also associated with this department.

CUI, Sahiwal Campus

Assistant Professors
- Dr. Saeeda Usman, PhD, North Dakota State University, USA
- Dr. Nazar Muhammad Idreess, PhD, Johannes Kepler University Linz, Austria
- Dr. Syed Aftab Naqvi, PhD, North Dakota State University, USA
- Dr. Saqib Saleem, PhD, Victoria University of Wellington, New Zealand
- Dr. Muhammad Abuzar Baqir, PhD, Kebangsaan, Malaysia
- Dr. Jehangir Arshad, PhD, Xindian University, P.R China
- Dr. Talha Younas, PhD, Xindian University, P.R China
- Dr. Ghulam Farid, PhD, Harbin Engineering University, P.R. China
- Dr. Muhammad Sohaib Yaseen, PhD, Shanghai Jiaotong University, P.R. China
- Dr. Ali Ehsan, PhD

Besides, 04 non-PhD Assistant Professors and 09 Lecturers, 10 Lab Engineers and 01, Research Associate are also associated with the department.

Department of Chemical Engineering

Chemical Engineering is one of the popular engineering disciplines that bear a promising market, both at home and abroad. The Department of Chemical Engineering at COMSATS University Islamabad (CUI) Lahore launched its academic programs in Fall-2005 with a vision to produce outstanding chemical engineers equipped with extensive up-to-date technical knowledge and skillful hand-on-training to meet the changing demands of the society. The Department offers enabling academic as well as social environment to its students to nourish their mental faculties. It strives for producing chemical engineers who are distinguished by their innovative approach, professional competence and managerial skills.

The Department has a rich tradition of providing quality education with an emphasis on applied research and all possible international linkages to uplift the standards of engineering education in Pakistan.

Graduate Programs

Currently, the following graduate programs are being offered

and pursued as per latest trends in the professional dynamic market.

Master of Science in Chemical Engineering

The graduate Master of Science in Chemical Engineering Program emphasizes the practical application of Chemical Sciences and Technology to cater the needs of society. The program is designed to prepare students for industry, teaching and research careers, and to meet the need for rigorous and advanced training in the applied aspects of modern technology. The objectives of MS degree program in Chemical Engineering are to create new knowledge by participating in the process of discovery and invention, educate the graduate students with a solid background of fundamentals, stretching their imagination, and preparing them for an exciting future, and serve the society through research, education and outreach activities.

The graduates will have an excellent opportunity in finding employment in areas with a broad, critical and practice - based understanding of Chemical Engineering and specialized disciplines, on successful completion of the this program. This knowledge makes them ready for a variety of leadership positions in complex contemporary environments and teaching careers in universities.

The Department offers specializations in the following fields:

- Oil and Gas production and Processing;
- Environmental Technology;
- Polymer and Rubber Technology;
- Bio-Chemical Engineering;
- Process Systems Engineering;
- Textile Processing;

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

Lahore

Doctor of Philosophy in Chemical Engineering

The purpose of the Doctor of Philosophy in Chemical Engineering Program is to provide research experience to enable chemical engineering graduates to develop new knowledge in the discipline. The developmental changes in program are continuously incorporated in accordance with the stipulated administrative, academic and research forums.

The objective of Chemical Engineering PhD Program is to provide a comprehensive and rigorous education to the graduate students. The program is expected to produce chemical engineers who will contribute to the chemical engineering industries worldwide. The graduates of this program will be able to utilize the principles of chemical engineering for addressing the needs of industry, the scientific community, and society. The program is intended to disseminate the research outcomes in the form of industrial solutions, publications and public presentations.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

Lahore

Faculty Members

CUI, Lahore Campus

Professors

- Dr. Asad Ullah Khan, PhD, Imperial College London, UK
- Dr. Robina Farooq, PhD, East China University of Science & Technology, Shanghai, China

Advisor

- Dr. Javaid Ahmad, PhD, Brunel University, London, UK

Associate Professors

- Dr. Moin-ud-Din Ghauri, PhD, University of Sheffield, UK
- Dr. Mazhar Amjad Gilani, PhD, Technical University of Clausthal, Germany
- Dr. Murid Hussain Malik, PhD, Korea Advanced Institute of Science and Technology, Korea
- Dr. Noman-ul-Haq, PhD, Kyungpook National University, Teagu, Korea
- Dr. Zulfiqar Ali, PhD, Martin Luther University of Halle-Wittenberg, UK
- Dr. Aqeel Ahmad Bazmi, PhD, University Technology Malaysia (UTM), Malaysia

Assistant Professors

- Dr. Sikandar Rafiq, PhD, University Technology Petronas, Malaysia
- Dr. Fahad Rehman, PhD, University of Sheffield, UK
- Dr. Aqeel Ahmad Khan, PhD, Manchester University, UK
- Dr. Javed Iqbal, PhD, Martin Luther University, Germany
- Dr. Abrar Faisal, PhD, Lulea University of Technology, Sweden
- Dr. Zakir Khan, PhD, University Technology Petronas, Malaysia
- Dr. Abrar Inayat, PhD, University Technology Petronas, Malaysia
- Dr. Asim Laeeq Khan, PhD, University of Leuven-Katholieke Universiteit Leuven, Belgium
- Dr. Muhammad Khaliq Majeed, PhD, University Technology Malaysia, Malaysia
- Dr. Faisal Ahmed, PhD, Hanyang University, Seoul, South Korea
- Dr. Muhammad Shahzad Khurram, PhD, Konkuk University, South Korea
- Dr. Muhammad Yasin, PhD, Gwangju Institute of Science and Technology, South Korea
- Dr. Maria Mustafa, PhD, Jeju National University, South Korea
- Dr. Um-e-Salma Amjad, PhD, Politecnico Di Torino, Italy
- Dr. Saif Ur Rehman, PhD, Korea Advanced Institute of Science and Technology, Korea
- Dr. Syed Muhammad Imran Hassan, PhD, Hanyang University, Seoul, South Korea
- Dr. Naim Rashid, PhD, Korea Advanced Institute of Science and Technology, South Korea
- Dr. Abdul Razzaq, PhD, Daegu Gyeongbuk Institute of Science and Technology, South Korea

Besides, 08 non-PhD Assistant Professors, 15 Lecturers, 12 Laboratory Engineers and 16 Research Associates are also associated with this department.

IRCBM, Lahore

Professors

- Dr. Anila Asif, PhD, East China University of Science & Technology, Shanghai, China

Associate Professors

- Dr. Ather Farooq Khan, PhD, University of Vienna, Austria
- Dr. Asma Tufail, PhD, Beijing University of Chemical Technology, China
- Dr. Aqif Anwar Chaudhry, PhD, University College London, UK
- Dr. Muhammad Yar, PhD, University of Bristol, UK

Assistant Professors

- Dr. Mustansara Yaqub, PhD, Dundalk Institute of Technology, Dundalk, Ireland, UK

- Dr. Hamad Khalid, PhD, Zhejiang University, China
- Dr. Mian Hasnain Nawaz, PhD, East China University of Science & Technology, Shanghai, China
- Dr. Muhammad Nasir, PhD, East China University of Science & Technology, Shanghai, China
- Dr. Usman Latif, PhD, University of Veterinary Medicine Vienna, Austria
- Dr. Arsalan Ahmed, PhD, Nanjing University, China
- Dr. Abdur Rahim, PhD, UNICAMP - Universidade Estadual de Campinas, Brazil
- Dr. Akhtar Hayat, PhD, University of Perpiqnan, France
- Dr. Sobia Tabassum, PhD, Technical University of Clausthal, Germany
- Dr. Farasat Iqbal, PhD, Friedrich-Alexander Universität Erlangen Nürnberg, Germany
- Dr. Sher Zaman Safi, PhD, University of Malaya, Malaysia
- Dr. Nawshad Muhammad, PhD, University Technology Petronas, Malaysia
- Dr. Faiza Sharif, PhD, Institute of Biology, Leiden University, Netherlands
- Dr. Fozia, PhD, University of Campinas, Brazil
- Dr. Naeem Akhtar, PhD, Waseda University, Japan
- Dr. Muhammad Irfan, PhD, University of Technology Malaysia
- Dr. Saeed ur Rehman, PhD, Seoul National University, South Korea
- Dr. Hafiza Fakhera Ikram, PhD, University of Cologne, Germany

Besides, 01 PhD Lecturer, 06 Lecturers and 08 Research Associates are also associated with this department.

Department of Civil Engineering

The Department of Civil Engineering was established at CUI Abbottabad and Wah Campuses in Fall 2012 and at CUI Sahiwal in Fall 2015. The department offers a competitive four years degree program at the undergraduate level and two years MS program at the graduate level based on a comprehensive curriculum designed in accordance with the HEC and PEC guidelines and in line with international standards. The department has diverse and experienced faculty of international repute. The department aims at the diversion of all natural resources to the well-being of mankind.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the dynamic market.

Master of Science in Environmental Engineering

The MS in Environmental Engineering is a two-year graduate program after BS Engineering. The program spans over 4 semesters with a minimum requirement of 30 credit hours. There is a research project in the last semester of the program in which the students apply their learning in consolidation. The program focuses on the attainment of environmental excellence in civil engineering projects and thereby to deliver improved environmental performance in project specification, design and construction. Closely aligned with industry's needs, this MS degree aims to provide students with the knowledge and skills to equip them for a career in environmental engineering. The course prepares students to think and act holistically with regard to environmental and sustainability issues, by developing their ability to make sound judgments in relation to the built and natural environments, while meeting the principles of sustainability.

The overall objective of the program is to provide advanced education and training for graduates in engineering, science, and related areas to meet current and future needs

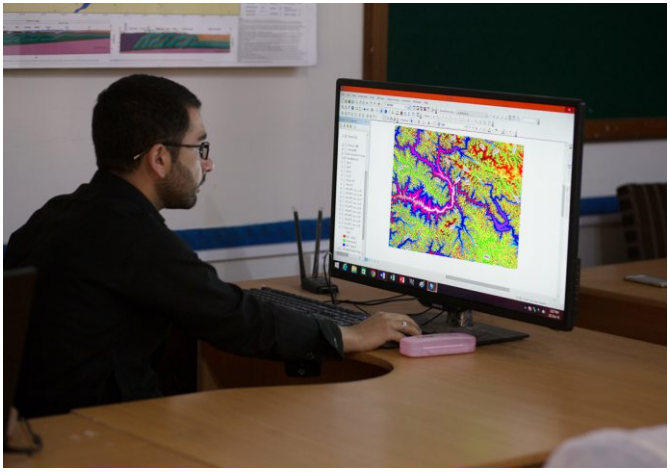
of environmental engineering in the region. The program emphasizes on providing engineers with an in-depth understanding of the technical, economic and managerial factors and their integration in the specification, design and operation of environmental engineering systems. The MS in Environmental Engineering build an important foundation, with a variety of topics including the modeling and analysis of hydrological systems, atmospheric physics and chemistry, pollution transport, and the impact of environmental pollution on human health. Specialized course topics in water supply, and Industrial and Hazardous Waste Management are also offered. The graduates of this program have career in the most demanding industries.

Environmental Engineering is an ever-green and demanding field. The demand of environmental engineers in the country in general and Hazara Division, AJK and GB in particular is at its peak. The following facts and figures reinforce the argument to initiate MS in Environmental Engineering at CUI Abbottabad:

Deforestation in Himalayan range results in adverse effects on environment, climate and annual precipitation pattern. Indus water system which is the backbone of the agriculture economy of Pakistan originates from Himalaya mountain range. Any change in rainfall precipitation may have amplified impacts on economy of Pakistan. There is a dire need to assess the quantum of deterioration and to cope with the natural calamities with the help of environmental engineering expertise.

Water scarcity and energy crisis in country have warranted the construction of large dams. However large dams are always associated with environmental implications. Hence a huge number of environmental engineers will be required for environmental degradation assessment and their mitigation.

The construction of mega projects such as large dams would further accentuate the requirement of environmental engineer. The program lays heavy emphasis on the practical application of knowledge, while at the same time recognizing the importance of theoretical knowledge in developing the intellectual capacity of the graduate engineers. Possible employers of Environment Engineering graduates are Ministries of Water and Power, Irrigation, Environment and Natural resources, Regional development, Municipal councils, water service companies, Private consulting firms, National and International Non-Governmental Organizations, Environmental Protection Agency (EPA), Civil Engineering contractors, and Institutions of higher learning among others.



Entry Requirements

- A 16 years degree in engineering relevant field from an accredited educational institution with first division (annual system) or CGPA 2.5/4.0 (semester system)
- No third division (annual system) or D grade (semester system) throughout the academic career
- GAT (General) with minimum of 50% marks

Offering Campus

Abbottabad

Master of Science in Civil Engineering

The Department of Civil Engineering at CUI Abbottabad has launched the Master of Science (MS) in Civil Engineering Program from Fall 2016. The graduate study in Civil Engineering is planned to be offered MS in Civil Engineering with Specialization in Structural Engineering while MS in Environmental Engineering has been already launched.

In spite of the description of the above two disciplines, an interdisciplinary approach will mark many of the research projects that will form part of the planned graduate studies.

The background and research interests of the faculty will provide opportunities to the prospective graduate students to excel academically and have an exposure to research in the overlapping areas of Civil Engineering which has recently emerged and is gaining popularity as an intellectual skill. Details of the program are described in succeeding paragraphs.

Entry Requirements

A 16 years degree in relevant field (Civil Engineering) from an accredited educational institution with first division (annual system) or CGPA 2.5/4.0 (semester system)
No Third Division (annual system) or D Grade (semester system) throughout the academic career
GAT (General) with 50% marks minimum

Offering Campus

- Abbottabad and Wah

Faculty Members

CUI, Abbottabad Campus

Associate Professors

- Dr. Sanaullah Baloch, PhD, Institute National Des Sciences Appliqees De Toulo(United States)
- Dr. Tahir Ali Akbar, PhD, University of Calgary, Canada

Assistant Professors

- Dr. Muhammad Faisal Javed, PhD, University of Malaya, Malaysia
- Dr. Sardar Kashif ur Rehman, PhD, University of Malaya, Malaysia

Besides, 10 lecturers and 08 Lab Engineers are also associated with this department.

CUI, Wah Campus

Advisor

- Prof. Dr. Saeed Ahmad, PhD, University of Sheffield, UK

Assistant Professors

- Dr. Badar ul Ali Zeeshan, PhD, Politecnico Di Torino, Italy
- Dr. Ahsen Maqsoom, PhD, Asian Institute of Technology, Thailand
- Dr. Tahir Mehmood, PhD, Asian Institute of Technology, Thailand
- Dr. Adnan Nawaz, PhD, Asian Institute of Technology, Thailand
- Dr. Hassan Ashraf, PhD, The University of Hong Kong, Hong Kong

Besides, 01 non-PhD Assistant Professor, 05 Lecturers, 05 Research Associates and 01 Lab Engineer is also associated with this department.

CUI, Sahiwal Campus

Chief Engineer

- Dr. Abdul Ghaffar, PhD, University of Engineering and Technology, Lahore

Besides, 01 Lecturers, 03 Lab Engineers and 01 Research Associate are also associated with the department.

Department of Mechanical Engineering

The CUI establish the Department of Mechanical Engineering in both CUI Sahiwal and Wah Campuses. The Department at Sahiwal Campus has launched the MS program in Mechanical Engineering keeping in mind its paramount importance.

Graduate Programs

Currently, the following graduate programs is being offered and pursued as per latest trends in the dynamic market.

Master of Science in Mechanical Engineering

Engineering is considered to be an inspired and highly motivated occupation and profession associated to collective human, material, and financial constituency to gratify the requirements of humanity. Mechanical engineering is one of the extensive and most adaptable of the engineering disciplines and vocations. In Pakistan, COMSATS University Islamabad is taking lead in the excellence of mechanical engineering teaching and education.

The most important purpose of the educational program at COMSATS University Islamabad is to train engineers for professional practice in the field of quickly progressing technology. This program is surely going to develop autonomy, inventive aptitude, and management as well as the capacity for progressing professional growth. Graduates of Mechanical Engineering discipline need in-depth information of the latest advancements in their fields, and should be acquainted with the recent research and development progression in the highly developed countries. They should also obtain a good gauge of revelation to the issues faced by our developing industrial infrastructure and techniques and strategies to deal with them.

The specialization areas of MS in Mechanical Engineering include:

1. Design and Manufacturing
2. Thermal and Fluid Sciences
3. Dynamics and Control
4. Modeling and Simulation

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

Sahiwal and Wah

Faculty Members

CUI, Sahiwal Campus

Chief Engineer

Dr. Zahiruddin Shaikh, PhD, University of Sheffield, UK

Assistant Professors

Dr. Muhammad Salman Mustafa, PhD, Politecnico Di Milano, Italy

Dr. Muhammad Akram, PhD, Delft University of Technology, Netherlands

Dr. Muhammad Rafi Raza, PhD, University Technology Petronas, Malaysia

Dr. Arslan Ahmad, PhD, University of Malaya, Malaysia

Dr. Awais Ali, PhD, Technical University of Darmstadt, Germany

Dr. Monis Raza Kazmi, PhD, University of Auckland, New Zealand

Besides, 03 non-PhD Assistant Professors, 11 Lecturers, 09 Lab Engineers and 05 Research Associates / Assistants are also associated with the department.

CUI, Wah Campus

Professors

- Prof. Dr. Muhammad Abid, PhD, University of Strathclyde, Glasgow, UK

Assistant Professors

- Dr. Ali Usman, PhD, Kyungpook National University, South Korea
- Dr. Muhammad Abid, Technische Universitat Braunschweig, Germany
- Dr. Muhammad Shoaib Naseem, Korea Advanced Institute of Science and Technology, South Korea

Besides, 02 Lecturer 04 Lab Engineer is also associated with this department.

Faculty of Business Administration

Dean's Message

I am delighted to introduce the CUI Faculty of Business Administration to you and I thank you all for the interest you have shown in it.

Faculty of Business Administration has rapidly and progressively evolved since its inception in 2000 and is presently one of the largest in Pakistan in terms of faculty strength, student body and the number of degree programs which it offers to students at both the undergraduate and post-graduate levels. It is also one of the select groups in this country which offers a doctoral degree programme in Management Sciences.

Represented across all seven campuses which constitute the CUI network in Pakistan, the Faculty of Business Administration encompasses the three Departments of Management Sciences, Development Studies, and Humanities. Currently, thousands of students are enrolled in all our departmental degree programs. Many thousands have graduated since our first batch earned their degrees. Our periodic surveys indicate that most of our graduates are employed by organizations in the corporate, public, and development sectors in Pakistan, and by organizations outside the country, especially in the Middle East. Many of our undergraduates seeking to advance their higher education opt for readmission at CUI in preference over other universities.

We consider our faculty's teaching and research capability our core strength and are especially proud to employ the largest concentration of doctoral degree holders in Pakistan. Most of our doctoral degree holders are foreign-qualified, have years-long professional work experience and have completed their post-doctoral programs overseas. Several are concurrently serving as adjunct faculty members at some leading North American and European universities. Many of our faculty members have also published several papers in their respective fields of research specialization in esteemed international research journals.

The Faculty of Business Administration has always accorded considerable importance to institutional networking both inside and outside Pakistan and, in particular, to building, consolidating and sustaining linkages with organizations operating in Pakistan in the public, commercial and not-for-profit sectors with a view to sharing information, knowledge and experience, and relating the theoretical concepts taught in class to their application in practice. Guest speakers and visiting experts from industry are a common feature of all our degree programs. At the institutional level, we have also developed and provided a specialized training program to hundreds of officials from non-for-profit organizations across Pakistan who are receiving grants from a large international organization as part of a major national citizens empowerment development initiative. We also played an instrumental role in forming an association of young entrepreneurs at CUI which boasts an increasing number of our graduates who have taken the bold leap to set up their own businesses.
We are also proud to be the pioneers of specialized advanced degree programs on themes which are of crucial importance for Pakistan's national development. Notable examples are our widely-acclaimed Master of Science degree programs in project management, and in energy management. The introduction of several more innovative degree programs in the foreseeable future is under consideration and on fruition will provide a depth of thematic diversity unmatched by most universities in Pakistan.

As an integral part of CUI, the Faculty of Business Administration strives to play its role towards fulfillment of our university's noble mission and goals. Though we are a very young – in fact barely fifteen years old - institution, we have already contributed significantly to society through our collective activities. We know that the future poses daunting and multi-dimensional challenges for Pakistani academia and graduates but we are confident that with our resources, infrastructure and experience we can face these challenges and nothing would honor and please us more than to help you prospective students do so too through the high-quality education, guidance and individual mentoring we can provide to you.

Best Wishes

Professor Dr. Khalid Riaz

Department of Management Sciences

Department of Management Sciences started its journey at CUI about 12 years ago and with its phenomenal ascent is presently one of the top departments in this country's higher educational landscape. This department endeavors to contribute to the broader social role in providing high quality education, distinguished by cutting edge technologies and modern managerial practices. It is committed to prepare students at par with the market trends. It has one of the largest concentrations of doctoral degree holders in the country and maintains multiple partnerships and cooperation agreements with prestigious universities across the globe.

Together with enjoying a good reputation among employers, our programs provide students a thorough insight into latest trends in management and business practices. In addition to grooming the personality of our students and sharpening their communication skills, greater emphasis is laid upon the intellectual augmentation and perpetual development of students with both curricular and extracurricular efforts.

Graduate Programs

Currently the following graduate programs are being offered and pursued as per latest trends in the dynamic market.

Master of Science in Management Sciences

The Master of Science in Management Science program offers a professional graduate course of study designed to provide competency in management and to acquaint the student with a variety of business activities. Considering the market demand, the specialized courses offered relate to General Management, Finance, Marketing, Information Technology Management, Human Resource Management and Business Economics. Further, the students have the opportunity to test the theories learned during the course work to the real world problem through writing dissertation. On successful completion of the program, the graduates will have an excellent opportunity of finding employment in areas with a broad, critical and practical understanding of Management Sciences disciplines. This knowledge makes them ready for a variety of leadership positions not only in contemporary changing business and corporate world but also in academics.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

Islamabad, Abbottabad, Wah, Lahore, Attock, and Sahiwal

Master of Science in Project Management

The Masters of Science in Project Management Program is exclusively designed for those who desire to enter into project management either in their current technical or business fields, or into a new field of expertise as a career change.

The MS program is prepared to help the scholars in improving their knowledge and skills in the discipline to better manage human resource, risk and change as well as the financial aspects of projects and programs through project management methodologies, tools, principles and philosophies of effective project management in multiple sectors including public, non-governmental and corporate sectors. An integral part of the program is dedicated to the dissertation writing by applying the tools and techniques of project management learned during the course work. The

graduates will have job opportunities in both corporate and academic world at the end of program.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses
Islamabad, Abbottabad, and Lahore

Master of Science in Energy Management

The aim of MS in Energy Management program at CUI, is to strengthen the alliance between industry and academia in the energy sector and help to create robust business partnerships between organizations and institutes both within Pakistan and with other developing nations. There are, however, only a very few institutions and "think tanks" in the world that focus on Energy Management and Energy Strategies at the national and global levels. Equipped with the knowledge imparted in the Energy courses, the students acquire the capability to break new grounds and produce new knowledge by undertaking research activities in the field of Energy Management.

The graduates of this program will be able to work in several important and highly demanded jobs including: Energy Analysts, Managerial Positions in the Energy organizations and Energy Intensive Industries, Energy Policy and Planning Strategists, Energy Investment Portfolio Management Officers, CEO of Energy Companies/Utilities Analysts, Energy Consultants, Energy Conservation and Audit Energy Project Management Officers, Energy Environment Specialists, Managers of companies of 21st century (energy efficient and committed to sustainable development).

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus
Islamabad

Master of Science in Banking and Finance

The primary objective of banking and finance at CUI is to develop knowledgeable and capable executives and workforce to move quickly to key positions in the financial services sector and to demonstrate the skills necessary to tackle problems within the complex world of international finance and banking. Graduates of banking and finance are one of the most sought after graduates worldwide and their employment opportunities are practically endless. After the successful completion of the degree, the graduate may work for a public or private organization, do consultancy or work in the field of academia.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses
Islamabad, Abbottabad, and Wah

Master of Business Administration (MBA)

The MBA curriculum has been designed to develop an in-depth understanding of all business functions. Most importantly, the areas are integrated throughout the curriculum to develop an understating of all aspects of business. The one and half year program will meet the increasing demand for advance business education which will not only combine text book learning with case study methodology but will expose students to an environment which will facilitate development of their conceptual skills as well as personal growth. Following specializations are offered in the program:

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

On successful completion of the course the graduates would have opportunities in practically all the sectors in an economy including telecom, energy, textile and many more.

Entry Requirements*

- A 16 years degree in the relevant field from an accredited educational institution with minimum First Division (annual system) or CGPA 2.5/4.0 (semester system)
- No third division (annual system) or D grade (semester system) throughout the academic career.
- GAT (General) with minimum 50% marks.

Offering Campuses

- Islamabad, Abbottabad, Wah, Lahore, Attock, and Sahiwal

***Subject to approval from concerned statutory body**

Doctor of Philosophy in Management Sciences

The doctoral program in management sciences addresses the need to train students to develop and sharpen management theories to enhance their contribution to management education, research and practice. Students acquire advanced knowledge of the literature and theory in the business and management field overall. They also gain theoretical and practical knowledge of advanced research skills, essential for publishing in leading academic journals. The Ph.D. program furnishes opportunities to its graduates in research, academia, business, and public sector. Besides the core courses, specializations are offered broadly in the field of Management and Finance in general and in Human resource, Marketing, Organizational behavior, Islamic finance and Business economics in particular.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

- Islamabad, Abbottabad, and Lahore

Faculty Members

CUI, Islamabad Campus

Associate Professors

- Dr. Muhammad Zahid Iqbal, PhD, National University of Modern Languages, Islamabad, Pakistan
- Dr. Muhammad Majid Khan, PhD, University of Massachusetts, USA

Assistant Professors

Dr. Faheem Aslam, PhD, Hanyang University, Seoul, China

- Dr. Yasir Tariq Mohmand, PhD, South China University of Technology, China
- Dr. Usman Ayub, PhD, CUI Islamabad, Pakistan
- Dr. Muhammad Aamir Khan, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Amir Rafique, PhD, SZABIST, Islamabad, Pakistan
- Dr. Muhammadi Sabra Nadeem, PhD, CUI Islamabad, Pakistan
- Dr. Hashim Khan, PhD, Universiti Tun Hussein Onn Malaysia, Pakistan
- Dr. Malik Ikramullah, PhD, Gomal University, D.I.K., Pakistan
- Dr. Osman Sadiq Paracha, PhD, University Technology Malaysia (UTM), Malaysia
- Dr. Sher Akbar, PhD, Sains University, Malaysia
- Dr. Munnawar Naz Khokhar, PhD, University of Cordilleras, Philippines
- Dr. Imran Abbas Jadoon, PhD, University Technology Malaysia (UTM), Malaysia
- Dr. Mansoor Ahmed, PhD, Leeds University, UK
- Dr. Noureen Adnan Khan, PhD, Cardiff University, UK
- Dr. Muhammad Abubakar Saeed, PhD, Middlesex University London, UK
- Dr. Aneel Salman, PhD, Rensselaer Polytechnic Institute, Troy, USA
- Dr. Muhammad Mustafa Raziq, PhD, Massey University, New Zealand
- Dr. Malik Faisal Azeem, PhD, Iqra University, Islamabad
- Dr. Naveed Raza, PhD, Universiti Malaysia Terengganu, Malaysia
- Dr. Raja Saquib Yusaf Janjua, PhD, Institue of Change Management Development, Vienna. University of Economics & Business Administration, Austria
- Dr. Muhammad Tahir, PhD, Malaysia
- Dr. Omer Farooq Malik, PhD, University Pertahanan Nasional, Malaysia
- Dr. Muhammad Khalid Sohail, PhD, Capital University of Science & Technology, Islamabad

Besides, 30 non-PhD Assistant Professors, 44 Lecturers and 04 Research Associates are also part of this department.

CUI, Abbottabad Campus

Professor

- Dr. Syed Amjad Farid Hasnu, PhD, Doctor of Philosophy (Business Economics), University of Bradford, UK

Associate Professor

- Dr. Kashif Rashid, PhD, Doctor of Philosophy in Finance, Victoria University, Melbourne, Australia

Assistant Professors

- Dr. Asim Afridi, PhD, Marseille University France
- Dr. Aziz Ullah Sayal, PhD, CUI Abbottabad, Pakistan
- Dr. Bilal Bin Saeed, PhD, University of Science and Technology Beijing, China
- Dr. Imran Khan, PhD, Hacettepe University, Turkey, Turkey
- Dr. Imran Naseem, PhD, Qurtaba University, D.I Khan, Pakistan
- Dr. Malik Fahim Bashir, PhD, Huazhong University of Science and Technology, China
- Dr. Mansoor Shahab, PhD, Chinese Academy of Sciences, China, China
- Dr. Muhammad Saeed Lodhi, PhD, University of Hradec

Kralove, Czech Republic
- Dr. Muhammad Tahir, PhD, University of Brunei Darussalam, (Brunei Darussalam)
- Dr. Shakir Hafeez, PhD, Kunming university of Science and Technology, China
- Dr. Yasar Bin Tariq, PhD, M.A.J.U, Pakistan
- Dr. Tahir Akhtar, PhD, UTM, Malaysia

Besides, 14 non-PhDs, and 26 lecturers are also associated with this department.

CUI, Wah Campus

Associate Professors
- Dr. Saqib Gulzar, PhD, Harbin Institute of Information Technology, China
- Dr. Samina Nawab, PhD, Institute of Policy and Management, Beijing, China
- Dr. Abdul Qayyum Khan, PhD, University of Peshawar, Pakistan

Assistant Professors
- Dr. Majid Jamal Khan, PhD, University de Rennes 1, France
- Dr. Amer Rajput, PhD, University Technology Malaysia, Malaysia
- Dr. Syeda Tamkeen Fatima Jafri, PhD, Ruhr University Bochum, Germany
- Dr. Khurram Shafi, PhD, Huazhong, University of Science and Technology, China
- Dr. Muhammad Yar Khan, PhD, University of Glasgow, UK
- Dr. Ayaz Qadeer, PhD, National University of Modern Languages, Islamabad, Pakistan
- Dr. Faheem A. Khan, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Islamabad, Pakistan

Besides, 02 non-PhD Assistant Professors, 13 Lecturers, and 01 Research Associate are also associated with this department.

CUI, Lahore Campus

Associate Professors

Dr. Muhammad Amir Rashid, PhD, University Technology Malaysia, Malaysia

Assistant Professors
- Dr. Hafiz Muhammad Usman, PhD, Lancaster University, UK
- Dr. Asma Imran, PhD, Foundation University Islamabad, Pakistan
- Dr. Ammar Abid, PhD, Zhongnan University of Economics and Law, China
- Dr. Zafar-uz-Zaman Anjum, PhD, Wuhan University of Technology, China
- Dr. Muhammad Ibrahim Abdullah, PhD, Chongqing University, China
- Dr. Ahmad Qammar, PhD, University of Sheffield, UK
- Dr. M. Ali Jibran Qamar, PhD, University of Gloucestershire, UK
- Dr. Imran Shafique, PhD, University Technology Malaysia, Malaysia
- Dr. Ghulam Hussain, PhD, University Technology Malaysia, Malaysia
- Dr. Muhammad Usman, PhD, University of International Business and Economics, China
- Dr. Basharat Naeem, PhD, CUI Lahore, Pakistan
- Dr. Sajid Nazir, PhD, CUI Lahore, Pakistan
- Dr. Saleha Javed, AP, Taylors University, Malaysia

Besides, 21 non-PhD Assistant Professors, 01 Senior Research Officer, 02 PhD Lecturers, 24 Lecturers and 04 Research Associates are also part of this department.

Centre of Islamic Finance

Associate Professors

- Dr. Abdus Sattar Abbasi, PhD, National University of Modern Languages, Islamabad, Pakistan

Assistant Professors

- Dr. Waheed Akhter, PhD, National University of Modern Languages, Islamabad, Pakistan

Besides, 01 Research Associates is also part of this department.

CUI, Attock Campus

Assistant Professors

- Dr. Saddam Hussain, PhD, University of Peshawar, Pakistan
- Dr. Shabir Hyder, PhD, Federal Urdu University of Arts, Science and Technology, Islamabad, Pakistan
- Dr. Muhammad Shakil Ahmed, PhD, University Technology Malaysia, Malaysia
- Dr. Muhammad Imran Malik, PhD, Foundation University Islamabad, Pakistan
- Dr. Faisal Nawaz, PhD, CUI Islamabad, Pakistan
- Dr. Noman Khan, PhD, Qurtaba University, Peshawar Pakistan
- Dr. Muhammad Ayub, PhD, National University of Modern Languages, Islamabad, Pakistan
- Dr. Asim Anwar, PhD, Federal Urdu University of Arts, Science & Technology, Islamabad, Pakistan
- Dr. Kh. Fawad Latif, PhD, Abasyn University, Peshawar, Pakistan
- Dr. Syed Asim Shah, PhD, Iqra National University, Peshawar, Pakistan
- Dr.Waqas Hanif, PhD, Iqra National University, Islamabad, Pakistan
- Dr. Inyat Ullah, PhD, KDI School of Public Policy, South Korea
- Dr. Muhammad Yasir, PhD Ege University, Turkey
- Dr. Faisal Shahzad, PhD Air University, Islamabad Pakistan

Besides, 02 non-PhD Assistant Professors, 18 Lecturers and 02 Research Associates are also part of this department.

CUI, Sahiwal Campus

Assistant Professors

- Dr. Muhammad Asrar-ul-Haq, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Irem Batool, PhD, Pakistan Institute of Development Economics, Islamabad, Pakistan
- Dr. Hafiz Muhammad Arshad, PhD, The Islamia University of Bahawalpur, Pakistan
- Dr. Khurram Abbas, PhD, Central South University, P.R China
- Dr. Minhas Akbar, PhD, Zhongnan University of Economics and Law, P.R China
- Dr. Saqib Ali, PhD, University of Utara Malaysia
- Dr. Mazhar Javed, PhD, CUI, Lahore Campus
- Dr. Qamar uz Zaman Malik, PhD, CUI, Lahore Campus
- Dr. Saira Aziz, PhD, University of Science and Technology, China
- Dr. Salman Zulfiqar, PhD, University of Science and Technology, China
- Dr. Muhammad Kaleem Khan, PhD, Beijing University of Posts & Tel., China

Besides, 04 non-PhD Assistant Professors, 16 Lecturers and 02 Research Associates are also part of this department.

CUI, Vehari Campus

Associate Professor

- Dr. Khuda Baksh, PhD, University of Agriculture, Faisalabad, Pakistan

Principal Research Officer

- Dr. Asad Afzal Humayon, PhD, Foundation University, Islamabad, Pakistan

Assistant Professors

- Dr. Sajid Haider, PhD, Rey Juan Carlos University Madrid, Spain
- Dr. Jamil Ahmad, PhD, SiChuan University, China
- Dr. Orangzab, PhD, National College of Business Administration and Economics, Pakistan
- Dr. Rafaqat Ali, PhD, Gomal University, D.I.K., Pakistan
- Dr. Mazhar Abbas, PhD, University Utara Malaysia, Malaysia
- Dr. Muhammad Ashraf, PhD, University of Malaya, Malaysia
- Dr. Muhammad Imran Khan, PhD, Qurtuba University of Sciences and Information Technology, D.I.Khan, Pakistan
- Dr. Munir Ahmed, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Muhammad Sajjad, PhD, Foundation University, Islamabad, Pakistan
- Dr. Dilshad Ahmad, PhD, Gomal University, D.I.K., Pakistan
- Dr. Muhammad Irfan, PhD, National College of Business Administration and Economics, Pakistan
- Dr. Qaiser Aman, PhD, Qurtuba University of Sciences & Information Technology, D.I.Khan, Pakistan
- Dr. Muhammad Asim Yasin, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Bilal Tariq, PhD, University Technology Malaysia, Malaysia
- Dr. Muhammad Sohail Tahir, PhD, University Technology Malaysia, Malaysia
- Dr. Nadia Bashir, PhD, Islamia University of Bahawalpur, Pakistan

Besides, 05 non-PhD Assistant Professors, 33 Lecturers and 05 Research Associates are also part of this department.

Department of Economics

The Department of Economics at COMSATS University is committed to uphold high standards of academic excellence through quality education. The aim of the department is to provide students with the intellectual and analytical tools and skills necessary for being critical thinkers and for using the analytical tools to investigate, confront and solve problems associated with important economic, political and social issues. All the degree programs offered are recognized by HEC, Pakistan, and are accredited with national bodies. The courses offered are very helpful in preparing the students to be leaders in the society. One of the core missions of the department is to conduct first-hand research in economics. Students are trained with innovative qualitative and quantitative methods of research. Their knowledge facilitates them with a career path in different fields of life.

Master of Science in Economics

As the economy continues to expand and diversify, there is growing need for economic expertise for understanding various facts amid increasingly complex economic system. Therefore, the demand for well-educated economics graduates comes from all sectors in an economy i.e. business, industry, academia, government and international development institutions. Considering vast expertise in this field, CUI is well placed to play an important role in catering to these national and global needs by producing high quality economics graduates. The Graduate Program in Economics would aims to produce graduates who could take up careers in governmental and nongovernmental organization. Besides offering core courses of advanced macro & micro economics, econometrics and mathematics, the program also offers various specialized courses relevant to the real economic world including International Economics, Development economics, Public finance and Agricultural

economics.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

- Islamabad, Abbottabad, and Lahore

CUI, Islamabad Campus

Professor

- Dr. Khalid Riaz, PhD, Iowa State University, USA
- Associate Professors
- Dr. Muhammad Arshad Khan, PhD, Pakistan Institute of Development Economics, Islamabad, Pakistan
- Dr. Muhammad Zakaria, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Assistant Professors

- Dr. Saima Nawaz, PhD, Pakistan Institute of Development Economics, Islamabad, Pakistan
- Dr. Muhammad Irfan, PhD, Federal Urdu University of Arts, Science and Technology, Islamabad, Pakistan
- Dr. Mumtaz Ahmed, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Muhammad Iftikhar ul Husnain, PhD, Federal Urdu University of Arts, Science and Technology, Islamabad, Pakistan
- Dr. Muhammad Aamir Khan, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Mudassar Rashid, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Nabila Khurshid, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Usman Shakoor, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Shahzad Kouser, PhD, Georg-August-University Gottingen, Germany
- Dr. Farhad Zulfiqar, PhD, Asian Institute of Technology, Thailand

Besides, 12 PhD Assistant Professors, 02 Non-PhD Assistant Professors, 03 Lecturers and 01 Research Associates are also part of this department.

CUI, Lahore Campus

Associate Professors

Dr. Hafiz Zahid Mahmood, PhD, Humboldt Universitat Zu Berlin, Germany

Dr. Abdul Haque, PhD, Huazhong University of Science & Technology, China

Assistant Professors

- Dr. Fariha Rehman, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Khan, PhD, Federal Urdu University of Arts, Science and Technology, Islamabad, Pakistan
- Dr.Summaira Malik, PhD, National College of Business Administration and Economics, Pakistan
- Dr. Rafi Amir ud Din, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Ahmad Nawaz, PhD, Goettimgen University, Germany
- Dr. Abdul Farooq, PhD, National College of Business Administration and Economics, Lahore
- Dr.Wajiha Manzoor, PhD, UIBE, China
- Dr. Rao Muhammad Atif, PhD, Huazhong University of Science & Techology, China

Besides, 02, Non-PhD Assistant Professors, and 02 Lecturers are also part of this department.

Department of Development Studies

As a premier institution of the region and on the basis of a prioritized need assessment, CUI expanded its role to encompass Development Studies as a separate department in 2004. Development Studies is an interdisciplinary field focusing on the study of societies, economies and institutions of the developing countries, their inter-connectedness with the developed world and processes through which the international institutions and mechanisms impact upon the overall goals of development within a global context. After completing MS Development Studies, many job opportunities can be availed in both national and international market.

Graduate Programs

Currently the following graduate programs are being offered and pursued as per latest trends in the dynamic market.

Master of Science in Development Studies

The MS in Development Studies core curriculum integrates substantive knowledge, spanning the disciplines of social, environment and administrative sciences in order to foster the development of cross-disciplinary skills necessary to prepare students for the field of Development Studies. In addition, specific learning outcomes for the program identify essential knowledge and skills that each graduate should acquire throughout the course of the program.

The MS degree program in Development Studies will be spread over 30 credit hours including 12 credit hours of core courses, 12 credit hours of elective courses and 6 credit hours of research thesis.

The aim of the Development Studies Program is development of professionals, managers, practitioners, consultants, teachers and students to equip them with transferable knowledge and skills, necessary in the varying fields and disciplines of different 'development' and related subjects. After completing studies, the graduates will be able to thrive in any world class organization and competitive international environment.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Faculty Members

CUI, Abbottabad Campus

Associate Professor

- Dr. Bahadur Nawab, PhD, Norwegian University of Life Sciences, Norway

Assistant Professors

- Dr. Adnan Ahmad Dogar, PhD, Universite Clermont Ferrand-II, France
- Dr. Arif Alam, PhD, Tottori University, Japan
- Dr. Ikram Shah, PhD, University of Karachi, Pakistan
- Dr. Noor Elahi, PhD, Norwegian University of Life Sciences, Norway
- Dr. Siddique Ullah Baig, PhD, UTM Malaysia
- Dr. Zahid Hussain, PhD, Agricultural University Peshawar, Pakistan
- Dr. Syed Muhammad Amir, PhD, China Agriculture University, China

Besides, 02 non-PhD Assistant Professors and 04 Lecturers are also associated with this department.

Department of Humanities

Department of Humanities at CUI has the highly qualified faculty members of many different fields including English Language, English Literature, Applied Linguistics, Psychology, French, Islamic Studies, International Relations, and Pakistan Studies.

The Department offers world-class teaching and research,

backed by the superb resources of the library, e-library and language laboratories. Such historic resources are linked to cutting-edge agendas in research and teaching, with an increasing emphasis on interdisciplinary study addressing practical, educational and personality building issues significant to learners, educators, policy makers, communication professionals, and human resources managers. The Department of Humanities is continually pioneering new ways to teach and assess language, to research written discourse, and to teach writing for specific purposes.

Along with facilitating students to enhance effective English-usage at its best, the department plays a pivotal role in making students aware of their religious and moral values by teaching Islamic Studies, keeping track of the current political and social issues through courses of Pakistan Studies and International Relations, and making our youth aware of the humanitarian standards catering to their emotional well-being through Sociology and Psychology.

Graduate Programs

Currently, following graduate programs are being offered and pursued as per latest trends in the dynamic market:

Master of Science in International Relations

The program is aimed at providing the leaders-in-making with the right set of skills and conceptual frameworks to take challenges head-on in the international arena. The program shall draw its foundations on three significant methodologies: leadership, analysis, and administration. The program seeks to provide its students with knowledge, skills and abilities to solve problems through an in -depth analysis of the international relations (IR) issues and challenges which formulate the dimensions of a problem. The goal of the program is to bring about demonstrable improvement in performance of politics, government, non-profit organizations, international organizations, international business organizations and foreign services by preparing future leaders to have the analytical tools, leadership capabilities, managerial skills and an in-depth understanding of IR issues.

Admission requirements, program duration, course work and thesis details are given at page 43

Offering Campus

- Islamabad

Mater of Science in English (Linguistic & Literature)

The program is designed to provide students an in-depth knowledge of language, linguistics and literature with added areas of interest for research. The program includes a thorough understanding of theoretical as well as practical applications of various modern and contemporary developments in the fields of linguistics and literature. The program will help students to explore the interdisciplinary aspect of language, linguistics, and literature and how these three dimensions interrelate and exist as integral parts of the whole, and yet have an independent existence as well. On the whole, the program is oriented to the study of and impact of literature in the evolution and development of cultural consciousnesses, and its role as an invaluable record of the significant advancements in human civilization. It also emphasizes the enrichment of knowledge and understanding of concepts, present issues and concerns and up-to-date research in the core areas of linguistics and language.

Entry Requirements

- A 16 years degree, in the relevant field, from an accredited educational institution with Second Division (annual system) or CGPA 2.5/4.0 (semester system)
- No third division (annual system) or D grade (semester system) throughout the academic career.
- GAT (General) with 50% marks minimum.

Offering Campuses

- Islamabad & Lahore

Faculty Members

CUI, Islamabad Campus

Assistant Professors

- Dr. Inayat Kaleem, PhD, University of Peshawar, Pakistan
- Dr. Ghulam Shabbir, PhD, University of Karachi, Pakistan
- Dr. Muhammad Nawaz, PhD, International Islamic University, Pakistan
- Dr. Samia Wasif, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Sohail Ahmed, PhD, University of Peshawar, Pakistan
- Dr. Waqar Hussain, PhD, University of Peshawar, Pakistan
- Dr. Farhat Nisar, PhD, National University of Modern Languages, Islamabad, Pakistan
- Dr. Aisha Jadoon, PhD, National University of Modern Languages, Islamabad, Pakistan
- Dr. Rizwan Naseer, PhD, Jinlin University, China
- Dr. Arshad Bashir, PhD, Applachin State University, USA
- Dr. Muhammad Mubeen, PhD, Ecole National Superior Des Telecommunication, France
- Dr. Fasih Ahmed, PhD, University of Nantes, France
- Dr. Bushra Sadiq, PhD, Université de Franche-Comté Besançon, France
- Dr. Mubeen Akhtar, PhD, Georg August-University Gottingen, Germany
- Dr. Fayyaz Ahmed Faize, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Mirza Naveed Baig, PhD, National University of Modern Languages, Islamabad, Pakistan
- Dr. Ayesha Inam, PhD, Quaid-I-Azam University, Islamabad, Pakistan
- Dr. Amna Saeed, PhD, NUML, Islamabad, Pakistan

Besides, 08 non-PhD Assistant Professors, 26 Lecturers and 07 Research Associates are also part of this department.

CUI, Abbottabad Campus

Professor

- Dr. Muhammad Mushtaq Khan, PhD, University of Groningen, Netherlands

Assistant Professors

- Dr. Rabiah Rustam, PhD, University of Azad Jammu and Kashmir, Pakistan
- Dr. Sardar Muhammad, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Zahid Shah, PhD, University of Peshawar, Pakistan
- Dr. Nasir Ali Khan, PhD, University of Karachi, Pakistan

Besides, 02 non-PhDs and 16 Lecturers are also part of this department.

CUI, Lahore Campus

Assistant Professors

- Dr. Muhammad Ammad Ul Haque, PhD, University of Karachi, Pakistan
- Dr. Aasia Nusrat, PhD, University of Nantes, France
- Dr. Musferah Mehfooz, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Shameem Fatima, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Muhammad Zubair, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Farzana Ashraf, PhD, University of the Punjab,

Lahore, Pakistan
- Dr.Muneeba Shakeel, PhD, University of Karachi, Pakistan

Besides, 07 non-PhD Assistant Professors, 01 Manager, 01 Senior Research Officer, 01 PhD Lecturer, 23 Lecturers and 01 Research Associates are also associated with this department.

CUI, Vehari Campus

Assistant Professors

Dr. Asma Ashraf, PhD, Bahauddin Zakariya University, Multan, Pakistan
Dr. Abdul Razzaq Azad, PhD, University of Karachi, Pakistan
Dr. Ali Ahmad, PhD, Bahauddin Zakariya University, Multan, Pakistan
Dr. Zahoor Ahmed, PhD, University of Urtra, Malaysia
Dr. Muhammad Shafiq, PhD, Quaid-e-Azam University Islamabad, Pakistan
Dr. Sadia Deep, PhD, University Tun Hussain Onn, Malaysia, Malaysia

Besides, 01 Non-PhD Assistant Professors, 12 Lecturers, and 02 Research Associates are also part of this department.

Center for Policy Studies

CUI, Islamabad Campus

Assistant Professors

Dr. Muhammad Shakeel Ahmad, PhD, Quaid-i-Azam University, Islamabad, Pakistan
Dr. Imran Syed, PhD, Quaid-i-Azam University, Islamabad, Pakistan
Dr. Tanveer Zahara Bukhari, Ph.D, Indiana University, Bloomington Indiana, USA
Dr. Ghulam Shabbir, Doctorate in Islamic Studies, University of Karachi, Karachi, Pakistan
Dr. Saeed Anwar, PhD, International Islamic University, Islamabad, Pakistan
Dr. Kalsoom Bebe Sumra, PhD, Huazhong University of Science & Technology, Wuhan, China

Inter-Islamic Network on Information Technology (INIT)

CUI, Islamabad Campus

Assistant Professor

- Dr. Akber Abid Gardezi, PhD, Sussex University, UK

Faculty of Science

Dean's Message

Welcome to the Faculty of Science at COMSATS University Islamabad (CUI). The Faculty of Science at CUI consists of the Departments of Mathematics, Biosciences, Chemistry, Physics, Meteorology, Environmental Science, Pharmacy, Statistics and Earth Sciences. The disciplines have been designed with the express aim to impart a clear insight into basic sciences and to develop strong experimental and technological skills. Each program provides a firm foundation for employment in industry and R&D organizations, as well as opportunities to pursue academic and research oriented careers.

This is a well-established faculty in terms of the programs offered, faculty strength and research productivity. The faculty is of international repute which is providing research facilities in diversified fields and a dynamic and vibrant environment to undergo a transformation in research and development. The faculty of science is providing different programs, advanced infrastructure, and experience and dedicated faculty. The strength of graduate students is increasing tremendously as a feedback of excellent research facilities available at CUI. The faculty provides the best facilities, environment and research culture comparable with the top universities of the world.

I hope this prospectus will encourage you to join this association of knowledge seekers.

Prof. Dr. Arshad Saleem Bhatti

Department of Mathematics

Department of Mathematics started offering its BS, MS, PhD, Programs immediately after its establishment at different campuses. It is also providing services to all other departments by offering more than 100 courses at graduate/undergraduate level every semester at each campus.

At present, PhD and BS Mathematics programs are running at Islamabad and Lahore Campuses. Department of Mathematics at Islamabad campus took the lead by producing about 50 PhDs. Department is offering its MS Program at all campuses and the number of MS graduates exceeds 300 to-date. Mathematics is essential in understanding all technological developments of our age like computer games, GPS, smart phones etc. This beautiful subject has got recognition in all aspects of human life like basic sciences, engineering, computer sciences, bio-sciences, medicine, environmental sciences, social sciences, management, economics, governance, etc. Mathematicians have an opportunity to make a lasting contribution to society by helping to solve problems in these diverse fields. It has relevance to fields of aerospace, oil exploration, electronics, weather prediction, management positions, teaching and research, accounting and financial analysis and defence related disciplines. Thus, it is a subject that can never lose its academic utility or professional value. The advent of computers and data acquisition facilities has stretched the limits of what is possible in Mathematics to all branches of human endeavor. New developments are taking place all the time; some as a result of fresh ideas or review of old techniques, and others prompted by the applications to new and emerging physical, biological and social sciences, economics, and computing. This has given rise to new IT based techniques of mathematical study and has created new computational methodologies.

The Department aims to pursue excellence in Mathematics through teaching and research by developing appropriate curricula and teaching practices, acquiring talented faculty members, and providing an environment conducive to teaching and learning of qualitative as well as quantitative skills.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Mathematics

Master of Science in Mathematics program aims to provide suitable career in many research organizations/laboratories, both government and private, who maintain independent research staffs which include mathematicians. Their work often deals with the development of new technology, including research in basic physics and software development, as well as applied mathematics. Numerical simulation, such as weather and climate forecasting, depends heavily on the use of supercomputers. At the MS level, graduate would be able to acquire skills for solving problems suggested either by mathematics or by real world questions. Foremost is the ability to break complex issues into smaller, more manageable problems, until a model is reached which can be thoroughly studied and understood.

Entry Requirements

- BS (4 Years) in Mathematics or M.Sc. (2 Years) in Mathematics or its equivalent 16 years of education from an accredited educational institution, with minimum first division (annual system) or CGPA 2.5/4.0 (semester system)
- No third division (annual system) or D grade (semester system) throughout the academic career
- NTS-GAT (General) with minimum score of 50% marks

Offering Campuses

- Islamabad, Abbottabad, Wah, Lahore, and Attock

Doctor of Philosophy in Mathematics

During PhD program, students are prepared for advance research activities along with many jobs in government, business, and industry. Many PhD Mathematicians join the faculty of a university or college, where they not only teach but also conduct research and publish their results in scholarly journals and books. Others take post-doctoral positions at various laboratories around the world, where work of interest to them is being done. Still others pursue careers in corporate research and management.

Admission requirements, program duration, course work and thesis details are given at page 43

Offering Campuses

- Islamabad and Lahore

Faculty Members

CUI, Islamabad Campus

Professors

- Dr. Aftab Khan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Shamsul Qamar, PhD, Otto-von-Guericke University Magdeburg, Germany
- Dr. Saleem Asghar, S.I., PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Aslam Noor, PhD, Brunel University London, UK
- Dr. Khalida Inayat Noor, PhD, University of Wales, Cardiff, UK
- Dr. Moiz-ud-Din Khan, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Akbar Azam, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Associate Professors
- Dr. Abdullah Shah, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China
- Dr. Shams-ul-Islam, PhD, Harbin Institute of Technology, China
- Dr. Mahmood ul Hassan, PhD, Brunel University London, UK
- Dr. Ishtiaq Ali, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China

Assistant Professors

- Dr. Fahad Munir Abbasi, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Amna Nazeer, PhD, Huazhong University of Science and Technology, China
- Dr. Bushra Malik, PhD, CUI Islamabad, Pakistan
- Dr. Baber Ahmed, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Qasim, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Rab Nawaz, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Mansoor Shaukat Khan, PhD, Beijing Institute of Technology, China
- Dr. Masood Anwar, PhD, National College of Business Administration and Economics, Pakistan
- Dr. Qumar Hussain, PhD, CUI Islamabad, Pakistan
- Dr. Muhammad Mushtaq, PhD, CUI Islamabad, Pakistan
- Dr. Javeria Nawaz Abbasi, PhD, CUI Islamabad, Pakistan
- Dr. Muhammad Yousaf, PhD, CUI Islamabad, Pakistan

- Dr. Manshoor Ahmed, PhD, CUI Islamabad, Pakistan
- Dr. Saima Noreen, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Hafiz Junaid Anjum, PhD, Cambridge University, UK
- Dr. Shahzad Munir, PhD, University Technology Petronas, Malaysia
- Dr. Umer Farooq, PhD, Shanghai Jiao Tong University, China
- Dr. Saleem Ahmed, PhD, State University of New York, USA
- Dr. Muhammad Zaighum Zia, PhD, DAAD, Germany
- Dr. Sohail Iqbal, PhD, Warwick University, UK
- Dr. Sajjad Khan, PhD, Swansea University, Wales, UK
- Dr. Mairaj Bibi, PhD, Nottingham University, UK
- Dr. Saqlain Raza, PhD, Toulouse Institute of Technology, France
- Dr. Tanveer Akbar, PhD, University of Strasbourg, France
- Dr. Salman Amin Malik, PhD, Université de La Rochelle, France
- Dr. Saqib Zia, PhD, CUI Islamabad, Pakistan
- Dr. Rabia Fayyaz, PhD, CUI Islamabad, Pakistan
- Dr. Tayyab Nawaz, PhD (Mathematics), University of Illinois, Urbana-Champaign, USA
- Dr. Muhammad Suleman, PhD (Mathematics), Zhejiang University, China
- Dr. Adeel Ahmed, PhD, Mathematics, CUI, Islamabad
- Dr. Shumaila Javeed, PhD, Max-Planck Institute and Otto-Von-Guericke University, Germany

Besides, 02 non-PhD Assistant Professors, 4 Lecturers and 03 Research Associates are also associated with this department.

CUI, Abbottabad Campus

Associate Professors

- Dr. Madad Khan, PhD, QAU, Islamabad, Pakistan
- Dr. Saqib Hussain, PhD, CUI Islamabad, Pakistan
- Dr. Zahid Ahmad, PhD, University of The Punjab, Pakistan

Assistant Professors

- Dr. Abdul Sami Awan, PhD, Government College University Lahore, Pakistan
- Dr. Ali Ahmad Farooq, PhD, Riphah International University, Pakistan
- Dr. Anwar Zeb, PhD, University of Malakand, Pakistan
- Dr. Izaz Ullah Khan, PhD, University Technology Malaysia, Malaysia
- Dr. Muhammad Ayub, PhD, QAU, Islamabad, Pakistan
- Dr. Muhammad Kahshan, PhD, CUI, Islamabad, Pakistan
- Dr. Muhammad Zahid, PhD, Riphah International University Islamabad, Pakistan
- Dr. Raheem Gul, PhD, University of Berlin, Germany
- Dr. Saeed ur Rahman, PhD, North-western Polytechnical university of China, China
- Dr. Saima Anis, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Saima Noor, PhD, CUI Islamabad, Pakistan
- Dr. Sheikh Irfan Ullah Khan, PhD, HITEC University Taxila, Pakistan
- Dr. Sultan Hussain, PhD, GC University Lahore, Pakistan
- Dr. Syed Zulfiqar Ali Zaidi, PhD, HITEC University Taxila, Pakistan
- Dr. Talat Nazir, PhD, Lahore University of Management Sciences, Lahore, Pakistan
- Dr. Usman Ashraf, PhD, GC University Lahore, Pakistan
- Dr. Zakir Hussain, PhD, University of Chinese Academy of Sciences, China

Besides, 03 non-PhDs, and 11 lecturers are also associated with this department.

CUI, Wah Campus

Advisor

- Dr. Munir Akhtar, PhD, University of Southampton, UK

Associate Professor

- Dr. Muhammad Kamran, PhD, Government College University, Lahore, Pakistan

Assistant Professors

- Dr. Shabieh Farwa, PhD, University of Sheffield, UK
- Dr. Muhammad Rafiq, PhD, CUI Islamabad, Pakistan
- Dr. Shabbir Ahmad, PhD, Zhejiang University, Hangzhou, China
- Dr. Sarfraz Nawaz Malik, PhD, CUI Islamabad, Pakistan
- Dr. Adnan Jahangir, PhD, CUI Islamabad, Pakistan
- Dr. Yasir Bashir, PhD, Government College University, Lahore, Pakistan
- Dr. Hafiz Obaid Ullah Mehmood, PhD, University Technology Petronas, Malaysia
- Dr. Nazeer Muhammad, PhD, Hanyang University, Korea
- Dr. Muhammad Bilal Ashraf, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. S.M. Jawwad Riaz, PhD, National University of Sciences and Technology, Islamabad, Pakistan
- Dr. Tayyab Mehmood, Sichuan University China, China

Besides, 01 non-PhD Assistant Professors, and 10 Lecturers are also associated with this department.

CUI, Lahore Campus

Associate Professors

- Dr. Kashif Ali, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Hussain, PhD, Government College University, Lahore, Pakistan
- Dr. Sarfraz Ahmad, PhD, Government College University, Lahore, Pakistan

Tenured Associate Professors

- Dr. Hani Shakir, PhD, Government College University, Lahore, Pakistan

Assistant Professors

- Dr. Syed Tahir Raza Rizvi, PhD, CUI Lahore, Pakistan
- Dr. Imran Ahmad, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Faisal Nadeem, PhD, Government College University, Lahore, Pakistan
- Dr.Shamaila Rani, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Hafiz M. Afzal Siddiqui, PhD, National University of Science and Technology, Islamabad, Pakistan
- Dr. Muhammad Zubair, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Abdul Jawad, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Saad Ihsan Butt, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Younas, PhD, University of Groningen, Netherlands
- Dr. Sadia Arshad, PhD, Government College University, Lahore, Pakistan
- Dr. Sana Javed, PhD, Government College University, Lahore, Pakistan
- Dr. Tariq Javed Zia, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China
- Dr. Ayesha Sohail, PhD, University of Sheffield, UK
- Dr.Qurat-ul-Ain Azim, PhD, Imperial College London, UK
- Dr. Adeel Farooq, PhD, Queen Mary University of London, UK
- Dr. Kashif Nazar, PhD, University Technology Malaysia, Malaysia
- Dr. Rabia Saleem, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Sadia Khalid, PhD, Government College University, Lahore, Pakistan
- Dr.Mohsan Hassan, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Aqeel Ahmad Khan, PhD, The Islamia University of Bahawalpur, Pakistan
- Dr. Muhammad Yousaf, PhD, Norwegian University of Life Sciences, Norway

- Dr. Yousaf Habib, PhD, University of Auckland, New Zealand

Besides, 03 non-PhD Assistant Professors, 03 PhD Lecturers and 02 Lecturers are also associated with this department.

CUI, Attock Campus

Assistant Professors

- Dr. Sadia Siddiqa, PhD, CUI Islamabad, Pakistan
- Dr. Farooq Ahmad Shah, PhD, CUI Islamabad, Pakistan
- Dr. Aamir Ali, PhD, CUI Islamabad, Pakistan
- Dr. Muhammad Zeb, PhD, CUI Islamabad, Pakistan
- Dr. Atiq ur Rehman, PhD, Government College University, Lahore, Pakistan
- Dr. Sohail Ahmed, PhD, Government College University, Lahore, Pakistan
- Dr. Ghulam Farid, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Awais, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Shafiq ur Rehman, PhD, Government College University, Faisalabad, Pakistan
- Dr. Muhammad Ozair, PhD, National University of Sciences and Technology, Islamabad, Pakistan
- Dr. Asif Waheed, PhD, CUI Islamabad, Pakistan
- Dr. Muhammad Numan, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Shoaib, PhD, National University of Science and Technology, Islamabad, Pakistan
- Dr. Muhammad Usman Ali, PhD, National University of Science and Technology, Islamabad, Pakistan
- Dr. Ali Imran, PhD, National University of Science and Technology, Islamabad, Pakistan
- Dr. Takasur Hussain, PhD National University of Science and Technology, Islamabad, Pakistan
- Dr. Maimona Rafiq, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Shahid Hussain, PhD, Dalian University, China

Besides, 5 Lecturers are also working in this department.

CUI, Sahiwal Campus

Principal Research Officer

- Dr. Muhammad Asad Meraj, PhD, Karl-Franzens-Universitat, Graz, Austria

Assistant Professors

- Dr. Muhammad Raza, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Manzoor Ahmad Zahid, PhD, Tilburg University, Netherlands
- Dr. Shahid Qaisar, PhD, Chongqing University, P.R China
- Dr. Najma Abdul Rehman, PhD, Government Ilege University, Lahore, Pakistan
- Dr. Sabir Ali Shehzad, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. M. Kamran Siddiqui, PhD, Government College University, Lahore, Pakistan
- Dr. Misbah Arshad, PhD, Government College University, Lahore, Pakistan
- Dr. Rida Irfan, PhD, Government College University, Lahore, Pakistan
- Dr. Asma, PhD, Government College University, Lahore, Pakistan
- Dr. Sami Ullah Khan, PhD, International Islamic University, Islamabad, Pakistan
- Dr. Numan Bashir, PhD, University of Engineering and Technology, Lahore
- Dr. Shehzad Sarwar, PhD

Besides, 10 Lecturers are also associated with the department.

CUI, Vehari Campus

Assistant Professors

- Dr. Muhammad Imran Qureshi, PhD, Government

College University, Lahore, Pakistan
- Dr. Muhammad Ishaq, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Muhammad Waseem, PhD, CUI Islamabad, Pakistan
- Dr.Asfand Fahad, PhD, Government College University, Lahore, Pakistan
- Dr. Hafiz M. Asim Zafar, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Tahir Mushtaq, PhD, Bahauddin Zakariya University, Multan, Pakistan

Besides, 03 Lecturers are also part of this department.

Department of Physics

Department of Physics at CUI is one of the best departments with excellent facilities, state of the art laboratories and internationally recognized faculty. It was established in 2002 at Islamabad and started its programs for the first time in Fall 2003 with a four-year BS degree program in Electronics. The Department is rapidly expanding and aspires to excel in the formal instruction of Physics internationally. The department of Physics at Lahore campus was established in 2007 and started a four-year BS degree program in Physics. The Department of Physics offers competitive degrees in rapidly expanding areas of study. Our strong faculty and excellent facilities ensure that students have a solid technical grasp on their subjects to apply this knowledge in practical work settings. Our invaluable linkages with national and international universities and organizations help us keep up-to-date with new policy trends and job market facilitation incentives being unrolled by the government and private sectors.

Department of Physics at Islamabad Campus

The Department of Physics has highly qualified faculty with diverse research interests in both theoretical and experimental physics, materials science, and electronics. In Pakistan, a major problem for scientists aspiring to explore events at the cutting edge of science has been the inaccessibility of experimental facilities including modern fabrication, growth, and characterization facilities. With the increasing importance of nano-scale materials and devices in the technologies of the future, this need has become even more urgent. The Department of Physics has, under some approved mega - projects, developed state-of-the-art laboratories for research in the above mentioned field. These laboratories are unique in Pakistan in terms of the experimental facilities and expertise they offer.

Research Activities in the Department of Physics

There are a number of groups in the Department of Physics which are actively involved in research activities in a variety of areas of physics. Besides collaborating locally, these groups are actively involved in research globally, e.g., in collaboration with CERN under the ALICE project, Technische Universität Berlin, University of Delaware and Tsinghua University. A large number of research projects were submitted to Higher Education Commission (HEC) of Pakistan for funding by the faculty members working in these research groups to strengthen the research activities. To date, several projects worth around 200 million PKR have been approved by the HEC.

Some prominent research groups in the Department of Physics, CUI, are as follows:

High Energy Physics Group

The group of High Energy Physics and Cosmology (HEP&C) and Ultra Relativistic Heavy Ion Collisions (URHIC) is working on problems involving R-parity violation phenomenology in minimal super-symmetric standard model (MSSM), non-standard electroweak interactions and their implications in neutrino physics, CP-violation, CKM-matrix elements, cosmological inflation and recent inflationary models, cosmological constant primordial nucleo-synthesis, finite temperature field theory, relativistic nuclear-nuclear collisions and dark energy.

On the experimental side, the group is working on problems related to Ultra Relativistic Heavy Ion Collisions (URHIC) affiliated with the ALICE project, CERN. The activities of this group involve experimental studies dealing with lead on lead collisions at the Large Hadron Collider (LHC) at CERN with centre of mass energies of 7 TeV. The group deals with computer software developed at the Joint Institute of Nuclear Research (JINR), Dubna for CERN and for physics analysis involved at the ALICE detector. This is a unique research activity in collaboration with ALICE/LHC at CERN and is first of its kind in Pakistan. CUI has recently joined the LHC as a council member which is a vital window for opportunities of research and training for scientists and engineers at the best and fastest accelerator and detector labs in the world.

Condensed Matter Physics Group

The Department of Physics has a very strong focus on the areas of condensed matter physics with special emphasis on nano-scaled materials and their applications. It has well-equipped laboratories and a very dedicated team which is engaged in working on nanostructures of semiconducting, magnetic and multifunctional materials. Ordered nanostructures are produced both by self-assembly as well as by combining self-assembly with lithographic techniques. The research carried out by the group is fundamental as well as application oriented with the objective of developing micro and nano-sized sensors for use in biomedicine and detection of environmental hazards.

Materials Science Group

Materials play an important role in our daily life from very simple use to hi-tech applications. The research group at CUI is engaged in synthesis and characterization of a wide range of advanced materials. Synthesis approaches include both solid state reaction methods and preparation by wet chemistry. Materials under investigation include but are not limited to metals, semiconductors, superconductors, ceramics and composites. These are synthesized in bulk, thin films, nanoparticles and nanostructures. Thermo physical properties include structural analysis, thermoelectricity, thermal diffusivity, heat capacity, thermal conductivity, dielectric spectroscopy, electrical resistivity, magnetic polarizability and susceptibility, magneto electrical conductivity and optical spectroscopy.

Nuclear and Radiation Physics Group

The Radiation Physics Laboratory was established in 2007 in the Department of Physics, CUI, Islamabad under the funding of Ministry of Science and Technology (MoST). The main objective of the RPL is to pursue the research and development work first at the CUI level and then strengthening of research infrastructure for science and technological development by making collaborations with different research institutes/universities of the country. Therefore, a well-equipped and standard research laboratory was established for taking research and development work in the field of Radiation Physics and its related subjects.

Lasers and Quantum Optics Group

Currently, research effort in experimental laser physics is focused on three areas, i.e., collisions in laser created sparks in gas mixtures, synthesis of nanoparticles through

laser ablation in gas phase as well as liquid environment, and preparation of thin films through pulsed laser deposition. On the theoretical side, the group is working in the field of quantum optics and its main area of research includes sub-wavelength atom localization, quantum state measurement of the radiation field, spontaneous emission spectra, coherent control of the GH-shift, propagation effects experienced by light pulses in atomic media, electromagnetically induced transparency, slow fast and backward propagating light, non-adiabatic optical transitions, wave shaping, control of optical response, decay rate of exited atoms in dielectric media, engineering entanglements in cavity QED systems, entanglement dynamics, quantum teleportation and quantum entanglement.

Plasma Physics Group

The Plasma Physics Group is working on non-thermal plasmas by developing and responding to major contemporary issues within low temperature plasma physics and atomic and molecular physics. Low-temperature plasmas have a huge range of technological and medical applications. These include plasma etching for semiconductor chip manufacture, plasma deposition (e.g. for solar cells or protective coatings), plasma TVs and new medical applications (e.g. sterilization, biocompatible materials). The research interest is in conventional, low pressure plasma systems, and the relatively recent discovery of atmospheric pressure plasmas. Research focuses on experiments and modeling to improve understanding of the plasma processes and thereby optimize applications and develop new ones.

Currently, the group is conducting research in the areas like atmospheric pressure plasmas and jets, low pressure plasmas and plasmas in liquids.

Research Facilities

State of the art research facilities are provided at the Department along with advanced tools and equipment like:

- Design and Fabrication of Micro- and Nanoelectronics Devices for Applications
- Design Tool: TCAD Simulation and Modeling Package
- Environment: Class (1000) Clean room
- RF and DC Magnetron Sputtering
- Plasma Enhanced Chemical Vapor Deposition (PECVD)
- Evaporators (Electron Beam, Resistive Heating)
- Photolithography
- Furnaces
- Spin Coaters
- Wet Etching Benches, Reactive Ion Etching
- Optical Microscopes
- Spectroscopic Ellipsometer
- Raman Spectroscopy
- Scanning Probe Microscopy (SPM)
- Dynamic Temperature X-Ray Diffraction (DTXD)
- I-V/C-V/G-V Characterization and CVBT Analysis
- Hall Effect System (0.37 T, 0.55 T and 1T)
- Semiconductor Characterization System (fully integrated)
- Differential Hall Measurement Setup with Transient Ion Drift Measurement (TIDM)
- Microwave Annealing System Connected with in-situ Metrology Unit
- Cryogenic Probe System
- Thermoelectric Measurement System
- X-ray Diffractometer
- Scanning Electron Microscope
- FTIR Spectrometer
- Vibrating Sample Magnetometer (3 Tesla, 50 – 400 K)
- Spectrometers (HP (Ge) Gamma Ray, NaI (Tl) Gamma Ray, Alpha Particle)
- Automatic Scanning System to Measure Radiation Tracks in Solids

- Radiation Sources and Survey Monitors
- G.M. BF-3 Neutron Detector and Surface Barrier Detectors
- Measurements of DC Electrical Resistivity
- Thermal Transport Properties
- Nanoparticle Synthesis via Wet Chemistry
- Planetary Ball Mills
- Uniaxial Press
- UV-VIS-NIR Spectroscopy
- UHV growth system, room temperature and low temperature growth
- Photon Counting/Detection System
- Dual Channel 8 GHz Data Acquisition; Lock-in-amplifier; Oscilloscope 40 GHz
- Close Spaced Sublimation System
- Laser Coating Vacuum System
- Ultrafast Optics
- Complete Laser Systems (Tunable Lasers)

International Research Collaborations

- University of Albany, NY, USA
- University of Lancaster, UK
- ALICE experiment in LHC (CERN), Geneva, Switzerland
- A and MTexas, Austin, TX, USA
- University of Illinois at Urbana Champaign, USA
- Queen Mary College University of London, UK
- University of Bologna, Italy
- Technical University, Darmstadt, Germany
- Tsinghua University, Beijing, China
- Institute of Physics, Belgrade, Serbia
- JINR, Dubna, Moscow Region, Russia
- Technical University of Berlin, Germany
- University of Geneva, Switzerland
- University of Calgary, Canada

Department of Physics at CUI, Lahore Campus

The Department of Physics was established in 2007 at CUI, Lahore campus. After its establishment, the department initially offered a four years undergraduate BS Physics program. This program is based on curricula including undergraduate Physics courses as a major leading to a final year project based on theoretical or experimental research areas of Physics including Nanotechnology, Medical Physics, Computational, Plasma and High Energy Physics. Later the Department offered MS Physics and PhD programs which are also successfully underway nourishing a good number of students on yearly basis. Till present the 17 batches for BS physics program have been inducted out of which 13 have passed out while 6 MS batches and PhD students have been inducted till to date which are continuing their study and research at the department in the fields of Nanotechnology and Advanced materials, Clean Energy Technology, Quantum Optics, Magnetic Materials, Plasma Physics etc. Currently the department has well established undergraduate and graduate labs. The department is privileged to have 35+ PhD faculty members which surely place it at the top with largest number of highly qualified faculty amongst its contemporary universities in the city of Lahore.

The faculty publishes a large number of quality research papers in international impact factor journals every year and has been reported as having the highest count of 97 publications among all CUI departments for the year 2015. The Department has a number of national and international research collaborations to facilitate research and higher studies. Physics colloquia and seminars are arranged on regular basis in each semester with a keen vision to bring research community together which includes faculty and research students from other universities and R&D organizations around the country. There are ample opportunities offered and granted to the faculty members and research students to attend and participate at national and international conferences/seminars and workshops. The department provides a sound platform to the students where they are offered counseling to pursue higher degrees

via getting scholarships abroad.

Mission

Our mission is to provide quality teaching and research to pursue higher degrees, become Physics educators, find employment, and offer improvement in a variety of technical areas in industry. We offer an innovative, project-based program with opportunities for campus-wide and off-campus projects, and hands on experience in all aspects of Physics

Areas of Research at CUI Lahore Campus

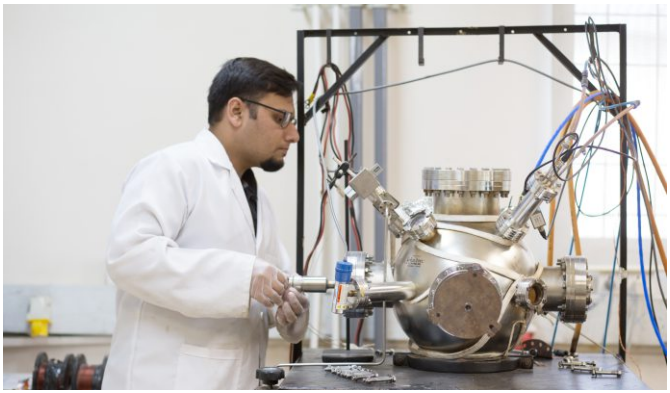
The Department of Physics, CUI Lahore has focused all its energies in achieving the ultimate target of World Ranking. Different measures are in progress to achieve this target and one of the measures is by Quality Teaching, Research Productivity and Services to the Community. To improve research productivity a number of research groups, headed by the senior PhD faculty and having about 10 faculty members in each group, have been formed at the Department of Physics. This evolving research environment attracts and retains high-performing staff at department. The major areas of research in the department are:

RF, Microwave and Opto-electronics

The last century has been the century of communication revolution. The majestic increase in the number of communication devices and standards has carried itself into the current century. The communication systems though not limited includes a variety of devices, from tablet PC to mobile phones, from blue-tooth to WiFi and from radars to satellite navigation systems through back-boned with RF, Microwaves and Optical Communication Systems. RF, Microwave and Opto-electronics research group is focusing on the study of the cutting edge technologies in the communication field, developing a facility to fabricate and characterize devices, developing GUI based simulation software and produce quality research publications.

Nanotechnology / Nano-materials

Nanotechnology revolutionized the nanomaterials importance to use in versatile applications. Organic/Inorganic nanostructures have attracted much attention due to novel properties such as large surface area, polar semiconducting, catalytic behavior and piezoelectric. Nanotechnology / Nano-materials research group focuses on synthesizing advanced nanomaterials, measuring structural, electric, magnetic, electrochemical, biosensing and optical properties of synthesized and fabricated nanostructures. To use the as prepared materials for antenna, medical (drug delivery, cancer treatment, biosensor etc), energy storage devices, gas sensors, memister, MEMS, NEMS, LED and thermal wall papers. Collaborate with R&D organizations and indigenous industry.



Quantum, Optical and Photonic Devices

The world's ever-increasing energy demands call for defining new schemes for efficient and sustainable power generation. Energy harvestion utilizing the solar spectrum is a topic of hot debate in today's scientific community. In 1hr, the sun delivers enough energy to the earth to meet global needs for an entire year. According to a theoretical estimate, the world's entire energy requirements can be met by utilizing the full length of the energy delivered on less than a tenth of the area of Sahara. As time goes on, a variety of solar technologies will be combined to power entire communities and industries. Third Generation solar cells have the potential to overcome the Shockley-Queisser limit of 33% power conversion efficiency.

The key objective of our group is to set the grounds for the next generation pollution-free and highly efficient green power production. Quantum dots/wires/dyes/organic material sensitized photovoltaics are the current focus of research. We aim at engineering advanced materials and processes to develop efficient, sustainable and cost-effective schemes to overcome the country's energy starvation issues. In addition to that, Quantum Device Research Group is aimed at conducting experimental and theoretical studies for semiconductor nanocrystals within the quantum confinement regime, for optoelectronic applications including Light Emitting Diodes, Bio-Medical applications and solid state display technology.

Clean Energy Technology

Clean energy technology is a unique umbrella project which covers / promotes the application of renewable technologies extending to the future sustainable energy. All applications where there is a need for energy and power includes portable electronics devices, transportation, overcome current energy crisis of Pakistan, design high efficient and more stable materials through DFT approach, develop functional nanocomposite materials for Fuel cells and Li- ion batteries, boost the solar cell efficiency by Quantum Dots, study and development of cost effective energy storage devices, develop prototype of energy conversion devices, find investments from industries for commercialization of the technology and investigation and feasibility of quantum-dot-based materials in new-generation fuel cells.

Micro, Nano-magnetic Materials and devices

The focus of our research group is to investigate the micro and nano sized amorphous and crystal line-magnetic materials, which find wide range applications in various fields. The synthesis and characterizations of the magnetic materials are the main objectives of the MNM&D research group. Fabrication of magnetic devices is also main focus of the group. Due to their applications in various fields, multi-scale theoretical and computational techniques will be adopted to simulate and design the devices. In current scenario, we aim to get the unique properties of these nano-structured magnetic materials for the improvement of their functionality.

Plasma Physics

The Scientific community now a days working to resolve the issue of energy demands of the world being various means. The plasma physics is one the solution to generate fusion energy on earth which has almost negligible pollution e.g., ITER, MAST, JET etc. The basic problem to attain this goal is the confinement which is based on stability mechanism through avoiding different instabilities and introducing different diagnostic and geometries of tokamak plasmas. Group is currently working in both theoretical and experimental studies of tokamak and laboratory plasmas. The Solar wind coming from the Sun interacts with the earth magnetic field and leads to different impacts on the earth environment through disturbing the communication and storms formation. The group has expertise to study the solar wind interaction with the earth through study of linear and nonlinear wave and instabilities and to explain the

observations through numerical simulation and/or data analysis. The star formation possibly happens due to the well-known Jeans instability. The group also works with different phenomena related to jeans instability in astrophysical plasmas.

High Energy Physics

High Energy physics is the study of the basic constituents of matter and the forces acting among them. It aims to determine the fundamental laws that control the make-up of matter and the physical universe. The research in High Energy physics mainly involves particle accelerators and detectors. Beams of particles such as electrons or protons are hurled at high speeds in the accelerators and then collided. The plethora of information contained in the data of these apparently chaotic collisions carries the hints about the underlying physics. It is the job of experimental high energy physicists to uncover the mysteries of fundamental laws from the huge sets of raw data.

Research facilities at Department of Physics Lahore Campus

- Atomic Force Microscope
- Optical Microscope
- UV-VIS-NIR Spectroscopy
- Raman Spectroscopy
- Photo Luminescence Spectroscopy
- Anechoic Chamber
- Vector Network Analyzer
- Electrochemical Impedance Analyzer (EIS)-PARSTAT 4000
- Corrosion Cell with Pt and Ag/AgI electrodes
- DC 4-Probe conductivity Setup
- Hydrogen Generator
- Fume Hood
- Fuel Cell testing unit (IV measurements)
- Planetary Ball Mill (RETSCH) Germany
- Simulator (Expert Design Software)
- Potentiostat/Galvanostat
- Four probe IV measurement system.
- Nanoparticle Synthesis via Wet Chemistry
- Metal Sputter coater
- Fume Hoods
- Furnaces/Ovens
- Glove Box
- Spin Coaters
- Centrifuges
- Hot Plates/Magnetic Stirrer

Research Collaborations

- Lancaster University, UK,
- Royal Institute of technology, KTH Sweden
- Uppsala University, Sweden,
- University of Alto, Finland
- Linkoping University, Korea
- University of Iowa, USA
- Harbin Institute of Technology Harbin, China
- University Technology Petronas, Malaysia
- University of Canterbury, New Zealand
- University of Strathclyde Engineering, Glasgow, UK
- University of Engineering & Technology, Lahore
- Government college University, Lahore
- PIEAS Pakistan

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Physics

The Master of Science in Physics is a thesis based program and offered in a variety of experimental and theoretical research areas which include; materials science, high energy physics, laser and photonics, condensed matter physics, plasma physics, radiation physics, quantum optics, etc. The Department has state of the art experimental facilities for graduate students to carry out their research.

Entry Requirements

- 16 years degree in one of the subjects: Physics, Computer Science (with BSc. in Physics and Mathematics), Mathematics (Applied), Computer Engineering, Engineering Sciences; BE in Electrical Engineering; BS in Materials Science/Metallurgical Engineering; BE in Mechatronics; BS in Medical Physics, Applied Physics, Computational Physics, Space Physics/Space Sciences and the relevant allied field from an accredited educational institution with minimum first division (annual system) or CGPA 2.5/4.0 (semester system)
- Candidates majoring in subjects other than Physics will be required to take some additional pre-requisite courses
- No third division (annual system) or D grade (semester system) throughout the academic career
- GAT (General) with minimum 50% marks

Offering Campuses

- Islamabad and Lahore

Doctor of Philosophy in Physics

The Doctor of Philosophy in Physics program offered by the Department of Physics has been contributing significantly in higher education learning. Besides doing theoretical research in a variety of areas like high energy physics, quantum optics, etc., availability of state of the art experimental facilities at the department offers great opportunity to the scholars to carry out research activities in the field of materials science, condensed matter physics, high energy physics, radiation physics, nanotechnology, etc. in accordance with the highest standards set by the international community.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

- Islamabad and Lahore

Faculty Members

CUI, Islamabad Campus

Professors

- Dr. Ishaq Ahmad, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Mahnaz Qader Haseeb, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Rafaqat Hussain, PhD, University College London, UK
- Dr. Sajid Qamar, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Arshad Saleem Bhatti, T.I., PhD, Cambridge University, UK

Advisors

- Dr. Muhammad Aslam Khan, PhD, HULL University, UK
- Dr. Mais Suleynanov, PhD, Joint Institute for Nuclear Research (JINR), Dubna, Moscow, Russia
- Dr. M. Zafar Iqbal, PhD, Manchester University, UK
- Dr. Hameed Ahmed Khan, PhD, Birmingham University, UK

Associate Professors

- Dr. Sadia Manzoor, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Ahmer Naweed, PhD, University of Massachusetts, USA
- Dr. Fazal Ghafoor, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Anis-ur-Rehman, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Farida P. Tahir, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Nazar Abbas Shah, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Najeeb-ur-Rehman, PhD, Quaid-i-Azam University,

Islamabad, Pakistan
- Dr. Fakhar ul Inam, PhD, Ohio State University, USA
- Dr. Waqas Masood, PhD, University of London, UK
- Dr. Siraj-ul-Islam, PhD, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Altaf Karim, PhD, Kansas State University, USA

Assistant Professors
- Dr. Muhammad Rashid, PhD, Islamia University of Bahawalpur, Pakistan
- Dr. Jaweria Ambreen, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Salman Khan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Asghari Gul, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Kamran, PhD, University of Innsbruck, Austria
- Dr. Farrukh Shahzad, PhD, Karl-Franzens-Universitat, Graz, Austria
- Dr. Abid Hasan Mujtaba, PhD, Texas A&M University, USA
- Dr. Ahsan Illahi, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Saira Arif, PhD, University of Vienna, Austria
- Dr. Sana Sabahat, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Azeem Mir, PhD, CUI Islamabad, Pakistan
- Dr. Zahid Imran, PhD, Pakistan Institute of Engineering & Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Syeda Sitwat Batool, PhD, Pakistan Institute of Engineering & Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Shahid Mehmood, PhD, CUI Islamabad, Pakistan
- Dr. Shahzad Hussain, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Anwar Hussain, PhD, Pakistan Institute of Engineering & Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Mushtaq Ahmad, PhD, Pakistan Institute of Engineering & Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Muhammad Abdul Latif, PhD, University of Groningen, Netherlands
- Dr. Shumaila Karamat, PhD, Nanyang Technical University, Singapore
- Dr. Junaid Ali, PhD, Jeju National University, South Korea
- Dr. Uzma Tabassam, PhD, University of Camerino, Italy
- Dr. Lubna Tabassam, PhD, University of Camerino, Italy
- Dr. Mushtaq Ali, PhD, University of Camerino, Italy
- Dr. Muhammad Hannan Younis, PhD, INFN - National Institute of Nuclear Physics, Italy
- Dr. Yasir Ali, PhD, Jagiellonian University Poland, Poland
- Dr. Asif Iqbal Zia, PhD, Massey University, New Zealand
- Dr. Waqar Ahmed, PhD, University of Twentte, Netherlands
- Dr. Mubarak Ali, PhD, University Technology Petronas, Malaysia
- Dr. Javed Akram, PhD, Freie Universitat Berlin, Germany
- Dr. Faheel Ather Hashmi, PhD, Universite Paul Sabatier, France
- Dr. Muhammad Sohail Amjad, PhD, University of Paris, France
- Dr. Muhammad Waseem, PhD, Birmingham University, UK
- Dr. Shams-ur-Rehman, PhD, Oxford University, UK
- Dr. Javeed Akhtar, PhD, Manchester University, UK
- Dr. Muhammad Umair Hassan, PhD, Cambridge University, UK
- Dr. Uzma Khalique, PhD, Eindhoven University of Technology, Netherlands
- Dr. Awais Ali, PhD, CUI Islamabad, Pakistan
- Dr. Hira Siddiqui, PhD, University of Munster, Germany
- Dr. Hamza Qayyum, PhD, National Central University, Taoyuan, Taiwan
- Dr. Jamila Bashir Butt, Doctor of Philosophy, Syracuse University, NewYork, USA

- Dr. Kaneez Rabia, PhD, University of Augsburg, Germany
- Dr. Muhammad Rehman, PhD, University of Cantabria, Spain
- Dr. Tasawar Abbas Malik, PhD, Quiad e Azam University, Islamabad, Pakistan
- Dr. Rana Liaqat Ali, PhD, CUI Islamabad Campus, Pakistan
- Dr. Muhammad Hafeez, PhD, CUI Islamabad Campus, Pakistan
- Dr. Zia-ud-Din, PhD, CUI Islamabad Campus, Pakistan

Besides, 07 non-PhD Assistant Professors, 20 Lecturers, 01 Scientific Officer, 18 Research Associates and 01 Lab Engineers are also working in this department.

CUI, Lahore Campus

Professor
- Dr. Muhammad Asif, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China

Associate Professors
- Dr. Muhammad Ashfaq Ahmad, PhD, Harbin Institute of Technology, China
- Dr. Salman Naeem Khan, PhD, Zhejiang University, China
- Dr. Shabana Nisar, PhD, Syracuse University, USA

Tenured Associate Professors
- Dr. Rizwan Raza, PhD, KTH Royal Institute of Technology, Sweden

Assistant Professors
- Dr. Nosheen Akbar, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Muhammad Hammad Aziz, PhD, The Islamia University of Bahawalpur, Pakistan
- Dr. Muhammad Yasir Rafique, PhD, University of Science and Technology, Beijing, China
- Dr. Amna Mir, PhD, Beijing University of Posts Telecommunication, China
- Dr. Saif-ur-Rehman, PhD, Mohammed V University, Agdal, Rabat, Morocco
- Dr. Mukhtar Ahmed, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Ghazanfar Abbas, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Muhammad Jamil, PhD, Government College University, Lahore, Pakistan
- Dr. Muhammad Idrees, PhD, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Muhammad Naveed Aslam, PhD, Government College University, Lahore, Pakistan
- Dr. Akbar Ali, PhD, Ripha International University, Pakistan
- Dr. Naima Amin, PhD, The Islamia University of Bahawalpur, Pakistan
- Dr. Muhammad Junaid Amjad, PhD, University of Engineering and Technology, Lahore, Pakistan
- Dr. Zahida Ehsan, PhD, University of Leuven- Katholieke Universiteit Leuven, Belgium
- Dr. Ishrat Sultana, PhD, Sungkyunkwan University, Korea
- Dr. Abdul Sattar, PhD, University of Canterbury, New Zealand
- Dr. Muhammad Imran, PhD, University Technology Malaysia, Malaysia
- Dr. Arslan Usman, PhD, University of Engineering and Technology, Lahore, Pakistan
- Dr. Muhammad Amir Razzaq, PhD, Uppsala University, Uppsala, Sweden
- Dr. Ayesha Jamil, PhD, University of Cambridge, UK
- Dr. Farah Alvi, PhD, University of South Florida, USA
- Dr. Muhammad Asif, PhD, Linkopings University, Sweden
- Dr. Muhammad Ajmal Khan, PhD, Bahauddin Zakariya University, Multan, Pakistan
- Dr. Siddique Akhtar Ehsan, PhD, VNiVERSiDAD Dsalamanca, Spain
- Dr. Hummad Habib Qazi, AP, Universiti of Teknologi

Malaysia
- Dr. Muhammad Naveed ul Haq, AP, University of Duisburg-Essen Germany

Besides, 01 non-PhD Assistant Professors, 06 Lecturers and 01 Research Associates are also associated with this department.

Department of Biosciences

Bioscience is a discipline of Life Sciences which deals with the diverse biological aspects of living organisms ranging from studying their structure to their function. Department of Biosciences in this regard provides a unique opportunity to students to get training in areas covering from Bacteria to Human, Genes to Genomes, Genomes to Ecosystems and from Basic research to applied research. The Department offers a dedicated and conducive teaching environment as well as excellent research opportunity in well-established disciplines of Microbiology and Immunology, Molecular Biology/Biochemistry, Molecular Genetics, Developmental Biology, Plant Sciences, Biotechnology and Bioinformatics.

CUI took the initiative by establishing the Biosciences Department in 2003 by introducing a 4 year degree program in Bioinformatics at Islamabad, and added another undergraduate degree in Biosciences in 2007. Meanwhile, the graduate degree programs in above mentioned fields were also started in 2006. CUI in this regard was the first institution to offer such diversified undergraduate as well as graduate programs in and around Islamabad.

The Department of Biosciences has, over the years, been able to attract world class faculty, who created interdisciplinary/intra- and inter-departmental research groups. They all collectively take part in teaching, research and training programs leading to the different offered degrees.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Biosciences

Master of Science in Biosciences aims to produce professionals who have thorough knowledge and skills to develop a career in any discipline of biological sciences. The department is committed to provide the fresh graduates with an environment conducive for learning and critical thinking in different aspects of biological sciences. The Department offers opportunities to the students for learning of research techniques in fields of Plant Sciences, Animal Sciences Microbiology, Biochemistry, Molecular Biology, Bioinformatics, Biotechnology and Pathology etc. A degree in Biosciences discipline will prepare students for a promising career in the field of teaching, clinical and research institutes, pharmaceutical companies, biotechnology industries etc.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

- Islamabad and Sahiwal

Doctor of Philosophy in Biosciences

The Doctor of Philosophy in Biosciences aims to explore the principles of biology and organism diversity so that the students develop their critical thinking skills which are essential to assimilate, interpret and impart knowledge. The department provides all possible resources to the students so that they gain maximum knowledge and practical skills needed to be highly competitive for availing the best opportunities in their professional careers. A PhD student is bound to perform research as an integral part of degree. For this, students are encouraged not only to conceive and develop a research project related to any biological and health issues but also to execute that research project independently. The program offers research in all major disciplines of Biosciences, which includes Microbiology and Immunology, Molecular Biology/Biochemistry, Molecular Genetics, Developmental Biology, Plant Sciences, Biotechnology and Bioinformatics. It also encourages the students to come up with new innovative interdisciplinary ideas and develop new techniques to achieve new heights of success in the relevant field. The PhD graduates are not only trained to develop tools, techniques, diagnostic and therapeutic solutions but also solutions to complex problems in the fields of molecular biology and agriculture sector through use of biotechnology.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Master of Science in Biochemistry and Molecular Biology

The MS in Biochemistry and Molecular Biology program infuses core concepts of biochemistry and molecular biology as applied to biomedical sciences and plant biotechnology. Core concepts related to biochemistry and molecular biology are taught through the course work consisting of advanced electives and special topics. Our courses expose students to advanced methods in biochemistry and molecular biology, laboratory and literature-based research as well as include a significant number of “hands on” lab-based courses that develop expertise in biochemistry, protein chemistry, cell signaling, vaccine development, molecular biology, and biotechnology concepts and skills. Our graduating students in this program can be an asset to academic, medical, biotechnology, agriculture as well as pharmaceutical industries.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Doctor of Philosophy in Biochemistry and Molecular Biology

The central mission of the Doctor of Philosophy in Biochemistry and Molecular Biology program is to apply rigorous scientific principles to understand the underlying biochemical and molecular mechanisms of life. Biochemistry and molecular Biology are the knowledge hubs for all other disciplines. The graduates will be able to review, synthesize, critique and integrate relevant concepts, discoveries and applications in Biochemistry or molecular biology and related fields. The curriculum is designed to provide a broad background in protein biochemistry, biotechnology and molecular genetics, in addition to an appropriate depth of knowledge in the field selected for the PhD thesis research.

Another main objective is to strengthen candidates' knowledge and technical proficiency, preparing them for collaborative, multidisciplinary assignments in several fields and to provide training in the preparation of scientists who are professional leaders, and a source of benefit to the society. The career potential of a biochemist/molecular

biologist is very broad. Contributing towards basic or applied research, graduates may get involved as researchers at various research organizations. Graduates may seek jobs in various laboratories housed in universities, medical centers and industrial laboratories (Medical, Pathology and Diagnostics, Forensics, Dairy, Food, Agriculture, Pharmaceutical, Chemical and Cosmetics industries) and can attain a leadership position. Business opportunities do exist as the graduates could get positions in the Biotechnology industry and regulatory agencies.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Master of Science in Molecular Genetics

Master of Science in Molecular Genetics program is designed to provide a broad background in major fields of genetics, providing an understanding of concepts that are essential to modern biologists. The subject is aimed to give knowledge of classical genetics followed by its application in functional genomics. This program will help the student to perform techniques of molecular genetics and interpret genetic data towards applied research. In addition to an appropriate depth of knowledge, the students will be prepared to pursue further research in the field selected for the PhD thesis. The degree will prepare the students for suitable careers in the medical research, pharmaceutical companies and biotechnology industries etc.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Doctor of Philosophy in Molecular Genetics

The Molecular Genetics is suitable for graduates in life sciences, biomedical sciences and allied subjects, as well as people already employed in related fields who wish to improve and update their knowledge and gain valuable experience. The Molecular Genetics is aimed to focus on the molecular aspect of diseases which mainly include heredity diseases. The technical approach of molecular genetics will shed light on molecular pathology of many prevailing diseases in Pakistan that are poorly understood at present, eventually paving the way for economically suitable treatment and prevention strategies. Upon successful completion of this course, graduates should be able to apply knowledge of genetics to clinical research using genetic data in an applied context.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Master of Science in Microbiology and Immunology

The Microbiology and Immunology program covers range of specialized fields, from more applied disciplines such as medical, public health, industrial and food microbiology, to basic fields of immunology, microbial ecology, physiology, genetics of microbes, antibiotic resistance, microbial forensics and host-pathogen interaction. The training through taught courses helps students to understand the disease-causing potential of various pathogenic bacteria, fungi and viruses, and the responses of the immune system. This program will enable students to apply the knowledge of microbiology and immunology to biotechnology, health and other relevant sectors, and will prepare them for suitable careers in areas as diverse as medicine (disease epidemiology), brewing, food spoilage, control of environmental pollution, biotechnology, diagnostics and therapeutics.

Admission requirements, program duration, course work

and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Doctor of Philosophy in Microbiology and Immunology

The Doctor of Philosophy in Microbiology and Immunology program offers opportunity to work on research problems as diverse as microbial genetics, microbial physiology and biochemistry, immunology, host-pathogen interactions, functional studies, human susceptibility to infectious diseases, human/livestock, virology, food and water microbiology, medical microbiology, molecular epidemiology to microbial forensics and outbreak investigation, recombinant DNA research and biosensors, drug resistance, vaccine development and targeted drug delivery using phage and nanoencapsulation technologies. The graduating students will be well trained to pursue career in fields of biomedical research, medicine, disease epidemiology, diagnostics and vaccine development, water and food testing for microbes and environmental pollutants, or other health professions, biotechnology and genetic engineering, industrial microbiology and public health.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Master of Science in Molecular Virology

The Master of Science in Molecular Virology program aims to produce graduates with focused and unique understanding as well as expertise in techniques involved in virology. Emergence and re-emergence of infectious diseases, the potential for the introduction of bioterrorism agents like smallpox virus, dengue fever virus etc., resistance acquired by the viruses against antiviral drugs, failure of successful vaccines against lethal viruses like HCV and HIV. Upon successful completion of the degree program, the graduates should be able to apply knowledge of virology in agriculture, animal health and environment and clinical research in an applied context. The degree will prepare students for engaging with the careers in the fields of clinical and research institutes, pharmaceutical companies and biotechnology industries etc.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Master of Science in Bioinformatics

Modern developments in the fields of 'omics' and health sciences as well as the generation of an exponentially ever increasing data through the associated high-throughput automated laboratory techniques are evidently transforming life sciences into a quantitative science. Rapid advances in computer science and information technology, however, have made it feasible to interpret and analyse the large volume of generated data. The need is growing for scientists who can speak and understand equally well the languages of computational, mathematical/statistical and biological sciences, and can extract the meaningful information from the raw data. This has necessitated the emergence of new

field of study – bioinformatics – where the individuals are simultaneously trained in the integrated areas of computer science, statistics, mathematics and molecular biology.

During the past two decades, bioinformatics has evolved into a full-fledged scientific discipline. Now, it is not only restricted to computational molecular biology and computational structural biology, rather it has expanded to areas such as comparative, structural and functional genomics, next generation sequence (NGS) analysis transcriptomics, proteomics, cellomics, metabolic pathway engineering, computational drug, peptide and enzyme designing as well as the development of integrated bioinformatics solutions such as biological and chemical databases, data analysis, data mining, biomedical text mining and customized tool development etc. The availability of complete genome sequences for human as well as several human pathogens coupled with bioinformatics has revolutionized the understanding the biological processes underlying the physiology of both host and pathogens. An equitable contribution of developing countries, such as Pakistan, in this whole process is not only vital for the economic growth of the country but also of global importance to best reap the profits of human resource world-wide. The Bioinformatics degree will enable students to pursue their careers in industries such as health care, biotechnology, biomedical, pharmaceutical, agrochemicals, renewable energy, environmental protection, software warehouses as well as in teaching and research institutes etc.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus
- Islamabad

Research Facilities
- Fully equipped research laboratories
- Green house
- DNA sequencer
- Fluorescence microscope
- Ultracentrifuge
- Real Time PCR
- Tissue culture facility
- Computational and software facility

Research Groups

1 Microbiology and Public Health

Group Mentor:
- Dr. Habib Bokhari, PhD, University of Glasgow, UK

Group Members:
- Dr. Ramla Shahid, PhD, Cambridge University, UK
- Dr. Muhammad Imran, PhD, INPL - ENSAIA - LIBio, Nancy, France
- Dr. Aisha Naeem, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Syed Ali Mustajab, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Haroon Ahmad, PhD, PMAS Arid Agriculture University, Rawalpindi, Pakistan
- Dr. Maira Junjua, PhD, Universite` de Lorraine, France
- Dr. Neelam Akram, PhD, Linnaeus University, Sweden

Research Activities:
Main areas of research in microbiology and public health are infectious disease (Bacterial and Viral) like cholera, E. coli, Salmonella, Shigella, Helicobacter, HCV, Rota Virus, TTV and Measles virus, nano biotechnology based drug delivery against infectious diseases, vaccine development and delivery, antibiotic resistance, molecular epidemiology, biosensors, environmental health (Toxins, heavy metals and pesticides) and safety. 02 Research Associates are also part of this group.

2 Molecular Virology

Group Mentor:

- Associate Professor. Dr. Ijaz Ali, PhD, University of the Chinese Academy of Sciences, IOZ, Beijing, China.

Group Members:

- Dr. Nazish Bostan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Sadia Sattar, PhD, Massey University New Zealand.
- Dr. Fahed Pervaiz, PhD, PhD, NUST, Islamabad, Pakistan
- Dr. Dr. Haji Akbar, PhD, University of Illinois at Urbana-Champaign
- Dr. Naseer ali Shah, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Anwar ullah, PhD, State University of Sao` Paulo, Brazil

Research Activities:

Main areas of research in Molecular Virology are characterization of disease burden of Hepatitis C virus, Surveillance and serological analysis, Vaccine development, Diagnostics and therapeutic bacteriophages.

3 Genomics

Group Mentor:

- Prof. Dr. Raheel Qamar, PhD, T.I., Dean, Research, Innovation and Commercialization (RIC), PhD University of North Texas, USA

Group Members:

- Dr. Maleeha Azam, PhD, CUI, Islamabad, Pakistan
- Dr. Muhammad Ajmal, PhD, CUI, Islamabad, Pakistan

Research Activities:

Research focus and specialization of activities going on: Genetic Studies of Inherited and Multifactorial Disorders

4 Functional Genomic and Proteomics

Group Mentor:

- Prof. Dr. Raheel Qamar, PhD, T.I., Dean, Research, Innovation and Commercialization (RIC), PhD University of North Texas, USA

Group Members:

- Dr. Saleem Ahmed Bokhari, PhD, Tsinghua University, China
- Dr. Irfan Sadiq, PhD, Pisa University, Italy
- Dr. Amira Tariq PhD, University of Vienna, Austria
- Dr. Nazia Bibi, PhD, University College London, UK
- Dr. Saima Feroz, PhD, University of Vienna, Austria
- Dr. Alamdar Hussain, PhD, Karolinsk Institute, Sweden
- Dr. M Jadoon Khan, PhD, Medical University of Graz, Austria
- Dr. Jawad Khan, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Syed Tahir Abbas, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Naseer Iqbal, PhD, University of Vienna, Austria
- Dr. Asghar Shabbir, PhD, University of Strasbourg, France.

Research Activities:

Functional genomic and proteomic researches post-genomic' technologies to unravel the function of related to different identified genes related to different human diseases. The group is also involved the identification of genes which are expressed in response to different biotic and abiotic stress in plants.

5 Computational Biology and Bioinformatics Group (CBBG)

Group Mentor:

- Dr. M. Qaiser Fatmi, Dr. Rer. Nat. (PhD), University of Innsbruck, Austria

Group Members:

- Dr. Abdul Rauf Siddiqi, PhD, Paris Descartes University, France
- Dr. Waseem Haider, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Abdullah Bilal Ahmed PhD, University of Montpellier 2, France *
- Dr. M. Mudassar, PhD, Korea Institute of Science and Technology SEOUL and University of Science and Technology South Korea *
- Dr, Arshan Nasir, University of Illinois at Urbana Champaign, USA*
- Dr. Malik Nadeem Akhter, University of Illinois at Urbana Champaign, USA
- * Also working in the Functional Genomics Laboratory.
- 03 lecturers and 01 Research Associate are also part of CBBG.

Research Activities:

Computer-Aided Drug Designing, Modeling and Simulations of Biomolecules (Structure, Dynamics and Function), Next Generation Sequence (NGS) Analysis, Tools and Database Development, Structural Bioinformatics, Computational OMICS (COMICS), Chemo informatics, Semi-empirical and Quantum Mechanical Calculations.

6 Cancer Genetics and Epigenetics Lab

Group Mentor:

Prof. Dr. Mahmood Akhtar Kayani, PhD University of Wales, Swansea, UK

Group Members:

Dr. Muhammad Saeed, PhD, Innsbruck University, Austria
Dr. Muhammad Faraz Arshad Malik, PhD, CUI, Islamabad, Pakistan
Dr. Zertashia Akram, PhD, Quaid-i-Azam University, Islamabad, Pakistan
Dr. Ishrat Mahjabeen, PhD, CUI Islamabad, Pakistan
Dr. Sajida Batool, PhD, University of Nottingham, Nottingham, UK.

Research Activities:

Cancer Genetics, Epigenetics and Biology (Head and Neck cancer, Thyroid Cancer, Breast Cancer). We focus on screening germ line mutations of several genes in relation to these cancers. We are also exploring expression profiles of different biomarkers in cancer progression to develop an early prognostic tool.

7 Applied Microbiology and Biotechnology

Group Mentor:

- Prof. Dr. Fauzia Yusuf Hafeez, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Group Members:

- Dr. Kiran Munir, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Zahid Ali, PhD, University of Hanover, Germany
- Dr. Saadia Naseem, PhD, University of Hanover, Germany
- Dr. Nadeem Hassan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Umer, PhD, Imperial College London, UK
- Dr.Faheem Ahmad, PhD, University of Queensland Australia

Research Activities:

Plant Microbe interactions, Plant biotechnology, Plant virology, Plant Physiology, Biofuels, Food biotechnology, Bioremediation, Microbial Culture Collection.

8 Plant Biochemistry and Biotechnology

Group Mentor:

- Prof. Dr. Asrar Muhammad Khan, PhD, University of Sydney, Australia

Group Members:

- Dr. Mustafa Nawaz, PhD, Kansas State University, USA

- Dr. Tayyaba Yasmin, PhD, PMAS Arid Agriculture University, Rawalpindi, Pakistan, Post Doc, Edinburgh University, UK
- Dr. Zeeshan Hyder, PhD, PMAS Arid Agriculture University, Rawalpindi, Pakistan, Post Doc, Cornell University, USA
- Dr. Suamira Farrakh, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Fazeelat Karamt, PhD, University of Lorraine, Nanacy, France
- Dr. Rumana Keyani,, PhD, The Edinburgh University, UK
- Dr. Rabia Naz, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Research Activities:

Plant Biochemistry, Redox Biology, Functional Genomics, Tissue Culture, Plant Biotechnology, Soil Chemistry, Genome Analysis, Biotic and Abiotic stress, Plant Secondary Metabolites.

Faculty Members

CUI, Islamabad Campus

Professors

- Dr. Syed Habib Bokhari, PhD, University of Glasgow, UK
- Dr. Mahmood A. Kayani, PhD, University of Wales, Swansea, UK
- Dr. Muhammad Arshad Rafiq, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Advisor

- Dr. Fauzia Yusuf Hafeez, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Associate Professors

- Dr. Ijaz Ali, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China
- Dr. Qaiser Fatmi, PhD, University of Innsbruck, Austria
- Dr. Mustafa Nawaz Shafqat, PhD, Kansas State University, USA
- Dr. Syed Muhammad Nurulain, PhD, Semmelweis University, Budapest, Hungary
- Dr. Muhammad Zeeshan Hyder, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Muhammad Saeed, PhD, University of Innsbruck, Austria
- Dr. Tayyaba Yasmin, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan

Assistant Professors

- Dr. Shabbar Abbas, PhD, Jiangnan University, China
- Dr. Syed Ali Musstjab Akber Shah, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Zertashia Akram, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Syed Kamran Ul Hassan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Sabir Hussain, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Farha Masood, PhD, Quaid i Azam University, Islamabad, Pakistan
- Dr. Kaleem Imdad, PhD, Beijing Institute of Technology, China
- Dr. Nazish Bostan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Saleem Ahmed Bokhari, PhD, Tsinghua University, China
- Dr. Saqib Mumtaz, PhD, Charles Darwin University, Australia
- Dr. Zahid Munir, PhD, Medical University of Vienna, Austria
- Dr. Aamira Tariq, PhD, University of Vienna, Austria
- Dr. Hamid Ali, PhD, University of Karachi, Pakistan
- Dr. Zahra Jabeen, PhD, Zhejiang University, China
- Dr. Humaira Shaheen, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Humaira Yasmin, PhD, Quaid-i-Azam University,

Islamabad, Pakistan
- Dr. Kifayat Ullah, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Fariha Khan, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Syeda Hafiza Beenish Ali, PhD, CUI Islamabad, Pakistan
- Dr. Nazneen Bangash, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Zehra Agha, PhD, CUI Islamabad, Pakistan
- Dr. Sumaira Farrakh, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Rabia Naz, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Rabia Habib, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Asif Gondal, PhD, University of Karachi, Pakistan
- Dr. Naseer Ali Shah, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Faraz Arshad Malik, PhD, CUI Islamabad, Pakistan
- Dr. Maleeha Azam, PhD, CUI Islamabad, Pakistan
- Dr. Waseem Haider, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Asia Nosheen, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Abdul Rauf Siddiqi, PhD, Paris Descartes University, France
- Dr. Sundus Javed, PhD, Technical University Munich, Germany
- Dr. Saadia Naseem, PhD, University of Hanover, Germany
- Dr. Zahid Ali, PhD, University of Hanover, Germany
- Dr. Neelam Akram, PhD, Linnaeus University, Sweden
- Dr. Alamdar Hussain Baloch, PhD, Karolinska Institute, Sweden
- Dr. Asghar Shabbir, PhD, University of Strasbroug, France
- Dr. Sadia Sattar, PhD, University Palmerton, New Zealand
- Dr. Abdullah Bilal Ahmed, PhD, Université Montpellier 2, France
- Dr. Muhammad Faheem, PhD, King Abdulaziz University, Saudi Arabia
- Dr. Abid Ali Khan, PhD, University of the Basque Country, Spain
- Dr. Farhan Haq, PhD, Gachon University, Korea
- Dr. Asma Amjad, PhD, The International School for Advanced Studies, Italy
- Dr. Pasha Ghazal, PhD, University of Camerino, Italy
- Dr. Irfan Sadiq, PhD, Pisa University, Italy
- Dr. Anwar Ullah, PhD, Universidade de Estadual Paulista, Portugal
- Dr. Syed Muhammad Usman Shah, PhD, University Technology Petronas, Malaysia
- Dr. Rumana Keyani, PhD, Edinburgh University, UK
- Dr. Malik Nadeem Akhtar, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Arshan Nasir, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Muhammad Jawad Khan, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Haji Akbar, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Muhammad Imran, PhD, INPL - ENSAIA - LIBio, Nancy, France
- Dr. Sajida Batool, PhD, University of Nottingham, UK
- Dr. Faheem Ahmad, PhD, Queensland University, UK
- Dr. Ramla Shahid, PhD, Cambridge University, UK
- Dr. Nazia Bibi, PhD, University College London, UK
- Dr. Muhammad Inam Afzal, PhD, University of Lorraine, France
- Dr. Syed Tahir Abbas Shah, PhD, University of Illinois at Urbana Champaign, USA
- Dr. Muhammad Umer, PhD, Imperial College London, UK
- Dr. Fahed Parvaiz, NUST, Islambad, Pakistan

- Dr. Ayesha Tahir, PhD, Clermont Ferrand University, France
- Dr. Muhammad Nadeem Hassan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Haroon Ahmed, PhD, Pir Mehr Ali Shah Arid Agriculture University, Pakistan
- Dr. Muhammad Ajmal, PhD, Redboud University, Netherlands
- Dr. Khuram Shahzad, PhD, University of Illinois at Urbana-Champaign, USA
- Dr. Ishrat Mahjabeen, PhD, CUI, Islamabad
- Dr. Muhammad Muddassar, PhD, Korea Institute of Science & Technology, Seoul
- Dr. Sidra Rehman, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Hassaan Mehboob Awan, PhD, University of Science and Technology, China
- Dr. Nighat Noureen, PhD, Capital University of Science and Technology, Islamabad, Pakistan
- Dr. Adeel Mahmood, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Besides, 11 Lecturers and 10 Research Associates are also part of this department.

CUI, Sahiwal Campus

Assistant Professors

- Dr. Shazia Mannan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Ibrahim, PhD, Zhejiang University, P.R China
- Dr. Abrar Hussain, PhD, Swedish University of Agriculture Sciences - Sveriges Lantbruks Universitet, Sweden
- Dr. Awais Ihsan, PhD, Huazhong Agriculture University, P.R China
- Dr. Asim Mehmood, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Qudsia Yousafi, PhD, University of Sargodha, Pakistan
- Dr. Shahzad Saleem, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Wasim Sajid, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Farrukh Jamil, PhD, Center for Chemical Biology, Universiti Sains, Malaysia
- Dr. Sumaira Kanwal, PhD, Kongju National University, Korea
- Dr. Hassan Riaz, PhD, Huazhong Agriculture University, P.R China
- Dr. Muhammad Asif Rasheed, PhD, Huazhong Agricultural University, P.R China
- Dr. Muhammad Azhar, PhD, University of Science and Technology, China

Besides, 03 Lecturers and 01 Research Associates are also associated with the department.

Department of Environmental Sciences

Department of Environmental Sciences at CUI was established in 2004 and has now become a hub for interdisciplinary undergraduate studies, innovative research development, graduate studies and advocacy on environmental issues. The Department has highly qualified faculty with major focus areas of research and development including environmental technologies, climate change and ecosystem, renewable energy, sustainable agriculture and natural resources, sanitation and public health.

The Department of Environmental Sciences at CUI is playing an important role to inspire a lifelong commitment to the earth for environmental responsibilities through research and education that is essential to understand and improve the environment at local, regional and global level.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Environmental Sciences

Master of Science in Environmental Sciences program was started in 2005. The aim of the program is to provide students with an opportunity to pursue their ambitions in this broad and multidisciplinary field and to become efficient advocates of environment. The program offers a range of research areas to choose from a wide range of career opportunities. The research oriented program is designed to prepare the graduates for career in environmental consultancy, regulatory agencies, manufacturing and service industry, wildlife management organizations, environment related national and international organizations and academic institutions.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campuses

- Abbottabad and Vehari

Doctor of Philosophy in Environmental Sciences

The PhD program in environmental sciences acquaint the scholars with critical analysis of the present and future development activities in the light of its ultimate environmental impacts on climate change, water resources and quality, public health and food security and how such influences can be managed at local, regional and national level.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Master of Science in Biotechnology

Master of Science (MS) in Biotechnology program was started in Fall 2009. The program broadly aims at preparing human resource in this emerging area of science of the 21st century with the realization of meeting local, regional and global demands of qualified and well – trained professionals. The specific objectives are to impart and integrate high quality education and research in the discipline of biotechnology and developing human resource with independent, creative and critical thinking and high moral values.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Doctor of Philosophy in Biotechnology

The program offered enormous research exposure with major focused areas of research include improving agricultural crops and livestock against biotic and abiotic stresses, higher yield, energy potential and production; improving health through drug designing, vaccines production, diagnostics, and DNA fingerprinting; bioremediation of contaminated soils and water and improving industrial processes.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Faculty Members

CUI, Abbottabad Campus

Professors

- Dr. Arshid Parvez, PhD, University of Bradford, UK
- Dr. Muhammad Irshad, PhD, Tottori University, Japan
- Dr. Muhammad Maroof Shah, PhD, University of Nebraska-Lincoln, USA

Associate Professors

- Dr. Adnan Ahmad Tahir, PhD, University of Montpelier 2, France
- Dr. Amjad Hassan, PhD, NIIGATA University, Japan
- Dr. Farid Ullah, PhD, Tottori University, Japan
- Dr. Qaisar Mehmood TI, PhD, Zhejiang University, Hangzhon, China
- Dr. Raza Ahmad, PhD, KAIST, Korea North
- Dr. Jamshaid Hussain, PhD, University of Verona, Italy
- Dr. Muhammad Bilal, PhD, Agrocampus Ouest, Rennes, France

Assistant Professors

- Dr. Abdul Nazir, PhD, Quaid -i-Azam University Islamabad, Pakistan
- Dr. Abdul Rehman Khan, PhD, University deparis Diderot paris, France
- Dr. Akhtar Iqbal, PhD, Soil and Env. Sciences, University of Rems France
- Dr. Arshad Mehmood, PhD, Quaid-i-Azam University of Islamabad, Pakistan
- Dr. Asim Yaqub, PhD, University Technology Petronas, Malaysia
- Dr. Ayesha Baig, PhD, University of California Riversine, United States
- Dr. Bibi Saima Zeb, PhD, CUI Abbottabad, Pakistan
- Dr. Bilal Ahmad Zafar Amin, PhD, University of Reims, France
- Dr. Farhan Hafeez, PhD, University of Dijon, France
- Dr. Fazli Wahid, PhD, Kyungpook National University, Korea (South)
- Dr. Humaira Ayub, PhD, CUI, Islamabad, Pakistan
- Dr. Iftikhar Zeb,PhD, Washington State University, USA
- Dr. Irum Shahzadi, PhD, Environment and Biotechnology, CUI Abbottabad, Pakistan
- Dr. Ismat Nawaz, PhD, Vrije University, Amsterdam, Netherland
- Dr. Jamshaid Hussain, PhD, University of Verona, Italy
- Dr. Khalid Ahmad, PhD, Quaid -i-Azam University, Islamabad, Pakistan
- Dr. Malik Tahir Hayat, PhD, Zhejiang University China, China
- Dr. Maria Siddique, PhD, CUI Abbottabad, Pakistan
- Dr. Muhammad Ali, PhD, Huazhong Agricultural University, China
- Dr. Muhammad Bilal, PhD, Agro campus Ouest, Rennes, France
- Dr. Muhammad Shahzad, PhD, Christian-Albrechts-Universität zu Kiel, Germany
- Dr. Nadia Riaz, PhD, UTP, Malaysia
- Dr. Nosheen Mirza, PhD, CUI Abbottabad, Pakistan
- Dr. Rafiq Ahmad, PhD, University of Paris-Est Creteil, France
- Dr. Rashid Nazir, PhD, University of Groningen, Netherlands
- Dr. Romana Afzal, PhD, Kyungpook National University South Korea
- Dr. Sabaz Ali Khan, PhD, Wageningen University, Netherlands
- Dr. Sajid Hussain Shah, PhD, University of Teknology Petronas, Malaysia
- Dr. Shahid Masood Shah, PhD, Pakistan Institute of Engineering and Applied Science, Pakistan
- Dr. Shamyla Nawazish, PhD, University of Agriculture Faisalabad, Pakistan
- Dr. Syed Tatheer Alam Naqvi, PhD, QAU Islamabad, Pakistan

- Dr. Usman Irshad, PhD, Superior Institute of Agronomy Montpell, France
- Dr. Wajiha Khan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Yasar Sajjad, PhD, University of Agriculture Faisalabad, Pakistan
- Dr. Zulfiqar Ahmad Bhatti, PhD, CUI Abbottabad, Pakistan

Besides, 01 non-PhDs, 02 Lecturers and 04 Research Associates are also associated with this department.

CUI, Vehari Campus

Associate Professors

- Dr. Muhammad Shahid, PhD, INP ENSAT Toulouse, France
- Dr. Wajid Naseem, PhD, University of Agriculture, Faisalabad, Pakistan

Assistant Professors

- Dr. Muhammad Rashad Javeed, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Nadeem Sharif, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Naveed Ahmed, PhD, University of the Punjab, Lahore, Pakistan
- Dr. Mazhar Ali, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Mubeen, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Sajjad, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Amjad Farooq, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Hafiz M. Mohkum Hammad, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Behzad Murtaza, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Samina Khalid, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Akram, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Iftikhar, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Amjad, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Sajjad Ahmad, PhD, Asian Institute of Technology, Bangkok, Thailand
- Dr. Nasir Masood, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Faiz Rabbani, PhD, University of Engineering and Technology, Lahore, Pakistan
- Dr. Abu Bakr Umer Farooq, PhD, Huazhong Agriculture University, China
- Dr. Muhammad Tahir, PhD, Pakistan Institute of Engineering & Applied Sciences, Nilore, Islamabad, Pakistan
- Dr. Saeed Ahmad Qaisrani, PhD, University of Sydney, Australia
- Dr. Muhammad Nadeem, PhD, Sciences & Environmental Graduate School, Universite Bordeaux, France
- Dr. Muhammad Farhan Saeed, PhD, University of Kassel, Germany
- Dr. Hafiz Faiq Siddique Gul Bakhat, PhD, Justus Liebig University Giessen, Germany
- Dr. Muhammad Zakir Ali, PhD, Swedish University of Agriculture Sciences – Sveriges Lantbruks University, Sweden
- Dr. Muhammad Imran, PhD, Utrecht University, Netherlands
- Dr. Ghulam Mustafa Shah, PhD, Wageningen University, Netherlands
- Dr. Muhammad Imtiaz Rashid, PhD, Wageningen University, Netherlands
- Dr. Ghulam Abbas, PhD, University of Agriculture, Faisalabad, Pakistan

- Dr. Noor Samad Shah, PhD, University of Peshawar, Pakistan
- Dr. Muhammad Asif Naeem, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Muhammad Shafique Khalid, PhD, University of Agriculture, Faisalabad, Pakistan
- Dr. Zia-ul-Haq Khan, PhD, Beijing University of Chemical Technology, China

Besides, 07 Research Associates and 02 Lab Engineers are also associated with the department.

Department of Meteorology

Department of Meteorology was established in 2005 and COMSATS University Islamabad is the only institute in the country offering degree in Meteorology. In 2005 MS Meteorology program was launched with specializations including Meteorology, and Remote Sensing and GIS (RS&GIS). Later on, in 2010, specializations of RS&GIS at Master level were introduced as separate disciplines. PhD in Meteorology with specializations in Meteorology and RS&GIS are intact in our department since 2010. Department of Meteorology COMSATS Institute Information Technology is the sole Institute in County to offer MS and PhD in Meteorology. The program aims to provide consultancy, solutions and future trends in the areas of Climate Change, Numerical Weather Predication, Hydrology and Water Resources, Snow and Ice, Agriculture and Food Security, Oceanography, Land use and Land cover and a Range and relevant state-of-the-art technologies. Department of Meteorology was launched to focus attention on these multidisciplinary fields and their significance in Pakistan, and to make sincere and serious efforts for the growth and advancement of education and research in these fields.

Remote Sensing and GIS and MET laboratories are well equipped with the state of the art hardware and software. GPS, ArcGIS, ArcView, Map Info, ArcInfo and ERDAS IMAGINE-image processing software have been installed on the latest machines. The Laboratories are fully equipped with state of the art HP plotter and Scanner. In addition, the RS&GIS Laboratory hosts a huge data bank of satellite data purchased and archived from satellite ground stations. The data bank includes SPOT, Landsat, IKONOS, NOAA-AVHRR, MODIS and ASTER data of various years. The Laboratories offers a peaceful environment where students can carry out their research in an innovative way.

The Department of Meteorology maintains an automatic 'MEADE 8 inch LX200-ACF' telescope and 'DSI PRO II' monochrome CCD Camera to monitor astronomical events and night time observations. These instruments offer a range of applications for researchers and amateur astronomers. There have been arranged moon sighting events at CUI campus for the students and public in the past and would be in the future as well.

The department has established its own meteorological research laboratory equipped with the most advanced equipment and computers vital for performing the experiments and quite capable to impart basic training to the students. Automatic Weather Station offers high performance in a very compact design, robust and lightweight, easy to install, field-proven reliability and accuracy, low power consumption, wide selection of sensors, extensive calculation and data logging capacity, user-friendly set-up and graphical display software. The basic sensors suite measures wind speed/direction, pressure, temperature, relative humidity and precipitation. AWS systems are widely used in:

- Climatological measurements
- Hydrological networks
- Energy production and Management
- Building automation
- Environmental research
- Sport and recreational activities

Department of Meteorology is developing linkages with research and development organizations and industries for the development of quality human resources in the vital field of Meteorology, Atmospheric Science, Remote Sensing and GIS, Climatology, and Global Warming etc. Furthermore, these facilities can also be utilized to train private and public sector organization professionals by offering, short and long term professional academic and practical courses to the executives and technicians, for the enhancement of their expertise. In this connection, CUI has signed memorandum of understanding (MOU) with some research and development organizations like Pakistan Meteorological Department (PMD), Institute of Space Technology (IST) and Pakistan Space and Upper Atmosphere Research Commission (SUPARCO). Thus, department of Meteorology will collaborate with organizations like Pakistan Meteorological Department (PMD), WAPDA, NESCOM, SUPARCO etc. to work on problems of applied nature in the field of Meteorology, Atmospheric Science, Climatology, Remote Sensing and GIS, and many others. The MOUs signed between CUI and University of Illinois Urbana Champaign (UIUC), Potsdam Institute for Climate Impact Research (PIK), Germany; are of great importance for the research activities carried out in the department. With these MOUs the department sends some of its most suitable MS student every year for a period of four months to conduct research activities during the last semester of their study.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the professional dynamic market.

Master of Science in Meteorology

The Master of Science in Meteorology is a versatile program. MS Meteorology is intended for those seeking to become expert in the field of Ocean-Atmosphere climate systems and undertake research challenges to improve Weather and Climate Forecasts.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Master of Science in Remote Sensing and GIS

The Master of Science in Remote Sensing and GIS program is focusing on art of acquiring information about objects, area or phenomenon without physical contact. Geographic Information System (GIS) is a computer based information system used to digitally represent and analyze the geographic features present on the earth's surface and the events that are taking place on it. GIS has been an effective tool for implementation and monitoring of different infrastructures. Department of Meteorology started MS in Remote Sensing and GIS program in 2010. The program aims to provide MS in Remote Sensing (RS) and Geographic Information System will provide immense opportunities in the field of large-scale mapping, updating of existing geographical maps, project planning, decision-making and natural resource management. Students after completion of MS-RS &GIS will be able to his/her career as Project Manager, Sr. System Executive, System Analyst, GIS Engineer, Image Analyst, GIS Programmer, Scientific Officer, Research Scientist and Research Scholar.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Doctor of Philosophy in Meteorology

Currently Department of Meteorology is offering Doctor of Philosophy in Meteorology, which has been started in 2010 with two modules including Module A (Meteorology) and Module B (Remote Sensing and GIS). The duration of

studies for PhD shall normally not be less than three years and not more than 5 years. Students have to complete 18 credit hours of course work and then appear in a comprehensive examination. Department of Meteorology, CUI provides the students with a broad - based theoretical knowledge as well as enhanced experimental research and computational skills to enable them to handle challenging research problems independently and innovatively.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad

Faculty Members

CUI, Islamabad Campus

Professor

- Dr. Athar Hussain, PhD, University of Missouri, USA and Quaid-i-Azam University, Islamabad, Pakistan

Associate Professors

- Dr. Shaina Tariq, PhD, University of Peshawar, Pakistan
- Dr. Kalim Ullah, PhD, Graduate School of Chinese Academy of Sciences, Beijing, China

Assistant Professors

- Dr. Khawar Ashfaq Ahmed, PhD, University of Hamburg, Germany
- Dr. Muhammad Imran Shahzad, PhD, The Hong Kong Polytechnic University, Kowloon, Hong Kong, China
- Dr. Rehan Ahmad, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Umar, PhD, University of Illinois, Urbana-Champaign, USA
- Dr. Majid Nazeer, PhD, The Honh Kong Polytechnic University, Hong Kong
- Dr. Jabir Hussain Syed, PhD, Quaid-I-Azam University, Islamabad

Besides, 04 Lecturers and 03 Research Associates are also associated with the department.

Center for Climate Research and Development (CCRD)

CUI, Islamabad Campus

Assistant Professors

- Dr. Toqeer Ahmed, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Anjum Rasheed, PhD, Fatima Jinnah Women University, Rawalpindi, Pakistan
- Dr. Saeed Ahmad Asad , PhD, University of Nottingham, UK
- Dr. Muhammad Abid, PhD, University of Hamburg, Germany
- Dr. Mohsin Raza, PhD, University of Karachi, Pakistan

Besides, 01 Scientific Officer is also associated with the department.

Department of Pharmacy

Department of Pharmacy at CUI is dedicated to educate future pharmacists and scientists and provide professional development opportunities to local and national practicing pharmacists. All of our programs are driven by our mission to enhance the quality of life for the local people and the global community through improved health. According to WHO, there is a dire need of Pharmacy professional worldwide, particularly in the third world countries and as per their recommendations for the current population of Pakistan, there is need of 90,000 Pharmacists against the existing about 7000 pharmacists serving the nation.

Resultantly, a huge demand for more professional pharmacists, not only for the country, but also in the world exists. The Department of Pharmacy at CUI Abbottabad Campus is playing an active role to cater the national health care needs through a broad-based higher and professional

education of pharmacy. In order to deliver quality education in the field of pharmaceutical sciences, the department has services of internationally qualified faculty and has established state of the art laboratories.

Graduate Programs

The mission of the graduate program is to provide exemplary educational, research, and growth opportunities during a student's tenure. We have researchers working actively in the areas of basic and applied pharmacology, bioactive natural products, cardiovascular pharmacology, drug delivery and formulation development, drug development based on enzyme inhibition, pharmacy practice, pharmacy practice and clinical research. The students graduate with a MS or PhD. in pharmaceutical sciences with a specialization in one of five areas: pharmacology, pharmaceutical chemistry, pharmaceutics, Pharmacy practice and pharmacognosy.

Currently, the following graduate programs are being offered and pursued as per latest trends in the dynamic market:

Master of Science in Pharmacy

The Master of Science in Pharmacy program currently focuses on research training in Pharmaceutics, Pharmacy Practice, Pharmacology, Pharmaceutical chemistry and Pharmacognosy. This program includes two semesters of coursework and a further two semesters of research focusing on topics like discovery and evaluation of novel drugs, determination of a drug's effects on the body, delivery methods to improve drug treatment, and how medication is used and applied to enhance patient outcomes. Other areas of research activity include cosmetics, nutraceuticals, herbal medicines, and strategies for assessing individual variations in drug response and clinical research. This program fulfills high demand of scientifically trained young people in the pharmaceutical industry, herbal industry and hospital/community pharmacy and academia.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Doctor of Philosophy in Pharmacy

The Doctor of Philosophy in Pharmacy program aims to prepare students for positions in academia, government and the pharmaceutical industry that will require experience and knowledge in the conduct of original investigation related to the pharmaceutical sciences. The department maintains an active research program with emphasis in discovery of anticancer, anti-diabetic, anti-Alzheimer drugs, Targeted drug delivery, enzyme inhibition, cell culture, immune pharmacology, neuro pharmacology and cardiovascular diseases. The activities of department researchers have long been supported by a wide range of funding sources.

The program offers two semesters of coursework prior to the commencement of research activities by the research scholar.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Faculty Members

CUI, Abbottabad Campus

Professors

- Dr. Jamshed Iqbal, PhD, University of Bonn, Germany
- Dr. Taous Khan, PhD, Kyungpook National University, South Korea

Eminent Professor

- Dr. Izhar Hussain, PhD, Technology & Medicine, United Kingdom

Associate Professors

- Dr. Abdul Jabbar Shah, PhD, University of Karachi, Pakistan
- Dr. Abdul Mannan, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Khalid Rauf, PhD, University of Peshawar, Pakistan

Assistant Professors

- Dr. Arshad Mahmood, PhD, University of Innsbruck, Austria
- Dr. Atif Ali, PhD, Islamia University of Bahawalpur, Pakistan
- Dr. Fiaz Alam, PhD, CUI Abbottabad, Pakistan
- Dr. Muhammad Arfat Yameen, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Muhammad Hassham Hassan Bin Asad, PhD, CUI, Abbottabad, Pakistan
- Dr. Muhammad Ikram, PhD, Pusan National University, South Korea
- Dr. Muhammad Imran Amirzada, PhD, Jiangnan University, China
- Dr. Muhammad Sohail, PhD, Islamic University Bahawalpur, Pakistan
- Dr. Nabi Shah, PhD, University of Karachi, Pakistan
- Dr. Nighat Fatima, PhD, Quaid-i-Azam University Islamabad, Pakistan
- Dr. S Mobasher Ali Abid, PhD, CUI, Abbottabad campus
- Dr. Shujaat Ali Khan, PhD, Islamia University of Bahawalpur, Pakistan
- Dr. Wajahat Mehmood, PhD, Charles Darwin University, Australia
- Dr. Yasser M.S.A Al- Kahraman, PhD, University of Baluchistan, Quetta, Pakistan
- Dr. Zia Ur Rahman, PhD, University of Karachi, Pakistan

Besides, 02 non-PhD Assistant Professors, 07 Lecturers and 04 Research Associates are also associated with this department.

Center for Advance Drug Research

CUI, Abbottabad Campus

Assistant Professors

- Dr. Abdul Hameed, PhD, University of Karachi, Pakistan

CUI, Lahore Campus

Associate Professors

- Dr. Ghulam Murtaza, PhD, Islamia University of Bahawalpur, Bahawalpur, Pakistan

Assistant Professors

- Dr. Muhammad Ijaz, PhD, University of Innsbruck, Austria
- Dr. Talib Hussain, PhD, University of Huddersfield, UK
- Dr. Yasser Shahzad, PhD, University of Huddersfield, UK
- Dr. Abid Mehmood Yousaf, PhD, Hanyang University, South Korea
- Dr. Waseem Hassan, PhD, China Pharmaceutical University, China
- Dr. Muhammad Ihtisham Umar, PhD, University of Sains Malaysia
- Dr. Shaheed ur Rehman, PhD, Hanyang University, South Korea

Besides, 02 Lecturers are also associated with this department.

Department of Chemistry

The Department of Chemistry at CUI Abbottabad is striving hard to attain a well-recognized position among the world leading institutes through excellence in education and cutting edge research and innovation. The department is committed to equip the students with updated knowledge by inculcating research expertise that are well in line with advancements in chemical sciences of the modern world. Students are provided opportunities to work in diverse research areas such as Natural Product Chemistry, Applied and Analytical Chemistry, Organic and Biological Chemistry, Physical and Theoretical Chemistry, Computational Chemistry, Material Chemistry, Biochemistry, etc.

Since inception of the department in 2008, a considerable number of graduates have been produced, who are serving in national and international prestigious institutions including academia, industry, research, public and private sector organizations. The department currently consists of 37 full time faculty holding doctoral degrees from distinguished universities of the globe. The faculty members are dedicated to train students in their respective areas of expertise, and enabling them as vital team members of the research groups. Besides imparting knowledge to students, the faculty members are also actively engaged in publishing their research work in high impact factor international journals including; Nature Materials, Advanced Materials, AngewandteChemie - Int. Ed., Journal of the American Chemical Society, Chemical Science, Physical Review Letters, Chemistry A- European Journal, Advanced Synthesis and Catalysis, Journal of Physical Chemistry A/C, Journal of Chromatography A, Journal of Power Sources, Journal of Hazardous Materials Journal of Membrane Science, Journal of Organic Chemistry, Journal of Material Chemistry C, Tetrahedron, RSC Advances, Organic and Biomolecular Chemistry, European Journal of Organic Chemistry, Polymer, European Journal of Medicinal Chemistry, etc. Moreover, a substantial number of patents, books, book chapters, posters and presentations are also on their credit.

Faculty of this department have a large number of research projects sponsored by different funding agencies including Higher Education Commission of Pakistan (HEC), Pakistan Science Foundation (PSF), Third World Academy of Science (TWAS), Commission on Science and Technology (COMSTECH), International Foundation for Science Sweden (IFS), UNICEF and CUI research grants. All these research grants involve students to conduct novel and cutting edge research. A large number of students are getting benefit from these projects in the form of financial support. Current projects involve synthesis of new anti-cancer agents; construction of biologically fascinating natural and synthetic molecules; establishing new bioassays for biomolecules, encapsulated drug delivery systems; advanced food preservation methods; green chemistry methodologies; synthesis and characterization of nano-materials, advanced polymers, composite materials, sensors and liquid crystal; Ligand-metal chemistry for energy sources and C-H activation catalysis; drinking water and waste water sustainable treatment; isolation of natural products; computational design of photo switches, photo switchable catalysis and hydrogen storage materials etc.

The graduates can get access to the following major expertise from their research:

- Modern and comprehensive knowledge in the specialized field.
- In depth knowledge to interpret analytical data from instruments like NMR, GC-MS, HPLC, MS, FT-IR, XRD, Steady State Fluorescence Spectrophotometer, UV/Visible Spectrophotometer, Electrochemical work station, AAS, SEM, TEM, etc.
- Ability to understand and optimize the new research methodologies.
- Understanding of ethical and professional responsibilities as a scientist as well as awareness of

contemporary global issues.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as latest trends in the dynamic market:

Master of Science in Chemistry

Master of Science in Chemistry is designed to produce high quality graduates for higher studies, professional trainings, or employment in academia, Govt. and non-Govt. organizations, industry etc.

The program accommodates individuals with background of chemistry and allied sciences to pursue advanced research work. Chemistry has seen enormous growth in past few decades with many new applications in medicine, biotechnology, nanotechnology, advanced materials, environmental health, alternative energy sources, forensic sciences, molecular modeling and many more. New developments in chemistry are rapidly transforming from laboratory research to practical applications.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad & Abbottabad

Doctor of Philosophy in Chemistry

Doctor of Philosophy program in Chemistry equips students with in depth understanding of specialized research areas required for job hunting in the relevant fields. Chemistry has a wide range of significant applications which constantly demands for well-trained chemists in many fields. There are large number of job opportunities for chemistry graduates in various international and national organizations including academic institutes, NIBGE, PCSIR, PAEC, KRL, NDC, AWC, POF, health departments, mineralogy departments, ministry of environment, agriculture, textile and pharmaceutical industry etc. the PhD program enables an individual to compete and secure a respectable position among scientific community in the relevant field.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Islamabad & Abbottabad

Faculty Members

CUI, Islamabad Campus

Professor

- Prof. Dr. Rafaqat Hussain, PhD, University College of London, UK

Assistant Professors

- Dr. Sana Sabahat, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Aneela Malik, PhD, University of Rostock, Germany
- Dr. Saira Arif, PhD, University of Vienna, Austria
- Dr. Muhammad Waseem, PhD, Birmingham University, UK
- Dr. Asghari Gul, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Jaweria Ambreen, PhD, Quaid-i-Azam University, Islamabad, Pakistan
- Dr. Safia Zahid, PhD, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan

Besides, 01 Research Associate is also working in this department.

CUI, Abbottabad Campus

Professors

- Dr. Abdur Rahman Khan, PhD, University of Birmingham, UK
- Dr. Umar Farooq, PhD, University of Karachi, Pakistan

Associate Professors

- Dr. Afsar Khan, PhD, HEJ Research Institute of Chemistry University of Karachi, Pakistan
- Dr. Amara Mumtaz, PhD, Quid-i-Azam University, Islamabad, Pakistan
- Dr. Asad Muhammad Khan, PhD, Quid-i-Azam University Islamabad, Pakistan
- Dr. Khurshid Ayub, PhD, University of Victoria, Canada
- Dr. Syed Tauqir Ali Sherazi, PhD, Government College University Lahore
- Dr. Tariq Mahmood, PhD, University of Karachi, Pakistan

Assistant Professors

Dr. Abida Khan, PhD, Quid-i-Azam University, Islamabad, Pakistan
Dr. Ahson Jabbar Shaikh, PhD, University of Groningen, Germany
Dr. Asma Zaidi, PhD, NTNU, Norway
Dr. Bushra Ismail, PhD, Quid-i-Azam University, Islamabad, Pakistan
Dr. Faheem Shah, PhD, University of Sindh, Pakistan
Dr. Farhan Ahmad Khan, PhD, Vienna University Technology
Dr. Huma Ajab, PhD, University Technology Petronas, Malaysia
Dr. Khizar Hussain Shah, PhD, University of Peshawar, Pakistan
Dr. Muhammad Azeem, PhD, KTH university Sweden
Dr. Rafaqat Ali, PhD, Quaid-i-Azam University, Islamabad, Pakistan
Dr. Rizwana Sarwar, PhD, CUI
Dr. Sadullah Mir, PhD, Quid-i-Azam University, Islamabad, Pakistan
Dr. Sohail Anjum Shahzad, PhD, Cardiff University, UK
Dr. Syed Majid Bukhari, PhD, Norwegian University, Norway
Dr. Umer Rashid, PhD, Quaid-i-Azam University, Islamabad, Pakistan

Besides, 01 Research Associate is also associated with this department.

Department of Earth Sciences

The Earth Sciences program was initiated in Fall 2008, followed by the establishment of the Department of Earth Sciences in 2011. CUI Abbottabad campus being at special geographic location with proximity of the Himalayas, Karakoram, and Hindukush, it provides students an opportunity to learn about the Earth and the geological processes in a real-time mountainous setting. It also provides students the opportunity for outdoor academic learning and research that combines field work and laboratory techniques with a focus on applied Geology and applied Geophysics (Petroleum Geology, Engineering Geology, Environmental Geology, Hydrogeology, Structural Geology/Tectonics, Economic Geology and Sedimentology).

The unique location of campus provides easy access in close proximity to most diversified set of geological features which include igneous, metamorphic, and sedimentary rocks ranging in age from Precambrian (800 million years) to recent, seismically active faults and their offshoots, a variety of mineral and gemstone deposits, and geomorphologic features.

Graduate Programs

Currently, the following graduate program is being offered and pursued as per latest trends in the professional dynamic market:

Master of Science in Earth Sciences (Applied Geology/Applied Geophysics: MS (ERS)

The Master of Science (MS) in Earth Sciences with specialization in Applied Geology and Applied Geophysics is designed to prepare graduate students for continuation to the PhD level, other professional trainings, or for immediate employment in advanced positions in government, industry, education, and abroad mainly in the Middle East. The program accommodates individual career objectives for those with degrees in Geology, Geophysics and allied fields/relevant subjects to pursue advanced research work and placement in the field. The Earth Sciences has seen enormous growth in past few decades with many new applications in Petroleum Geosciences, Engineering Geology, Economic Geology, Environmental Geology, Earthquake Geology and Geohazard Assessment and computational research. New information is being rapidly transferred from Industry to Academia for practical application.

Detail regarding admission requirements, the program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Abbottabad

Faculty Members

CUI, Abbottabad Campus

Associate Professors

Dr. Muhammad Amjad Sabir, PhD, University of Peshawar, Pakistan

Dr. Muhammad Umar, PhD, University of Baluchistan, Pakistan

Assistant Professors

Dr. Javed Iqbal, PhD, University of Chinese Academy of Sciences, China

Dr. Muhammad Farooq, PhD, Chonbuk National University Jeonju, South Korea

Dr. Muhammad Qasim, PhD, Institute of Tibetan Plateau Research, China

Dr. Nangyal Ghani Khan, PhD, Institute of Tibetan Plateau Research, China

Besides, 01 non-PhD Assistant Professors, 17 Lecturers and 01 Research Associates are also associated with this department.

Department of Statistics

Department of Statistics has been recently established at CUI Lahore Campus. The department intends to achieve excellence in teaching and research in statistics by hiring world class faculty, providing state-of-the-art facilities and environment for quality teaching and world class research. The Department aims to pursue excellence in Statistics through teaching and research by developing appropriate curricula and teaching practices, hiring talented faculty members, and providing conducive environment for teaching, research and learning activities.

Graduate Programs

Currently, the following graduate programs are being offered and pursued as per latest trends in the dynamic market:

Master of Science in Statistics

The Master of Science in Statistics inculcates huge exposure of knowledge and provides the platform to pursue suitable career in the relevant field. The breadth and depth of work will depend on the degree level and the students are encouraged to develop new ideas in research and to apply them in real world problems.

Admission requirements, program duration, course work and thesis/research project details are given at page 43

Offering Campus

- Lahore

Doctor of Philosophy in Statistics

While a career in mathematics can be very attractive, it takes time to acquire the necessary skills, particularly for advance research at the Ph.D. level. Graduate study is essential for most fields. The graduate course sequence for this program provides a foundation upon which more advanced statistics will be built. In graduate study, required course work provides basic training opportunities and then more specialized courses advances the frontiers of research. The course of Applied Statistics in various application areas is offered to acquire experience in modeling the real world, and to learn how statistics can help in problem solving. This program will also help the students to develop their capacity of reasoning so that they will think more logically and independently in making rational decisions.

Admission requirements, program duration, course work and thesis/research project details are given at pages page 43

Offering Campus

- Lahore

Faculty Members

CUI, Lahore Campus

Associate Professor

Dr. Muhammad Mohsin, PhD, Klagenfurt University, Austria

Assistant Professors

Dr. Muhammad Ismail, PhD, National College of Business Administration and Economics, Pakistan

Dr.Tajammal Hussain, PhD, University of the Punjab, Lahore, Pakistan

Dr. Faisal Tehseen Shah, PhD, University of the Punjab, Lahore, Pakistan

Dr. Muhammad Noor Ul Amin, PhD, National College of Business Administration and Economics, Pakistan

Dr. Aamir Sanaullah, PhD, National College of Business Administration and Economics, Pakistan

Dr.Riffat Jabeen, PhD, National College of Business Administration and Economics, Pakistan

Besides, 01 non-PhD Assistant Professors and 04 Lecturers are also associated with this department.

Scheme of Studies

Note

- The approved Scheme of Studies of all graduate programs is available in the Registrar Office of the respective campus.
- The approved rules and regulations governing graduate programs can be obtained from Registrar Office of respective campus.
- All other regulations approved and issued from time to time, regarding graduate degree programs, shall also be applicable.

CUI Campuses Map Guide

CUI Islamabad

CUI Islamabad campus is accessible via Rawalpindi and Islamabad. From Rawalpindi take the Murree road crossing Faizabad chowk and heading straight towards Rawal Chowk. Take right to and take Park Road that will lead you to the splendid campus of CUI located on the right side after 10 minutes drive.

From within Islamabad follow any route connecting to Zero point and then take the Islamabad highway. After reaching Faizabad chowk take left and you will be heading towards Rawal chowk. After having reached to the Rawal Chowk, take right and take Park Road that will lead you to the splendid campus of CUI located on the right side after 10 minutes drive.

CUI Abbottabad

Taking the route of Wah from Islamabad you will be crossing Wah, Hasanabdal and Hawalian to enter the main city of Abbottabad. Then on following the road leading to Military Academy Kakul will give you a sight to CUI Abbottabad campus.

CUI Wah

Starting from Islamabad, take the road to Taxila. After crossing Taxila underpass, take “u” turn in front of POF barrier No. 5 and move back towards Taxila. Drive furtherfor 200 meters on G.T. Road, where CUI Wah campus is situated on left side of the road.

CUI Lahore

Starting from Islamabad follow motorway route to Lahore. On reaching Lahore take Canal road i.e. near to Tokhar Niaz Baig chowk. From the roundabout turn towards the Raiwind road, at the end of the road, turn on right for Defence road on which the Lahore CUI campus is situated.

CUI Attock

Starting from Islamabad towards Peshawar on Grand Trunk (GT) Road, after crossing Wah, Hassanabdal, Harrow Toll Palaza and Faqirabad (Lawarance Pur), then after two kilometer on GT, take left on New Hattian Hazro Road which will be reached on Kashif Shaheed Chowd (Old Teenmila Chowk).Then following the Kamra Road again take left from the crossing to enter Attock City where COMSATS Institute of Information Technology (CUI) Attock Campus is located on the right side before entering into the main city. CUI Attock Campus Sign board guide each and every turn from Faqirabad to Attock.

CUI Sahiwal

Following the motorway route or Grand Trunk Road from Islamabad to Lahore, further take the road from Lahore to Multan to approach Sahiwal city. On arrival at Sahiwal city, take the Tufail Shaheed Road and after crossing Over Head Bridge, move towards Police Lines to reach Jail road, where CUI Sahiwal Campus is situated.

CUI Vehari

From Multan, take the Multan road to reach Vehari campus located near Peer Murad Adda on the right side of the road.

From Burewala, take the Burewala road to reach “V” chowk, and from there gear on to Multan road to reach Vehari campus located near Peer Murad Adda on the left side of the road.

Contacts

Admission Offices

Following may be contacted for any admission and scholarships inquiry:

Islamabad

Mr. Rizwan Ahmed
In-Charge Admissions
Phone: (92-51) 9049 5032-5
Email: rizwan_ahmed@comsats.edu.pk

Abbottabad

Mr. Ghias-ud-din Shah
Incharge (Student Affairs)
Phone: 0992-383591-6
E-mail: ghias@cuiatd.edu.pk

Wah

Dr. Akmal Javaid
Senior Manager (Student Affairs) / OIC Admissions
Phone: 051-9314482-3, Ext: 228 & 051-9314484
E-mail: akmal@ciitwah.edu.pk

Lahore

Mr. Majid Sultan Bhatti
Senior Coordination Officer
Phone: 042-99204786, 042-111-001-007, Ext: 830, 831, 842
Email: majid.sultan@cuilahore.edu.pk

Attock

Dr. Muhammad Javed
Incharge (Admissions)
Phone: 057-9049159
Email: ic_admissions@cuiatk.edu.pk

Sahiwal

Mr. Rana Adeel Abad
Deputy Registrar (Admissions)
Phone: 040-9200100, 4305001. Ext: 119
E-mail: adeel@ciitsahiwal.edu.pk

Vehari

Mr. Fakhar Hussain
Assistant Program Officer / Incharge (Admissions)
Phone: 067-3001606, 067-3602805
E-mail: admissions@ciitvehari.edu.pk,
fakhar@ciitvehari.edu.pk

International Admissions

Mr. Kashif Masood
Deputy Registrar
Phone: +92-51 8318471, +92-51-9247001-3 Ext: 5195
Email: int.admissions@comsats.edu.pk

Hostels

Following may be contacted for any hostel inquiry:

Islamabad

Girls Hostel

Ms. Farzana Abid
Warden
Phone: 051-8315313
E-mail: farzana_abid@comsats.edu.pk

Abbottabad

Dr. Syed Zulfiqar Ali Zaidi
Hostel Provost
Phone: 0992-383591-5
E-mail: zzaidi@cuiatd.net.pk

Wah

Dr. Muhammad Sharif
Associate Professor / Hostel Warden
Phone: 051-9314382-3, Ext: 205
E-mail: sharif@ciitwah.edu.pk

Lahore

Girls Hostel

Ms. Saima Saleem
Superintendent (Girls Hostel)
Phone: 042-111-001-007 Ext: 815
Email: saimasaleem@cuilahore.edu.pk

Boys Hostel

Dr. Ather Farooq Khan
Associate Professor/ Incharge Boys Hostel
Phone: 042-111-001 007 Ext: 845
E-mail: atherfarooq@cuilahore.edu.pk

Attock

Mr. Laeeq Mushtaq
Deputy Librarian/Hostel Warden
Phone: 057-9316330, Ext: 310
E-mail: laeeqmushtaq@comsats.edu.pk

Sahiwal

Dr. Majid Hussain
Assistant Professor / Hostel Warden
Phone: 040-4305001-5, Ext: 125
E-mail: majidhussain@ciitsahiwal.edu.pk

Vehari

Girls Hostel

Ms. Tayyba Noreen
Lecturer
Phone: 067-3602803
E-mail: tayybanoreen@ciitvehari.edu.pk

Transport

Following may be contacted for any transport inquiry:

Islamabad

Muhammad Ibrahim
Incharge Transport
Phone: 051-90495037
E-mail: muhammad_ibrahim@comsats.edu.pk

Abbottabad

Mr. Rafiq Ahmed Khalil
Transport Incharge
Phone: 0992-383591-5
E-mail: rafiq@cuiatd. net.pk

Wah

Mr. Adnan Karim
Deputy Registrar / Incharge Transport
Phone: 051-4534200-02, Ext: 216
E-mail: adnankarim@ciitwah.edu.pk

Lahore

Mr. Muhammad Bashir
Transport Officer
Phone: 042-111-001-007 Ext: 870
E-mail: mbashir@cuilahore.edu.pk

Attock

Mr. Faisal Altaf Malik
Deputy Registrar
Phone: 057-9316330-1, Ext: 105
E-mail: dr@ciit-attock.edu.pk

Sahiwal

Mr. Khalid Majeed
(Assistant Professor ECE Department) Convener Transport
Phone: 0321-6325548
E-mail: khalid.majeed@cuisahiwal.edu.pk

Vehari

Mr. Dr. Faiz Rabbani
Transport Incharge/ Convener Transport
Phone: 067-3602803, 0300-5176685
E-mail: faizrabbani@ciitvehari.edu.pk

Salient features

- ☆ Quality education and academic programs
- ☆ Leading research and innovation
- ☆ State of Art Laboratories
- ☆ World class highly qualified faculty
- ☆ Affordable fee structure
- ☆ Ranked # 1 in TIMES Higher Education (THE) World University Rankings 2019 in Pakistan, and among 601-800 in world best universities
- ☆ Ranked among 301-400 THE Engineering & Technology subject ranking 2019
- ☆ Ranked among 401-500 THE Computer Science & Life Sciences subject ranking 2019
- ☆ Ranked among 501-600 THE Physical Sciences subject ranking 2019
- ☆ Ranked 137 in the prestigious THE Emerging Economies Rankings 2019
- ☆ Ranked 751-800 World Best Universities as per QS World Universities Rankings 2019 and Ranked #135 in Asian Universities
- ☆ Ranked # 1 among all Pakistani Universities and amongst 601-700 ranked universities of the world by Academic Ranking of World Universities (ARWU) Prestigious Shanghai Rankings 2018
- ☆ Ranked 301+ in THE University Impact Rankings 2019 and among top 05 Universities of Pakistan
- ☆ First University in Pakistan to achieve the milestone of 2000 impact factor journal publications in 2017 and also published 2200 impact factor publications in the year 2018
- ☆ Globally academic and research linkages
- ☆ Rewarding careers after graduation
- ☆ Clean and Green Campuses
- ☆ ISO 9001:2008 Certified

www.comsats.edu.pk
COMSATS Institute of Information Technology - Official
CUIOfficial
051-111-001-007