FEDERAL
URDU
UNIVERSITY

PROSPECTUS

FEDERAL URDU UNIVERSITY
OF ARTS, SCIENCE & TECHNOLOGY
ISLAMABAD

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CONTENTS

INTRODUCTION

Federal Urdu University of Arts, Science and Technology (FUUAST) has, over the years, emerged as an impressive centre of highest learning with extremely learned faculty.FUUAST enjoyed the unique distinction of being the first-ever University in Pakistan which ultimately aims to use Urdu as its official language. The University was established on 13th November 2002 under ordinance No CXIX2002 promulgated by the president of Pakistan. As per the provision of this ordinance, the University has its principal seat at Islamabad.

The university started functioning in November 2002 by taking over two federal government colleges, Federal Urdu Science College and Federal Urdu Arts College in Karachi, established in 1949 by Baba-e-Urdu Molvi Abdul Haq. FUUAST Islamabad Campus commenced its teaching programs in November 2003. The campus has come a long way since its beginning in 2002 from a few subjects to full-fledged faculties, including Basic and Applied Sciences along with Engineering, Business Management, Economics and Humanities.

Message

Prof. Dr. Zabta Khan Shinwari
Vice Chancellor

With great pleasure, I welcome you to the Federal Urdu University of Arts, Sciences & Technology (FUUAST), where we strive to nurture and pursue excellence in every endeavor.

At FUUAST, we pride ourselves on our modern educational approaches and our commitment to shaping change-makers. Our aim extends beyond imparting knowledge; we are dedicated to producing leaders who will drive positive change in the world, particularly within Pakistan. As a federal institution of higher learning, we embrace candidates from across the country, offering admissions based on merit without regard to domicile. Our unique distinction lies in our commitment to teaching and learning in Urdu, in addition to English, making us a pioneer in this regard.

We are devoted to equipping our students with the skills and capabilities necessary to thrive in an ever-evolving global landscape. Our focus is on maintaining the highest standards of teaching and research across all disciplines and levels of education.

In return, we encourage you to uphold a high standard of discipline and integrity, enabling you to make the most of the resources at your disposal. We emphasize the importance of ethical conduct in both academic and social spheres, and we expect you to practice intellectual honesty and recognize the contributions of others.

I am confident that your time at FUUAST will be both enriching and rewarding, and I wish you every success in your future endeavors. Welcome to a place where we are dedicated to fostering excellence and driving meaningful change.

Prof. Zabta K. Shinwari T.I., S.I.; UNESCO Laureate Vice Chancellor, Fed. Urdu University of Arts, S & T (FUUAST) Distinguished National Professor/ Prof. Emeritus, Fellow, The World Academy of Sciences (TWAS); Pakistan Academy of Sciences & Vice President Islamic World Academy of Sciences

Message

Dr. Saba Bashir
Incharge Islamabad Campus

It is indeed a matter of great pleasure and honor for me to welcome the luckiest students pursuing their higher studies in one of the best public sector Universities in Islamabad, the Federal Urdu University of Arts, Science and Technology (FUUAST). This University is engaged in developing young people, both males and females, into globally beneficial citizens. At FUUAST, we endeavor to provide equitable access to all students of all regions without considering the cast, creed, color, religion, etc. We strive to give our students the latest knowledge in all disciplines, reflecting the latest research and discovery at all levels. We are also working to transition the FUUAST to a world-class University. We are putting much effort and energy into academics and research. We are counting on further strengthening our existing programs and expanding new specialties. Federal Urdu University of Arts Science and Technology is growing by enhancing enrollment in consultations with the stakeholder's requirements in different sectors of the economy, i.e., Agriculture, Industry & services. They will cater to the needs of the economy and society. The Basic & Applied Scientific Research conducted at FUUAST is critical for innovation, the emergence of new technologies, and economic development.

FUUAST is fostering entrepreneurial skills and translating new knowledge into applications. These applications are to be commercialized as new business ventures. We all know that Basic Scientific Research is an innovative ability, in addition to the technical ability, that plays an ever-increasing role in economic success. We are striving to establish and enhance the university's endowment funds. The government, the industry, alumni, national and international donors shall be pursued to contribute.

We at FUUAST have highly qualified faculty members; most of them have Ph.D. degrees. We have tried our best to provide our students with an environment conducive to teaching and learning. The faculty and administrative staff are very considered, but they do not compromise on the university's high moral values in conformity with its rich past and its motto to serve the Nation.

On our part, we expect a good attitude and behavior as well as a deep interest in studies, which is the hallmark of the University. I am confident that each one of the students will indeed prove to be a torch-bearer and set examples of excellence in their selected fields that others who follow may find them as models to emulate in subsequent years. Pakistan is facing many internal and external challenges today, and education is the only instrument that can help us meet these challenges.

We are heading for a future in which educational institutions will increasingly be judged by the quality of education they provide, by the kind of people they graduate, and by how those graduates choose to lead their lives, and we at FUUAST have been striving constantly to meet these challenges.

FACULTY

FUUAST, Islamabad, has an excellent faculty with diverse backgrounds in all disciplines. The faculty has a fundamental motivational spirit for the achievement of larger aspirations. Recently, all the departments have been strengthened with foreign-qualified professors. High-qualified supporting faculty is also engaged to teach courses in the subjects of English, Islamic Studies, Mathematics, and Statistics.

FACULTY MEMBERS

DEPARTMENT OF ECONOMICS

Sr. No	Name	Designation
1	Dr. Adiqa Kausar Kiani	Associate Professor
2	Dr. Ihtsham Ul Haq Padda	Associate Professor/ Head of Department
3	Dr. Muhammad Tariq Mahmood	Assistant Professor
4	Dr. Sadaf Shahab	Assistant Professor
5	Dr. Sadia Safdar	Assistant Professor
6	Dr. Azra Khan	Assistant Professor
7	Dr. Zubaria Andlib	Assistant Professor
8	Dr. Anila Sultana	Assistant Professor

DEPARTMENT OF PHYSICS

Sr. No	Name	Designation
1	Dr. Ijaz Ahmed	Associate Professor/ Head of Department
2	Dr. Muhammad Zubair Khan Niazi	Associate Professor
3	Dr. Muhammad Imran Shahzad	Assistant Professor
4	Dr. Aurang Zeb	Assistant Professor
5	Dr. Mahtab Ahmad Khan	Assistant Professor
6	Mr. Ahmad Saeed	Assistant Professor
7	Mr. Mustansar Nadeem	Assistant Professor
8	Mrs. Sania Shaheen	Lecturer
9	Mr. Muhammad Saddique	Lecturer

DEPARTMENT OF COMPUTER SCIENCE

Sr. No	Name	Designation
1	Muhammad Yousaf	Assistant Professor/ Head of Department
2	Dr. Muhammad Shiraz	Associate Professor
3	Dr. Abdul Mateen	Assistant Professor
4	Dr. Saeed Ullah	Assistant Professor
5	Dr. Furqan Shahid	Assistant Professor
6	Dr. Naveed Kazim Khan	Assistant Professor
7	Dr. Nauman Qadeer	Assistant Professor
8	Dr. Kashif Rizwan	Assistant Professor
9	Dr. Asim Shehzad	Assistant Professor
10	Dr. Yousaf Hameed	Assistant Professor
11	Dr. Faisal Baig	Assistant Professor
12	Ms. Fakhra Kashif	Assistant Professor
13	Mr. Jamal Akram	Assistant Professor
14	Mr. Naeem Akhtar Malik	Lecturer
15	Khawaja Tahir Mahmood	Lecturer
16	Ms. Fazia Akhtar	Lecturer
17	Mr. Tahir Hussain	Lecturer
18	Mr. Jaffar Khan	Lecturer
19	Mr. Faisal Abdullah	Lecturer
20	Muhammad Adil	Lecturer
21	Muhammad Aqib	Lecturer

22	Ms. Attiya Iram	Lecturer
23	Ms. Irum Shahzadi	Lecturer
24	Engr. Faheem Ahmed	Lab Engineer
25	Engr. Rizwan Munir Gillani	Lab Engineer
26	Engr. Kashif Aziz	Lab Engineer

DEPARTMENT OF BUSINESS ADMINISTRATION

Sr. No	Name	Designation
1	Dr Mumtaz Ali	Assistant Professor/Head of Department
2	Dr Nasim Qaiser	Assistant Professor
3	Dr Mohay Ud Din Khan	Assistant Professor
4	Dr Hafiz Muhammad Ishaq	Assistant Professor
5	Dr Imran Anwar Mir	Assistant Professor
6	Dr Ghazala Shaheen	Assistant Professor
7	Dr Zuee Javaira	Assistant Professor
8	Dr Saima Nosheen	Assistant Professor
9	Dr Mehwish Aziz Khan	Assistant Professor
10	Dr Huma Bilal	Assistant Professor
11	Dr Sadaf Nagi	Lecturer
12	Arooj Malik	Lecturer
13	Ayesha Shahid	Lecturer
14	Khizra Ahmed	Lecturer
15	Hidayat Ali Khan	Lecturer
16	Haris Raza	Lecturer
17	Shafqat Hussain	Lecturer
18	Faiz Ahmed	Lecturer
19	Ammara Sheikh	Lecturer

DEPARTMENT OF ELECTRICAL ENGINEERING

Sr. No	Name	Designation
1	Engr. Dr. Rahat Ullah	Assistant Professor/Incharge Dean/ Head of Department
2	Engr. Dr. Hashim Safdar	Assistant Professor
3	Engr. Dr. Hanif Ullah	Assistant Professor
4	Engr. Dr. Fargham Sandhu	Assistant Professor
5	Engr. Dr. Zubair Khalid	Assistant Professor
6	Engr. Jamal Akram	Assistant Professor
7	Engr. Hamayun Aziz	Lecturer
8	Engr. Shafiq ur Rahman	Lecturer
9	Engr. Saqib Riaz	Lab Engineer
10	Engr. Muhammad Idrees	Lab Engineer
11	Engr. Rizwan Munir Gillani	Lab Engineer
12	Engr. Faheem Ahmed	Lab Engineer
13	Engr. Kashif Aziz	Lab Engineer

DEPARTMENT OF COMMERCE

Sr. No	Name	Designation
1	Dr. Malik Adil Pasha	Assistant Professor/ Head of Department
2	Dr. Syeda Faiza Urooj	Assistant Professor/on Deputation
3	Ms. Sadia Rashid	Lecturer
4	Ch. Muhammad Waseem	Lecturer
5	Malik Muhammad Ishtiaq Amir	Lecturer
6	Muhammad Mehtab Hussain	Lecturer
7	Kashif Amin Butt	Lecturer
8	Shafiq Ul Mulk	Lecturer
9	Ms. Asma Nazeer	Lecturer
10	Muhammad Asif Chaudhary	Lecturer
11	Muhammad Atif	Lecturer

DEPARTMENT OF SOFTWARE ENGINEERING

Sr. No	Name	Designation
1	Engr. Dr. Saba Bashir	Associate Professor/ Chairperson
2	Engr. Dr. Asim Shehzad	Assistant Professor
3	Engr. Dr. Yousaf Hameed	Assistant Professor
4	Engr. Dr. Faisal Baig	Assistant Professor
5	Ms. Rabia Kalsoom	Lecturer
6	Ms. Naghmana Shafi	Lecturer
7	Ms. Faiza Latif	Lecturer
8	Ms. Ayesha Batool	Lecturer
9	Mr. Sameed Faiz Awan	Lecturer
10	Mr. Umer Ahmed Butt	Lecturer
11	Mr Shehroz Afzal	Lecturer
12	Mr. Muhammad Abrar	Lecturer

DEPARTMENT OF MATHEMATICAL SCIENCES

Sr. No	Name	Designation
1	Dr. Amer Bilal Mann	Assistant Professor/Head of Department
2	Dr. Aamir Nadeem	Assistant Professor on EX-Pakistan Leave
3	Mr. Nadeem Nasir	Assistant Professor
4	Mr. Jahan Nawaz	Assistant Professor
5	Dr. Abdul Qayyum	Assistant Professor

DEPARTMENT OF ENGLISH

Sr. No	Name	Designation
1	Dr. Atia Anwar Zoon	Assistant Professor/Head of Department
2	Mr. Faisal Hameed Butt	Lecturer
3	Ms. Qurat-ul-Ain Iqbal	Lecturer
4	Ms. Sarwat Farid Khan Khalil	Lecturer
5	Ms. Saadia Saba	Lecturer

DEPARTMENT OF INTERNATIONAL RELATIONS

Sr. No	Name	Designation
1	Dr. Faisal Javaid	Assistant Professor/Head of Department
2	Dr. Uzma Siraj	Lecturer
3	Dr. Najam Us Saqib	Lecturer
4	Taimur Khan	Lecturer
5	Samina Rehmat	Lecturer

DEPARTMENT OF MASS COMMUNICATION

Sr. No	Name	Designation
1	Dr. Muhammad Sher Juni	Assistant Professor
2	Dr. Sikander Ali	Assistant Professor

DEPARTMENT OF ISLAMIC STUDIES

Sr. No	Name	Designation
1	Dr. Muhammad Irfan	Assistant Professor (Regular) /Head of Department
2	Dr. Hafiz Abdul Rashid	Assistant Professor (Regular)
3	Dr. Habib Ur Rehman	Assistant Professor (Regular)
4	Dr. Shazia Rasheed Abbasi	Lecturer (Regular)
5	Dr. Abdul Ghani	Lecturer (Regular)
6	Dr. Hafiz Muhammad Naveed	Lecturer (Contractual)

DEPARTMENT OF URDU

Sr. No	Name	Designation
1	Dr. Fehmida Tabassum	Assistant Professor/Head of Department
2	Dr. Naheed Qamar	Associate Professor
3	Dr. Syed Aun Sajid	Assistant Professor
4	Dr. Zeenat Afshan	Assistant Professor
5	Dr. Sadia Tahir	Assistant Professor

LIBRARY

Federal Urdu University of Arts, Sciences, and Technology Library provides excellent services and facilities to fulfill the information needs of its teachers, staff, and students. The library is equipped with a collection of over 20862 volumes. Qualified and experienced staff dedicated to providing high-quality, innovative services and managing the library. Its culture of trust, tolerance, sharing, and self-serving makes it a unique library in Islamabad. Our mission is to excel in supporting the academic endeavor of our users in their core instructional and research requirements by utilizing the best possible resources, systems, and services.

The library aims to encourage and support the academic and research activities of FUUAST faculty and students. It provides a full range of services, including Books, reference services, photocopying, and digital resources. The library is equipped with a vast range of resources in the following categories.

General Collection
This is the main collection comprising high-quality selected books. This collection is organized according to Dewey's Decimal Classification Scheme and shelved subjects-wise according to call numbers (100-999) pasted on the spine of each item.

Reference Collection
A significant number of current reference sources are available on reference shelves. This includes Government of Pakistan data, dictionaries, encyclopedias, handbooks, directories, yearbooks, and bibliographies are distinct features of this collection. These reference books can only be consulted within the library.

Government Documents
The library has Government of Pakistan documents, including statistics, annual and five-year plans, budgets, census reports, and other publications in print format.

Research Material
To fulfill its users' very intensive research needs, the library acquires research papers, studies, and reports from various national organizations, such as AERC and PIDE.

Information Services
Book Lending
All registered users are entitled to borrow books. Lending privileges differ for various categories.

Reference Service
The library provides efficient and reliable services under the supervision of its professional staff.

Information Technology Cell (IT-Cell)

IT Infrastructure at FUUAST

FUUAST has state-of-the-art information technology facilities designed to support academic and research activities. The university boasts advanced computer labs, each featuring high-performance systems to cater to the needs of students and faculty alike. These labs are optimized for various disciplines, providing a seamless computing experience.

The entire campus is supported by a robust and expansive wireless network, with seamless connectivity through eduroam, ensuring that students, faculty, and staff can access the internet securely and conveniently from anywhere on campus. Additionally, the university has wired and wireless networks, providing high-speed internet access across all departments and facilities. This ensures that users can engage in high-bandwidth activities, such as online research, video conferencing, and digital collaboration, without interruptions.

Moreover, FUUAST is linked to the Pakistan Education and Research Network (PERN), enhancing its access to global research resources and facilitating seamless communication with academic institutions and research centers nationwide and internationally. This connection further strengthens the university's commitment to fostering an advanced, technology-driven academic environment.

At FUUAST, we embrace various engineering technologies, including Software Engineering, Computer Science, Electrical Engineering, and Artificial Intelligence, preparing our students to excel in these rapidly evolving fields. Join us at FUUAST, where cutting-edge technology meets academic excellence and where every student is equipped to shape the future.

MIS CELL

Introduction

The Management Information System (MIS) at the Federal Urdu University of Arts, Science & Technology (FUUAST) Islamabad Campus offers a comprehensive suite of tools and applications designed to streamline and enhance university management. Our MIS is pivotal in facilitating efficient communication between academic and administrative departments, ensuring seamless course registration each semester, and promptly addressing student queries and issues. By leveraging advanced technology, our MIS supports the university's commitment to providing a well-organized, responsive, and student-centric educational environment.

Admin & Users

The User Management grants authorized users the rights to use various services of the MIS by dividing them into groups and defining their privileges.

Registration Admin

This module is used in the university management system to register student's examinations, semesters, and programs. This module manages the academic years, the prerequisites for various degrees, and the programs and subjects to be offered in Semester or Annual Terms.

Semester Admission

The semester Admission Module manages the admission record of the students for each semester.

Fee Management

Fee Management is an important UMS module; this particular module is responsible for handling the process of Fee Collection from the students as well as the fee for all sorts of Admission Tests & Interviews.

Student Registration

The Student Registration Module allows for the management of student registration. It manages the registration schedule of Student Registration, Student Management, and the board. Customized Reporting of Student Registration are also generated.

E-Notice Board

The electronic Notice Board manages the university notices. The notice requests are approved, and the approved requests are displayed on the electronic notice board.

ACADEMIC COLLABORATIONS

Academic Collaborations have been established abroad and locally with the following institutions.

1.　　　University of Central Florida (UCF) Orlando, USA.
2.　　　University of ESSEX, UK.
3.　　　Peking University, China.
4.　　　University of Technology, Malaysia (UTM)
5.　　　MCS and EME College, NUST, Islamabad.
6.　　　Iqra University, Islamabad.
7.　　　Muhammad Ali Jinnah University, Islamabad.
8.　　　COMSATS, Islamabad.
9.　　　CASE, Islamabad.
10.　　Heavy Industries Taxila Education City University (HITE), Taxila Cantt.
11.　　Azerbaijan Universities (Collaboration being established)
12.　　National Center for Physics (NCP)

DEPARTMENTS (ACADEMICS)

DEPARTMENT OF ECONOMICS

PROGRAM MISSION

The Department of Economics aims to contribute to the frontier of knowledge in all core areas of Economics. It is one of the leading departments in the field of Economics in terms of Ph.D. faculty strength and diversity of offered courses and research publications. The Department of Economics at FUUAST was launched in spring 2004. It commenced its program with one full-time professor and a few visiting faculty members. Since then, it has blossomed into an excellent center of economic learning. Since launching study programs in economics in 2004, 51 candidates have been awarded Ph.D. degrees, while 121 have been awarded M.Phil degrees. The graduates of the department have been successful in competing in job markets and holding their own against the alums of well-established institutions of higher learning in the country. The program's Mission of the Department of Economics is to train graduates in economics who are well grounded in economic theory and its applications to real-life situations. The Journal of Economic Sciences (JES) is a biannual, open access, and peer-reviewed, HEC-approved 'Y' category journal published by the Department of Economics, Federal Urdu University of Arts, Science and Technology, Islamabad. It aims to encourage and promote original thinking in various fields of economic sciences. The journal also offers a unique perspective on policy issues critical to developing economies and the world. It publishes original theoretical and empirical contributions in economics (all areas) and related fields. The department offers programs of studies leading to a BS in Economics (4 years), BS in Economics and Finance (4 years), Associate degree program (ADP) (2 years) in Economics as well as Economics and Finance, BS third year Program (2- years) in Economics as well Economics and Finance, BS Economics with Data Science and M. Phil. and Ph.D. Economics. There are two associate professors and six assistant professors in the department.

DEPARTMENT OF ECONOMICS

The details of various programs of studies are given below:

1.   B.S. Economics (4-years)

The main objective of the BS program is to achieve the highest possible standards of education, teaching, and research in economics. Admission criteria for the BS Economics is Intermediate (equivalent to 12 years of education) with at least 45% marks in any discipline. The program is offered in Spring and Autumn Sessions. It is a 4-year program that lasts 8 semesters. The minimum duration for completing this degree is four years, and a maximum of seven years. The BS Economics degree program is completed by earning 132 required credits. A student is required to take 15-18 credit hours of coursework per regular semester. The degree will be awarded on completion of 132 credits with a CGPA of at least 2.5/4.

Courses
Semester-wise details of courses are given below;

S. #	Course Code	Course Title	Type of Course	Cr. Hours
Semester- I				
1	GEN-111	Islamic Studies/ Ethics	General	2
2	GEN-112	Functional English	General	3
3	GEN-113	Applications of Information and Communication Technologies	General	(2+1)3
4		Social Sciences (from list)	General	2
5	ECO-105	Principles of Microeconomics	Major	3
6	ECO-106	Principles of Macroeconomics	Major	3
Semester- II				
1	GEN-121	Ideology and Constitution of Pakistan	General	2
2	GEN-122	Expository Writing	General	3
3	GEN-123	Mathematics	General	3
4	GEN-124	Civics and Community Engagement	General	2
5	ECO-205	Intermediate Microeconomics	Major	3
6	ECO-206	Intermediate Macroeconomics	Major	3
Semester- III				
1	GEN-231	Statistics	General	3
2	GEN-232	Arts and Humanities/Urdu	General	3

3	ECO-204	Development Economics	Major	3
4	ECO-231	Mathematics for Economics and Finance	Major	3
5	ECO-233	International Trade	Major	3
6		Optional*	Major	3
Semester- IV				
1	GEN-241	Entrepreneurship	General	2
2		Natural Sciences (from list)	General	(2+1)3
3	ECO-232	Statistics for Economics and Finance	Major	3
4	ECO-312	Monetary Economics	Major	3
5	ECO-314	Public Finance	Major	3
6		Optional*	Major	3
Semester- V [a, b]				
1	ECO-305	Microeconomic Analysis	Major	3
2	ECO-306	Macroeconomic Controversies	Major	3
3	ECO-309	Dynamic Optimization	Major	3
4	ECO-310	Basic Econometrics	Major	3
5		Allied 1**	Allied	3
Semester- VI				
1	ECO-307	Labour Economics	Major	3
2	ECO-313	Research Methodology	Major	3
3	ECO-402	Applied Econometrics	Major	3
4	ECO-411	International Finance	Major	3
5		Allied 2**	Allied	3
Semester- VII				
1	ECO-401	General Equilibrium and Welfare Economics	Major	3
2	ECO-402	Applied Economics	Major	3
3		Minor 1**	Minor	3
4		Minor 2**	Minor	3
5		Allied 3**	Allied	3
Semester- VIII				
1	ECO-445	Issues in the Economy of Pakistan	Major	3
2	ECO-446	Introduction to the History of Economic Thought	Major	3
3		Minor 3**	Minor	3
4		Minor 4**	Minor	3
5		Allied 4**	Allied	3

Courses		44	127
Internship			3
Capstone Project			3
Total			133

* Can be chosen from the list of Optional Subjects.
** Can be chosen from the list of Allied Subjects.
*** Can be chosen from the list of Minor Subjects.
A student can start a Field Experience/Internship from the fifth semester for a minimum of six weeks (preferably undertaken during the semester or summer break).
b Capstone Project will be undertaken/registered from the fifth semester.

List of General Education Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN-111	Islamic Studies/ Ethics	General	2
2	GEN-112	Functional English	General	3
3	GEN-113	Applications of Information and Communication Technologies	General	(2+1)3
4		Social Sciences*	General	2
5	GEN-121	Ideology and Constitution of Pakistan	General	2
6	GEN-122	Expository Writing	General	3
7	GEN-123	Mathematics	General	3
8	GEN-124	Civics and Community Engagement	General	2
9	GEN-231	Statistics	General	3
10	GEN-232	Arts and Humanities/Urdu	General	3
11	GEN-241	Entrepreneurship	General	2
12		Natural Sciences*	General	(2+1)3

Note: There are 12 general courses with 31 credit hours. ***** The tables below give a list of natural and social science courses.

List of Social Sciences Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN-114	Introduction to Political Science	General	3
2	GEN-115	Introduction to International Relations	General	3
3	GEN-116	Introduction to Economics	General	3
4	GEN-117	Introduction to Mass Communication	General	3
5	GEN-118	Introduction to Psychology	General	3
6	GEN-119	Basic Concepts of Social Sciences	General	3

Note: One course is required from the list of social science courses.

List of Natural Science Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN- 242	Introduction to Physics	General	(2+1)3
2	GEN- 243	Introduction to Chemistry	General	(2+1)3
3	GEN- 244	Introduction to Biology	General	(2+1)3
4	GEN- 245	Introduction to Ecology	General	(2+1)3
5	GEN- 246	Every Day Sciences	General	(2+1)3
6	GEN- 247	Food and Nutrition	General	(2+1)3

Note: One course is required from the list of natural science courses.

List of Allied Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-110	Introduction to Business	Allied	3
2	ECO-111	Principles of Marketing	Allied	3
3	ECO-112	Principles of Accounting	Allied	3
4	ECO-213	Governance & Politics	Allied	3
5	ECO-215	Business Finance	Allied	3
6	ECO-216	Introduction to Commerce	Allied	3
7	ECO-220	Business and Industrial Law	Allied	3
8	ECO-221	Gender Studies	Allied	3
9	ECO-230	Data Analytics	Allied	3

Note: Four courses (12 credit hours) are required from the list of allied courses.

List of Compulsory Major Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-105	Principles of Microeconomics	Major	3
2	ECO-106	Principles of Macroeconomics	Major	3
3	ECO-205	Intermediate Microeconomics	Major	3
4	ECO-206	Intermediate Macroeconomics	Major	3
5	ECO-204	Development Economics	Major	3
6	ECO-233	International Trade	Major	3
7	ECO-231	Mathematics for Economics and Finance	Major	3
8	ECO-312	Monetary Economics	Major	3
9	ECO-314	Public Finance	Major	3

Note: A minimum of 72 credit hours are required for major courses. There are 22 major courses (66 credit hours) offered as compulsory courses. The remaining two courses (6 credit hours) are offered from the list of optional major courses given below.

List of Optional Major Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-447	Comparative Economics	Major	3
2	ECO-448	Introduction to Institutional Economics	Major	3
3	ECO-449	Poverty and Income Distribution	Major	3
4	ECO-450	Introduction to Demographic Economics	Major	3
5	ECO-451	Gender Economics	Major	3
6	ECO-452	Introduction to Human Resource Development	Major	3
7	ECO-453	Economics of Education	Major	3
8	ECO-454	Introduction to Health Economics	Major	3
9	ECO-455	Environmental and Health Economics	Major	3
10	ECO-456	Introduction to Industrial Economics	Major	3
11	ECO-457	Introduction to Urban Economics	Major	3
12	ECO-458	Transport and Infrastructural Economics	Major	3
13	ECO-459	Production Economics	Major	3
14	ECO-460	Applied Microeconomics	Major	3
15	ECO-461	Experimental and Behavioral Economics	Major	3
16	ECO-462	Globalization and Environment	Major	3
17	ECO-463	Global Political Economy	Major	3
18	ECO-464	Introduction to Fiscal Policy	Major	3
19	ECO-465	Money, Banking and Finance	Major	3
20	ECO-466	Introduction to Project Planning and Evaluation	Major	3
21	ECO-467	Engineering Economics	Major	3
22	ECO-468	Economics of Regulations and Competitive Policy	Major	3
23	ECO-469	Critical Thinking in Economics	Major	3

24	ECO-470	Applied Statistics for Economics and Finance	Major	3
25	ECO-471	Economics of the Digital Economy	Major	3
26	ECO-472	Introduction to Artificial Intelligence (AI) for Finance and Economics	Major	3

Note: Two courses (6 credit hours) are required from the list of optional major courses.

List of Minor Groups Course

S. #	Course Code	Course Title	Type of Course	Cr. Hours
Specialization in Development Economics				
1	ECO-403	Development Theory	Minor	3
2	ECO-404	Development Policy	Minor	3
3	ECO-405	Sustainable Development	Minor	3
4	ECO-406	Globalization and Development	Minor	3
5	ECO-407	Institutions and Development	Minor	3
Specialization in International Economics				
1	ECO-408	International Trade Theory	Minor	3
2	ECO-409	International Trade Policy	Minor	3
3	ECO-410	Open Economy Macroeconomics	Minor	3
4	ECO-411	International Finance	Minor	3
Specialization in Banking and Finance				
1	ECO-412	Financial Economics	Minor	3
2	ECO-413	Corporate Finance	Minor	3
3	ECO-414	Financial Accounting	Minor	3
4	ECO-415	Financial Management	Minor	3
5	ECO-416	Financial Institutions and Markets	Minor	3
Specialization in Environmental Economics				
1	ECO-417	Environmental Economics	Minor	3
2	ECO-418	Natural Resource Economics	Minor	3
3	ECO-419	Economics of Climate Change	Minor	3
4	ECO-420	Governance and Global Environmental Issues	Minor	3
Specialization in Public Policy				
1	ECO-421	Public Policy	Minor	3
2	ECO-422	Public Finance and Tax Management	Minor	3
3	ECO-423	Governance and Public Policy	Minor	3
4	ECO-424	Political Economy	Minor	3

Specialization in Econometrics				
1	ECO-425	Data Visualization	Minor	3
2	ECO-426	Advanced Econometrics	Minor	3
3	ECO-427	Time Series Analysis	Minor	3
4	ECO-428	Panel Data Analysis	Minor	3
5	ECO-429	Non-Parametric Econometrics	Minor	3
Specialization in Agriculture Economics				
1	ECO-430	Agricultural Economics	Minor	3
2	ECO-431	Agricultural Marketing	Minor	3
3	ECO-432	Agriculture Price Policy	Minor	3
4	ECO-433	Agricultural Credit and Finance	Minor	3
Specialization in Labour Economics				
1	ECO-434	Labour Market and Social Policy	Minor	3
2	ECO-435	Labour Law	Minor	3
3	ECO-436	Applied Labour Economics	Minor	3
4	ECO-437	Migration and Public policy	Minor	3
Specialization in Islamic Economics				
1	ECO-438	Principles of Islamic Economics	Minor	3
2	ECO-439	Islamic Economics and Finance	Minor	3
3	ECO-440	Islamic Commercial Law and Contract	Minor	3
4	ECO-441	Takaful and Retakaful	Minor	3

Note: Four courses (12 credit hours) are required from the list of minor courses.

2.   BS Economics and Finance (4-years)

The Bachelor of Science in Economics and Finance program is designed for those students who, after completing their 12 years of education, are looking for some knowledge-based, career-oriented, and market-determined educational program in the field of Economics and Finance jointly. Admission criteria are Intermediate/ A level (equivalent to 12 years of education) with at least 45% marks in any discipline. The program is offered in Spring and Autumn Sessions. It is a 4-year program of 8 semesters. The minimum duration for completing this degree is four years, and a maximum of seven years. The degree program is completed by earning 132 required credits. A student is required to take 15- 18 credit hours of coursework per regular semester. The degree will be awarded on completion of 132 credits with a CGPA of at least 2.5/4.

Courses

Semester-wise details of courses are given below

S. #	Course Code	Course Title	Type of Course	Cr. Hours
Semester- I				
1.	GEN-111	Islamic Studies/ Ethics	General	2
2.	GEN-112	Functional English	General	3
3.	GEN-113	Applications of Information and Communication Technologies	General	(2+1)3
4.		Social Sciences (from list)	General	2
5.	ECO-105	Principles of Microeconomics	Major	3
6.	ECO-106	Principles of Macroeconomics	Major	3
Semester- II				
1	GEN-121	Ideology and Constitution of Pakistan	General	2
2	GEN-122	Expository Writing	General	3
3	GEN-123	Mathematics	General	3
4	GEN-124	Civics and Community Engagement	General	2
5	ECO-303	Fundamentals of Finance	Major	3
6	ECO-412	Financial Economics	Major	3
Semester- III				
1	GEN-231	Statistics	General	3
2	GEN-232	Arts and Humanities/Urdu	General	3
3	ECO-231	Mathematics for Economics and Finance	Major	3
4	ECO-233	International Trade	Major	3
5	ECO-415	Financial Management	Major	3
6	EC0-465	Money, Banking and Finance	Major	3
Semester- IV				
1	GEN-241	Entrepreneurship	General	2
2		Natural Sciences (from list)	General	(2+1)3
3	ECO-112	Principles of Accounting	Major	3
4	ECO-232	Statistics for Economics and Finance	Major	3
5	ECO-312	Monetary Economics	Major	3
6	ECO-314	Public Finance	Major	3

Semester- V ^{a, b}				
1	ECO-205	Intermediate Microeconomics	Major	3
2	ECO-206	Intermediate Macroeconomics	Major	3
3	ECO-310	Basic Econometrics	Major	3
4	ECO-315	Analysis of Financial Statements	Major	3
5		Allied 1**	Allied	3
Semester- VI				
1	ECO-302	Financial Econometrics	Major	3
2	ECO-307	Labour Economics	Major	3
3	ECO-313	Research Methodology	Major	3
4	ECO-411	International Finance	Major	3
5		Allied 2**	Allied	3
Semester- VII				
1	ECO-413	Corporate Finance	Major	3
2	ECO-442	Financial Risk Management	Major	3
3		Optional 1*	Major	3
4		Optional 2*	Major	3
5		Allied 3**	Allied	3
Semester- VIII				
1	ECO-301	Financial Modeling	Major	3
2	ECO-416	Financial Institutions and Markets	Major	3
3		Optional3*	Major	3
4		Optional 4*	Major	3
5		Allied 4**	Allied	3
Courses			**44**	**127**
Internship				**3**
Capstone Project				**3**
Total				**133**

* Can be chosen from the list of Optional Subjects.
** Can be chosen from the list of Allied Subjects.
A student can start a Field Experience/Internship from the fifth semester for a minimum of six weeks (preferably undertaken during the semester or summer break).
b Capstone Project will be undertaken/registered from the fifth semester.

List of General Education Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN-111	Islamic Studies/ Ethics	General	2
2	GEN-112	Functional English	General	3
3	GEN-113	Applications of Information and Communication Technologies	General	(2+1)3
4		Social Sciences*	General	2
5	GEN-121	Ideology and Constitution of Pakistan	General	2
6	GEN-122	Expository Writing	General	3
7	GEN-123	Mathematics	General	3
8	GEN-124	Civics and Community Engagement	General	2
9	GEN-231	Statistics	General	3
10	GEN-232	Arts and Humanities/Urdu	General	3
11	GEN-241	Entrepreneurship	General	2
12		Natural Sciences*	General	(2+1)3

Note: There are 12 general courses of 31 credit hours. * List of natural and social science courses is given in the tables below.

List of Social Sciences Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN-114	Introduction to Political Science	General	3
2	GEN-115	Introduction to International Relations	General	3
3	GEN-116	Introduction to Economics	General	3
4	GEN-117	Introduction to Mass Communication	General	3
5	GEN-118	Introduction to Psychology	General	3
6	GEN-119	Basic Concepts of Social Sciences	General	3

Note: One course is required from the list of social science courses.

List of Natural Science Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN- 242	Introduction to Physics	General	(2+1)3
2	GEN- 243	Introduction to Chemistry	General	(2+1)3
3	GEN- 244	Introduction to Biology	General	(2+1)3
4	GEN- 245	Introduction to Ecology	General	(2+1)3
5	GEN- 246	Every Day Sciences	General	(2+1)3
6	GEN- 247	Food and Nutrition	General	(2+1)3

Note: One course is required from the list of natural science courses.

List of Allied Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-110	Introduction to Business	Allied	3
2	ECO-111	Principles of Marketing	Allied	3
3	ECO-213	Governance & Politics	Allied	3
4	ECO-215	Business Finance	Allied	3
5	ECO-216	Introduction to Commerce	Allied	3
6	ECO-220	Business and Industrial Law	Allied	3
7	ECO-221	Gender Studies	Allied	3
8	ECO-230	Data Analytics	Allied	3

Note: Four courses (12 credit hours) are required from the list of allied courses.

Compulsory Major Courses of Economics and Finance

A. List of Compulsory Major Courses Economics				
S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-105	Principles of Microeconomics	Major	3
2	ECO-106	Principles of Macroeconomics	Major	3
3	ECO-205	Intermediate Microeconomics	Major	3
4	ECO-206	Intermediate Macroeconomics	Major	3
5	ECO-231	Mathematics for Economics and Finance	Major	3
6	ECO-232	Statistics for Economics and Finance	Major	3
7	ECO-233	International Trade	Major	3
8	ECO-307	Labour Economics	Major	3
9	ECO-310	Basic Econometrics	Major	3
10	ECO-312	Monetary Economics	Major	3
11	ECO-313	Research Methodology	Major	3
12	ECO-314	Public Finance	Major	3
B. List of Compulsory Major Courses Finance				
1	ECO-303	Fundamentals of Finance	Major	3
2	ECO-412	Financial Economics	Major	3
3	ECO-465	Money, Banking and Finance	Major	3
4	ECO-415	Financial Management	Major	3
5	ECO-301	Financial Modelling	Major	3
6	ECO-302	Financial Econometrics	Major	3
7	ECO-413	Corporate Finance	Major	3
8	ECO-442	Financial Risk Management	Major	3

9	ECO-411	International Finance	Major	3
10	ECO-416	Financial Institutions and Markets	Major	3
11	ECO-112	Principles of Accounting	Major	3
12	ECO-315	Analysis of Financial Statements	Major	3

Note: There are 24 compulsory major courses (72 credit hours) in Economics and Finance.

Optional Major Courses of Economics and Finance

C. List of Optional Major Courses Economics				
S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-445	Issues in the Economy of Pakistan	Major	3
2	ECO-446	Introduction to the History of Economic Thought	Major	3
3	ECO-447	Comparative Economics	Major	3
4	ECO-448	Introduction to Institutional Economics	Major	3
5	ECO-449	Poverty and Income Distribution	Major	3
6	ECO-450	Introduction to Demographic Economics	Major	3
7	ECO-451	Gender Economics	Major	3
8	ECO-452	Introduction to Human Resource Development	Major	3
9	ECO-453	Economics of Education	Major	3
10	ECO-454	Introduction to Health Economics	Major	3
11	ECO-455	Environmental and Health Economics	Major	3
12	ECO-456	Introduction to Industrial Economics	Major	3
13	ECO-457	Introduction to Urban Economics	Major	3
14	ECO-458	Transport and Infrastructural Economics	Major	3
15	ECO-459	Production Economics	Major	3
16	ECO-460	Applied Microeconomics	Major	3
17	ECO-461	Experimental and Behavioral Economics	Major	3
18	ECO-462	Globalization and Environment	Major	3
19	ECO-463	Global Political Economy	Major	3
20	ECO-464	Introduction to Fiscal Policy	Major	3
21	ECO-466	Introduction to Project Planning and Evaluation	Major	3
22	ECO-467	Engineering Economics	Major	3
23	ECO-468	Economics of Regulations and Competitive Policy	Major	3

24	ECO-469	Critical Thinking in Economics	Major	3
25	ECO-470	Applied Statics for Economics and Finance	Major	3
26	ECO-471	Economics of the Digital Economy	Major	3
27	ECO-472	Introduction to Artificial Intelligence (AI) for Finance and Economics	Major	3

D. List of Optional Major Courses Finance

1	ECO-414	Financial Accounting	Major	3
2	ECO-469	Financial Reporting and Analysis	Major	3
3	ECO-470	Financial Derivatives	Major	3
4	ECO-471	Multinational Corporations & Finance	Major	3
5	ECO-472	Insurance & Risk Management	Major	3
6	ECO-473	Commercial Bank Management	Major	3
7	ECO-474	Regulations & Financial Markets	Major	3
8	ECO-475	Corporate Law	Major	3
9	ECO-476	Investment Banking	Major	3
10	ECO-477	Comparative Financial Systems	Major	3
11	ECO-478	Islamic Banking and Finance	Major	3
12	ECO-479	Emerging issues in Finance	Major	3
13	ECO-480	Regulation of Financial Crime	Major	3
14	ECO-481	Behavioral Finance	Major	3
15	ECO-482	Fundamentals of Taxation	Major	3
16	ECO-483	Foreign Exchange Management	Major	3
17	ECO-484	Portfolio Management	Major	3
18	ECO-485	Corporate Taxation	Major	3
19	ECO-486	Cost Accounting	Major	3
20	ECO-487	Audit and Assurance	Major	3
21	ECO-488	Corporate Governance	Major	3
22	ECO-489	Venture Capital and Private Equity Finance	Major	3
23	ECO-490	Real Estate Investments: Analysis and Financing	Major	3
24	ECO-491	Financial Information System	Major	3
25	ECO-492	Microfinance in Theory and Practice	Major	3

Note: There are four courses (12 credit hours) required from the list of Economics and Finance optional

3. Associate Degree Program (ADP) (2 years) (Economics and Economics and Finance)

These include two-year degree programs offering fundamental academic and working knowledge of a particular field to enable graduates to enter the job market earlier than those who enter after four-year undergraduate/ equivalent degree programs. It is an undergraduate academic program equivalent to a bachelor's degree, 14 years of education, which has replaced the old BA/ B.Sc/equivalent degrees, which have been discontinued. Applicants for admission to the associate degree program must have passed with at least 45 marks in Intermediate (12 years of education) in any discipline. The degree will be awarded on completion of 67 credit hours with a CGPA of at least 2.00/4. The candidate will have to take a total of 24 courses, taking six courses in each semester. The first two years (1-4 semesters) of courses will be considered as part of ADP.

4. BS Third Year Program (2 years) (Economics and Economics and Finance)

This program provides a pathway for associate degree holders as well as for conventional two-year BA/B.Sc/equivalent degree holders. An associate degree holder in the relevant field may apply for admission to a BS third-year program with a minimum of 2.00 CGPA. Students with 14 years of education (BA, B.Sc, or equivalent) in the relevant field with at least 45% marks may also apply for this program. Relevance of courses studied at graduation level is mandatory. However, the departmental committee will decide about prerequisite courses on a case-to-case basis. The prerequisite course will be a non-credit course. They will be admitted in the fifth semester of the BS program. It is a 2-year program of 4 semesters. The minimum duration for completing this degree is 2 years and a maximum of 3 years. The degree will be awarded on completing 66 credit hours with a CGPA of at least 2.00/4. The candidate will have to take a total of 20 courses, taking five courses each semester. The field experience of six to eight weeks (preferably during the semester or summer break) is a mandatory degree award requirement of 3 credit hours. The capstone project (preferably undertaken in the fifth semester) is a mandatory degree award requirement of 3 credit hours. The last two years (5-8 semesters) courses will be considered as part of this program.

5. BS Economics with Data Science

The Bachelor of Science in Economics with a Data Science degree focuses on applying data science concepts in economics. With a grounding in these two complementary disciplines, graduates can use high-level computational techniques to gain valuable insights from data, predict trends, solve business problems, and help businesses and organizations become more efficient. The BS in Economics with a Data Science degree provides excellent preparation for various job roles in the private sector, particularly in technology-focused or financial businesses and in the nonprofit, government, and consultancy sectors. Admission Eligibility Criteria is Intermediate/ A level (equivalent to 12 years of education) with at least 45% marks in any discipline. The program is offered in Spring and Autumn Semesters. BS Economics with Data Science is a 4-year program of 8 semesters. The minimum duration for the completion of this degree is four years and a maximum of-

seven years. The BS Economics with Data Science degree program is completed on earning 133 required credits. A student is required to take 15-18 credit hours of coursework per regular semester. The degree will be awarded on completion of 133 credits with a CGPA of at least 2.5/4.

Courses

Semester-wise details of courses are given below.

S. #	Course Code	Course Title	Type of Course	Cr. Hours
Semester- I				
1.	GEN-111	Islamic Studies/ Ethics	General	2
2.	GEN-112	Functional English	General	3
3.	GEN-113	Applications of Information and Communication Technologies	General	3 (2+1)
4.	EDS-111	Programming Fundamentals	Major	4 (3+1)
5.	ECO-105	Principles of Microeconomics	Major	3
6.	ECO-106	Principles of Macroeconomics	Major	3
Semester- II				
1	GEN-121	Ideology and Constitution of Pakistan	General	2
2	GEN-122	Expository Writing	General	3
3	GEN-123	Mathematics	General	3
4	GEN-124	Civics and Community Engagement	General	2
5	EDS-121	Object Oriented Programming	Major	4 (3+1)
6		Social Sciences (from list)	General	2
Semester- III				
1	GEN-231	Statistics	General	3
2	GEN-232	Arts and Humanities/Urdu	General	3
3	ECO-231	Mathematics for Economics and Finance	Major	3
4	ECO-204	Development Economics	Major	3
5	EDS-231	Data Structures and Algorithms	Major	4 (3+1)
6	EDS-232	Introduction to Data Science	Major	3
Semester- IV				
1	GEN-241	Entrepreneurship	General	2
2		Natural Sciences (from list)	General	3 (2+1)
3	EDS-241	Database Systems	Major	3
4	EDS-242	Web Technologies	Major	3
5	ECO-232	Statistics for Economics and Finance	Major	3
6	ECO-312	Monetary Economics	Major	3

Semester- V $^{a, b}$				
1	ECO-205	Intermediate Microeconomics	Major	3
2	ECO-206	Intermediate Macroeconomics	Major	3
3	ECO-310	Basic Econometrics	Major	3
4	EDS-351	Data Visualization and Analysis	Major	3
5	ECO-233	Ecommerce and Digital Marketing (Allied 1)	Allied	3
Semester- VI				
1	ECO-402	Applied Econometrics	Major	3
2	EDS-361	Data Mining	Major	3
3	EDS-362	Machine Learning	Major	3
4	ECO-313	Research Methodology	Major	3
5		Allied 2**	Allied	3
Semester- VII				
1	EDS-471	Big Data Analytics	Major	3
2	EDS-472	Economic Modelling with Data Science	Major	3
3	ECO-314	Public Finance	Major	3
4		Optional 1*	Major	3
5		Allied 3**	Allied	3
Semester- VIII				
1	EDS-481	Artificial Intelligence	Major	3
2	ECO-445	Issues in the Economy of Pakistan	Major	3
3		Optional 2*	Major	3
4		Allied 4**	Allied	3

* Can be chosen from the list of Optional Subjects.

** Can be chosen from the list of Allied Subjects.

A student can start a Field Experience/Internship from the fifth semester for a minimum of six weeks (preferably undertaken during the semester or summer break).

b Capstone Project will be undertaken/registered from the fifth semester.

Courses and Credit Hours for Degree

S. #	Courses	No. of Courses	Credit Hours
1	General Education Courses	12	31
2	Allied Courses	4	12
3	Compulsory Major Courses Economics	13	39
4	Compulsory Major Courses Data Science	12	39
	Optional Courses	2	6
5	Internship		3
6	Capstone Project		3
	Total	**43**	**133**

List of General Education Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN-111	Islamic Studies/ Ethics	General	2
2	GEN-112	Functional English	General	3
3	GEN-113	Applications of Information and Communication Technologies	General	3 (2+1)
4		Social Sciences*	General	2
5	GEN-121	Ideology and Constitution of Pakistan	General	2
6	GEN-122	Expository Writing	General	3
7	GEN-123	Mathematics	General	3
8	GEN-124	Civics and Community Engagement	General	2
9	GEN-231	Statistics	General	3
10	GEN-232	Arts and Humanities/Urdu	General	3
11	GEN-241	Entrepreneurship	General	2
12		Natural Sciences*	General	3 (2+1)

Note: There are 12 general courses with 31 credit hours. ***** The tables below give a list of natural and social science courses.

List of Social Sciences Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN-114	Introduction to Political Science	General	3
2	GEN-115	Introduction to International Relations	General	3
3	GEN-116	Introduction to Economics	General	3
4	GEN-117	Introduction to Mass Communication	General	3
5	GEN-118	Introduction to Psychology	General	3
6	GEN-119	Basic Concepts of Social Sciences	General	3

Note: One course is required from the list of social science courses.

List of General Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	GEN- 242	Introduction to Physics	General	3 (2+1
2	GEN- 243	Introduction to Chemistry	General	3 (2+1)
3	GEN- 244	Introduction to Biology	General	3 (2+1)
4	GEN- 245	Introduction to Ecology	General	3 (2+1)
5	GEN- 246	Every Day Sciences	General	3 (2+1)
6	GEN- 247	Food and Nutrition	General	3 (2+1)

Note: One course is required from the list of natural science courses.

List of Allied Courses

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-110	Introduction to Business	Allied	3
2	ECO-111	Principles of Marketing	Allied	3
3	ECO-213	Governance and Politics	Allied	3
4	ECO-215	Business Finance	Allied	3
5	ECO-216	Introduction to Commerce	Allied	3
6	ECO-220	Business and Industrial Law	Allied	3
7	ECO-221	Gender Studies	Allied	3
8	ECO-230	Data Analytics	Allied	3
9	ECO-233	Ecommerce and Digital Marketing	Allied	3

Note: Four courses (12 credit hours) are required from the list of allied courses.

Compulsory Major Courses of Economics with Data Science

A. List of Compulsory Major Courses Economics				
S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-105	Principles of Microeconomics	Major	3
2	ECO-106	Principles of Macroeconomics	Major	3
3	ECO-205	Intermediate Microeconomics	Major	3
4	ECO-206	Intermediate Macroeconomics	Major	3
5	ECO-231	Mathematics for Economics and Finance	Major	3
6	ECO-232	Statistics for Economics and Finance	Major	3
7	ECO-204	Development Economics	Major	3
8	ECO-310	Basic Econometrics	Major	3
9	ECO-402	Applied Econometrics	Major	3
10	ECO-312	Monetary Economics	Major	3
11	ECO-313	Research Methodology	Major	3
12	ECO-314	Public Finance	Major	3
13	ECO-445	Issues in the Economy of Pakistan	Major	3
B. List of Compulsory Major Courses Data Science				
1	EDS-111	Programming Fundamentals	Major	4 (3+1)
2	EDS-121	Object Oriented Programming	Major	4 (3+1)
3	EDS-231	Data Structures and Algorithms	Major	4 (3+1)
4	EDS-232	Introduction to Data Science	Major	3

5	EDS-241	Database Systems	Major	3
6	EDS-242	Web Technologies	Major	3
7	EDS-351	Data Visualization and Analysis	Major	3
8	EDS-361	Data Mining	Major	3
9	EDS-362	Machine Learning	Major	3
10	EDS-471	Big Data Analytics	Major	3
11	EDS-472	Economic Modelling with Data Science	Major	3
12	EDS-481	Artificial Intelligence	Major	3

Note: There are 25 compulsory major courses (78 credit hours) in Economics with Data Science.

Optional Major Courses of Economics with Data Science

C. List of Optional Major Courses Economics				
S. #	Course Code	Course Title	Type of Course	Cr. Hours
1	ECO-446	Introduction to the History of Economic Thought	Major	3
2	ECO-447	Comparative Economics	Major	3
3	ECO-448	Introduction to Institutional Economics	Major	3
4	ECO-449	Poverty and Income Distribution	Major	3
5	ECO-450	Introduction to Demographic Economics	Major	3
6	ECO-451	Gender Economics	Major	3
7	ECO-452	Introduction to Human Resource Development	Major	3
8	ECO-453	Economics of Education	Major	3
9	ECO-454	Introduction to Health Economics	Major	3
10	ECO-455	Environmental and Health Economics	Major	3
11	ECO-456	Introduction to Industrial Economics	Major	3
12	ECO-457	Introduction to Urban Economics	Major	3
13	ECO-458	Transport and Infrastructural Economics	Major	3
14	ECO-459	Production Economics	Major	3
15	ECO-460	Applied Microeconomics	Major	3
16	ECO-461	Experimental and Behavioral Economics	Major	3
17	ECO-462	Globalization and Environment	Major	3
18	ECO-463	Global Political Economy	Major	3
19	ECO-464	Introduction to Fiscal Policy	Major	3

20	ECO-466	Introduction to Project Planning and Evaluation	Major	3
21	ECO-467	Engineering Economics	Major	3
22	ECO-468	Economics of Regulations and Competitive Policy	Major	3
23	ECO-469	Critical Thinking in Economics	Major	3
24	ECO-470	Applied Statics for Economics and Finance	Major	3
25	ECO-426	Advanced Econometrics	Major	3
26	ECO-427	Time Series Analysis	Major	3
D. List of Optional Major Courses Data Science				
1	EDS-482	Advance Database Systems	Major	3
2	EDS-483	Social Network Modelling and Analytics	Major	3
3	EDS-484	Cloud Computing	Major	3
4	EDS-485	Data Warehousing & Business Intelligence	Major	3
5	EDS-486	Ethics and Privacy in Data Science	Major	3
6	EDS-487	Spatial Data Analysis	Major	3
7	EDS-488	Data Ecology	Major	3

Note: Two courses (6 credit hours) are required from the list of Economics with Data Science optional major courses.

6.   M. Phil. Economics

A 16-year degree in Economics or a relevant field (Economics and Finance, Agricultural Economics, Environmental Economics, Development Economics, Public Policy Economics, Health Economics, Econometrics or equivalent) with a minimum of 2.5/4.00 CGPA under the semester system or 50% marks under the annual system from the HEC recognized institutions. The candidates must pass NTS/ GRE (General) or the admission test and interview conducted by the department with at least 50 % marks. In-service candidates are required to provide an NOC from their department. For the award of an M.Phil degree, candidates need to complete 30 credit hours, 24 credit hours of course work, and 6 credit hours of thesis research. The program duration is two years, and the maximum duration is as per university rules.

Courses

Semester-wise details of courses offered to M. Phil are given below:

Core courses:

Semester-I

Course Code	Course Title	Credit Hours
ECO- 714	Advanced Microeconomics	3
ECO -724	Advanced Macroeconomics	3
ECO-741	Advanced Econometric Methods	3
ECO-	Optional Course	3

Semester-II

Course Code	Course Title	Credit Hours
ECO-751	Topics in Development Economics	3
ECO- 811	Research Methods in Social Sciences	3
ECO-	Optional Course	3
ECO-	Optional Course	3

Optional courses:

Course Code	Course Title	Credit Hours
ECO- 731	Advanced Mathematical Economics	3
ECO- 752	Issues in Development Economics (for Ph.D. only)	3
ECO- 761	Topics in International Economics	3
ECO- 812	Topics in International Finance	3
ECO- 813	Globalization and Economic Integration	3
ECO- 814	Optimization in Economics	3
ECO- 815	Topics in Human Resource Development	3
ECO- 816	Issues in Health Economics	3
ECO- 817	Topics in Labor Economics	3
ECO- 818	Topics in Environmental Economics	3
ECO- 819	Climate Change Modeling	3
ECO- 820	Energy Economics and Policy	3
ECO- 821	Public Sector Economics	3
ECO- 822	Public Policy	3
ECO- 823	Computable General Equilibrium (CGE) Modeling	3
ECO- 824	Topics in Applied Economics	3
ECO- 825	Experimental Economics	3
ECO- 826	Topics in Transport Economics	3
ECO- 827	Topics in Industrial Economics	3
ECO- 828	Topics in Urban Economics	3
ECO- 829	Topics in Applied Econometrics	3
ECO- 830	Issues in Banking and Finance	3
ECO- 831	Advanced Monetary Economics	3
ECO- 832	Monetary Policy	3
ECO- 833	Governance and Institutions	3
ECO- 841	Issues in Agricultural Economics	3
ECO- 842	Food and Agricultural Policy	3

Thesis research

After the completion of coursework with a CGPA of 2.5/4.00 or above, the student will develop a research proposal on a suitable topic under the supervision of an assigned teacher, preferably from the department. After approval by the Departmental Research Committee (DRC), the synopsis will be submitted to the Graduate Research Management Council (GRMC) for final approval. After the completion of research on the approved topic, the revised manuscript will be submitted to the GRMC through the Dean of the Faculty for its external evaluation from the panel of experts proposed by the department. Finally, the student will defend the thesis in an oral exam conducted by the external examiner approved by the GRMC. The defense will be held in the department under the supervision of the Head of the Department of Economics.

7. Ph.D. Economics

The candidates seeking admission to the Ph.D. program in Economics must have a minimum CGPA of 3.00/4.00 or 60% marks in M. Phil/MS Economics or relevant field (Economics and Finance, Agricultural Economics, Environmental Economics, Development Economics, Public Policy Economics, Health Economics, Econometrics or equivalent) from the HEC recognized institutions. A thesis in the M.Phil/MS is mandatory for admission to the Ph.D. program. The candidates must pass the NTS/ GRE or the admission test conducted by the Department of Economics if the NTS/GRE score is not available at the time of admission. In-service candidates are required to provide an NOC from their department. The program duration is three years, and the maximum duration is per university rules. The candidates are required to complete at least 18 credits of coursework after M. Phil.

Courses

Semester-wise details of courses offered to Ph.D. are given below:

Core Courses:

Semester-I

Course Code	Course Title	Credit Hours
ECO-713	Topics in Microeconomics	3
ECO-723	Topics in Macroeconomics	3
ECO-	Optional Course	3

Semester-II

Course Code	Course Title	Credit Hours
ECO-783	Advanced Research Methods	3
ECO-792	Topics in Econometrics	3
ECO-	Optional Course	3

Optional courses:

Course Code	Course Title	Credit Hours
ECO- 731	Advanced Mathematical Economics	3
ECO- 752	Issues in Development Economics (for Ph.D. only)	3
ECO- 761	Topics in International Economics	3
ECO- 812	Topics in International Finance	3
ECO- 813	Globalization and Economic Integration	3
ECO- 814	Optimization in Economics	3
ECO- 815	Topics in Human Resource Development	3
ECO- 816	Issues in Health Economics	3
ECO- 817	Topics in Labor Economics	3
ECO- 818	Topics in Environmental Economics	3
ECO- 819	Climate Change Modeling	3
ECO- 820	Energy Economics and Policy	3
ECO- 821	Public Sector Economics	3
ECO- 822	Public Policy	3
ECO- 823	Computable General Equilibrium (CGE) Modeling	3
ECO- 824	Topics in Applied Economics	3
ECO- 825	Experimental Economics	3
ECO- 826	Topics in Transport Economics	3
ECO- 827	Topics in Industrial Economics	3
ECO- 828	Topics in Urban Economics	3

ECO- 829	Topics in Applied Econometrics	3
ECO- 830	Issues in Banking and Finance	3
ECO- 831	Advanced Monetary Economics	3
ECO- 832	Monetary Policy	3
ECO- 833	Governance and Institutions	3
ECO- 841	Issues in Agricultural Economics	3
ECO- 842	Food and Agricultural Policy	3

Comprehensive examination

Only the candidate with a 3.00/4.00 CGPA in the coursework is eligible to appear for the comprehensive exam. A comprehensive exam will be conducted in two parts (oral and written). It is compulsory to pass both separately. The written exam will be 65% and oral 35%. The oral exam will be conducted only for those candidates who pass the written exam. The Ph. D candidates are required to pass a comprehensive examination with 60 % marks. The department will offer comprehensive examinations for Ph.D. candidates twice a calendar year: first in the Fall semester and second during the Spring session. A student can have a maximum of two chances to pass the comprehensive exam; otherwise, admission will be canceled.

Thesis research

After passing the comprehensive examination, the candidate will develop a research proposal on a suitable topic for Ph.D. degree under the guidance of a supervisor assigned by the department and approved by the GRMC. After the research on the approved topic is completed, the student will prepare a draft dissertation. The supervisor will ensure the manuscript's integrity and that it is free from plagiarism (less than 20 %). The submission of the final draft and its forwarding to the GRMC is predicated on the publication / formal acceptance of at least one paper relevant to the subject of the student's dissertation in an HEC-approved Research Journal of the "Y" category. Finally, the student will defend the thesis orally. The defense will be conducted in the department under the supervision of the Dean faculty/ Head of the Department of Economics at Islamabad.

DEPARTMENT OF PHYSICS

The Department aims to provide a quality academic and research environment to the students. In addition, we are also availing every opportunity to improve the research capabilities of our graduates and, consequently, contributing towards a healthy and skilled nation. The Department offers programs in fundamental areas of Physics, Material Science, Semiconductor Physics, Electrodynamics, Laser Spectroscopy, Nano-Science, Plasma Physics & Electronics, etc. The Department has a well-qualified faculty in various disciplines. Most of the faculty members have Ph.D. degrees, and few are in the process of completing their Ph.D. The coursework and research projects are designed for the students in order to meet both academic and industrial needs. There are three laboratories for the students. In addition, the projects of BS, BS with Data Science, BS Lateral Entry, MS, and Ph.D. research students are carried out in collaboration with different National and International Universities / Research Organizations.

Research Groups

1.	Laser Spectroscopy	2.	Material Science	3.	High Energy Physics
4	Nano Sciences	5.	Plasma Physics	6.	Semi-Conductor Physics

Ph.D. Physics

Semester wise Scheme for Ph.D. in Physics

Semester 1st			
Course Code	**Course Title**	**Credit Hours**	**Remarks**
	Graduate Level Physics Course	03	Elective I
	Graduate Level Physics Course	03	Elective II
	Graduate Level Physics Course	03	Elective III
	Total	**9**	

Semester 2nd			
Course Code	**Course Title**	**Credit Hours**	**Remarks**
	Graduate Level Physics Course	03	Elective IV
	Graduate Level Physics Course	03	Elective V
	Graduate Level Physics Course	03	Elective VI
	Total	**9**	

LIST OF GRADUATE LEVEL PHYSICS COURSES

PHY-7111 Advanced Mathematical Methods of
Physics PHY-7112 Advance Electrodynamics
PHY-7121 Advanced Quantum
Mechanics PHY-7122 Advance
Statistical Physics PHY-7113 Condensed
Matter Theory PHY-7114 Materials
Science
PHY-7115 Particle
Physics PHY-7116
Quantum Optics
PHY-7117 Optical Properties of
Solids PHY-7118 Plasma Physics-I
PHY-7119 Quantum Field Theory
PHY-7123 Magnetism in Condensed
Matter PHY-7124 Plasma Physics-II
PHY-7125 Experimental Plasma Physics

PHY-7126 Superconductivity

PHY-7127 Physics of Thin

Film

PHY-7128 Methods and Techniques of Experimental Physics

LIST OF ELECTIVE COURSES

PHY-8111 Accelerator Physics

PHY-8112 Advance Plasma

Physics

PHY-8113 Advanced Digital

Communications PHY-8114 Advanced

Digital Signal Processing

PHY-8115 Advanced Electromagnetic Fields &

Waves PHY-8116 Advanced Semiconductor Physics

PHY-8117 Condensed Matter Theory-

II PHY- 8118 Plasma Diagnostics

PHY-8119 General Relativity and

Cosmology PHY-8120 Group Theory

PHY -8121 Quantum Information Theory-

II PHY-8122 Quantum Optics-II

PHY-8123 Research

Methodology PHY-8124 Solid

State Theory-I PHY-8125 Solid

State Theory-II

MS Physics (2Years)

Semester wise Scheme for MS in Physics

Semester 1st			
Course Code	**Course Title**	**Credit Hours**	**Remarks**
PHY-111	Advanced Mathematical Methods of Physics	03	Compulsory
PHY-112	Advanced Electrodynamics	03	Compulsory
PHY-11X	Graduate Level Physics Course	03	Elective I
PHY-11X	Graduate Level Physics Course	03	Elective II
	Total	**12**	

Semester 2nd			
Course Code	**Course Title**	**Credit Hours**	**Remarks**
PHY-121	Advanced Quantum Mechanics	03	Compulsory
PHY-122	Advanced Statistical Physics	03	Compulsory
PHY-12X	Graduate Level Physics Course	03	Elective III
PHY-12X	Graduate Level Physics Course	03	Elective IV
	Total	**12**	

LIST OF COURSES

COMPULSORY COURSES

PHY-7111 Advanced Mathematical Methods of

Physics PHY-7112 Advance Electrodynamics

PHY-7121 Advanced Quantum

Mechanics PHY-7122 Advance Statistical

Physics

ELECTIVE COURSES
PHY-7113 Condensed Matter
Theory PHY-7114 Materials
Science
PHY-7115 Particle
Physics PHY-7116
Quantum Optics
PHY-7117 Optical Properties of
Solids PHY-7118 Plasma Physics-I
PHY-7119 Quantum Field Theory
PHY-7123 Magnetism in Condensed
Matter PHY-7124 Plasma Physics-II
PHY-7125 Experimental Plasma
Physics PHY-7126 Superconductivity
PHY-7127 Physics of Thin Film
PHY-7128 Methods and Techniques of Experimental Physics

BS Physics (4 Years)

Semester wise Scheme of Study

		Semester 1ˢᵗ		
S. #	Course Code	Course Title	Course Type	Credit Hours
1	PHY-111	Mechanics	Major	04
2	PHY-112	Lab-1	Major	01
3	GEN-111	Islamic Studies/Ethics	General	02
4	GEN-112	Functional English	General	03
5	GEN-113	Applications of Information and Communication Technologies	General	(2+1) 3
6	GEN-114	Natural Sciences – Everyday Sciences	General	(2+1) 3
7	MTS-301	Calculus-I	Interdisciplinary	03
		Total		19

		Semester 2ⁿᵈ		
1	PHY-121	Electricity and Magnetism	Major	04
2	PHY-122	Heat and Thermodynamics	Major	03
3	PHY-123	Lab II	Major	01
4	GEN-121	Ideology and Constitution of Pakistan	General	02
5	GEN-122	Expository Writing	General	03
6	GEN-123	Civics and Community Engagement	General	02
7	MTS-401	Calculus-II	Interdisciplinary	03
		Total		18

		Semester 3ʳᵈ		
1	PHY-231	Waves and Oscillations	Major	03
2	PHY-232	Optics	Major	03
3	PHY-233	Basic Electronics	Major	03
4	PHY-234	Lab-III	Major	01
5	GEN-231	Quantitative Reasoning-I	General	03
6	GEN-232	Arts and Humanities - Urdu	General	02
7	MTS-404	Deferential Equations	Interdisciplinary	03
		Total		18

Semester 4th				
1	PHY-241	Modern Physics	Major	03
2	PHY-242	Computer Programming in Physics	Major	03
3	PHY-243	Lab-IV	Major	01
4	GEN-241	Quantitative Reasoning-II	General	03
5	GEN-242	Entrepreneurship	General	02
6	GEN-243	Social Sciences - Introduction to Economics	General	02
7	MTS-511	Numerical Analysis	Interdisciplinary	03
		Total		**17**

Semester 5th				
1	PHY-351	Classical Mechanics	Major	03
2	PHY-352	Mathematical Methods of Physics-I	Major	03
3	PHY-353	Electromagnetic Theory-I	Major	03
4	PHY-354	Electronics-I	Major	03
5	PHY-355	Lab-V	Major	02
		Total		**14**

Semester 6th				
1	PHY-361	Quantum Mechanics-I	Major	03
2	PHY-362	Mathematical Methods of Physics-II	Major	03
3	PHY-363	Electromagnetic Theory-II	Major	03
4	PHY-364	Electronics-II	Major	03
5	PHY-365	Statistical Physics	Major	03
6	PHY-366	Lab-VI	Majors	02
		Total		**17**

Semester 7th				
1	PHY-471	Quantum Mechanics-II		03
2	PHY-472	Solid State Physics-I		03
3	PHY-473	Atomic and Molecular Physics		03
4	PHY-474	Computational Physics		03
5	PHY-475	Lab-VII		02
6	PHY-476	Capstone Project		03
		Total		**17**

Semester 8th				
1	**PHY-481**	Nuclear Physics	Major	03
2	**PHY-482**	Solid State Physics-II	Major	03
3	**PHY-483**	Internship/Field Experience	Major	03
4	**PHY-48X**	Elective Course	Major	03
		Total	Major	**12**

Total Credit Hours: 132

Elective Courses

Category	Course Code	Course Title	Credit Hours
Elective Courses	**PHY-484**	Quantum Information Theory	03
	PHY-485	Introduction to Astrophysics	03
	PHY-486	Digital Electronics	03
	PHY-487	Methods of Experimental Physics	03
	PHY-488	Introduction to Particle Physics	03
	PHY-489	Introduction to Plasma Physics	03

BS Physics with Data Science (4 Years)

Semester wise Scheme of Study

Semester 1st				
S. #	Course Code	Course Title	Course Type	Credit Hours
1	**PHY-111**	Mechanics	Major	04
2	**PHY-112**	Lab-1	Major	01
3	**GEN-111**	Islamic Studies/Ethics	General	02
4	**GEN-112**	Functional English	General	03
5	**GEN-113**	Applications of Information and Communication Technologies	General	(2+1) 3
6	**GEN-114**	Natural Sciences – Everyday Sciences	General	(2+1) 3
7	**MTS-301**	Calculus-I	Interdisciplinary	03
		Total		**19**

		Semester 2nd		
1	PHY-121	Electricity and Magnetism	Major	04
2	PHY-122	Heat and Thermodynamics	Major	03
3	PHY-123	Lab II	Major	01
4	GEN-121	Ideology and Constitution of Pakistan	General	02
5	GEN-122	Expository Writing	General	03
6	GEN-123	Civics and Community Engagement	General	02
7	MTS-401	Calculus-II	Interdisciplinary	03
		Total		**18**

		Semester 3rd		
1	PHY-231	Waves and Oscillations	Major	03
2	PHY-232	Optics	Major	03
3	PHY-233	Basic Electronics	Major	03
4	PHY-234	Lab-III	Major	01
5	GEN-231	Quantitative Reasoning-I	General	03
6	GEN-232	Arts and Humanities - Urdu	General	02
7	MTS-404	Deferential Equations	Interdisciplinary	03
		Total		**18**

		Semester 4th		
1	PHY-241	Modern Physics	Major	03
2	PHY-242	Computer Programming in Physics	Major	03
3	PHY-243	Lab-IV	Major	01
4	GEN-241	Quantitative Reasoning-II	General	03
5	GEN-242	Entrepreneurship	General	02
6	GEN-243	Social Sciences - Introduction to Economics	General	02
7	MTS-511	Numerical Analysis	Interdisciplinary	03
		Total		**17**

		Semester 5th		
1	PHY-351	Classical Mechanics	Major	03
2	PHY-352	Mathematical Methods of Physics -I	Major	03
3	PHY-353	Electromagnetic Theory-I	Major	03
4	PHY-354	Electronics-I	Major	03
5	PHY-355	Lab-V	Major	02
	CS2xx	Introduction to Data Science	Minor	03
		Total		**17**

		Semester 6th			
1	PHY-361	Quantum Mechanics-I	Major		03
2	PHY-362	Mathematical Methods of Physics -II	Major		03
3	PHY-363	Electromagnetic Theory-II	Major		03
4	PHY-364	Electronics-II	Major		03
5	PHY-365	Statistical Physics	Major		03
6	PHY-366	Lab-VI	Major		02
	CS3xx	Data Warehousing & Business Intelligence	Minor		03
		Total			**20**

		Semester 7th			
1	PHY-471	Quantum Mechanics-II	Major		03
2	PHY-472	Solid State Physics-I	Major		03
3	PHY-473	Atomic and Molecular Physics	Major		03
4	PHY-474	Computational Physics	Major		03
5	PHY-475	Lab-VII	Major		02
6	CS3xx	Data Visualization	Major		03
7	PHY-476	Capstone Project	Minor		03
		Total	Field Experience		**20**

		Semester 8th			
1	PHY-481	Nuclear Physics	Major		03
2	PHY-482	Solid State Physics-II	Major		03
3	CS3xx	Data Mining	Minor		03
4	PHY-483	Internship/Field Experience	Major		03
5	PHY-48X	Elective Course	Major		03
		Total	Major		**15**

Total Credit Hours:

Elective Courses

Category	Course Code	Course Title	Credit Hours
Elective Courses	**PHY-484**	Quantum Information Theory	03
	PHY-485	Introduction to Astrophysics	03
	PHY-486	Digital Electronics	03
	PHY-487	Methods of Experimental Physics	03
	PHY-488	Introduction to Particle Physics	03
	PHY-489	Introduction to Plasma Physics	03

BS Lateral Entry Program (2Years)

Semester wise Scheme of Study

		Semester 1st		
S. #	Course Code	Course Title	Course Type	Credit Hours
1	PHY-351	Classical Mechanics	Major	03
2	PHY-352	Mathematical Methods of Physics -I	Major	03
3	PHY-353	Electromagnetic Theory-I	Major	03
4	PHY-354	Electronics-I	Major	03
5	PHY-355	Lab-V	Major	02
		Total		**14**

		Semester 2nd		
1	PHY-361	Quantum Mechanics-I	Major	03
2	PHY-362	Mathematical Methods of Physics -II	Major	03
3	PHY-363	Electromagnetic Theory-II	Major	03
4	PHY-364	Electronics-II	Major	03
5	PHY-365	Statistical Physics	Major	03
6	PHY-366	Lab-VI	Major	02
		Total		**17**

		Semester 3rd		
1	PHY-471	Quantum Mechanics-II	Major	03
2	PHY-472	Solid State Physics-I	Major	03
3	PHY-473	Atomic and Molecular Physics	Major	03
4	PHY-474	Computational Physics	Major	03
5	PHY-475	Lab-VII	Major	02
6	PHY-476	Capstone Project	Major	03
		Total		**17**

		Semester 4th		
1	PHY-481	Nuclear Physics	Major	03
2	PHY-482	Solid State Physics-II	Major	03
3	PHY-483	Internship/Field Experience	Major	03
4	PHY-48X	Elective Course	Major	03
		Total	Major	**12**

Total Credit Hours: 60

Elective Courses

Category	Course Code	Course Title	Credit Hours
Elective Courses	PHY-484	Quantum Information Theory	03
	PHY-485	Introduction to Astrophysics	03
	PHY-486	Digital Electronics	03
	PHY-487	Methods of Experimental Physics	03
	PHY-488	Introduction to Particle Physics	03
	PHY-489	Introduction to Plasma Physics	03

ADP in Physics

Semester wise scheme of study

S. #	Course Code	Course Title	Course Type	Credit Hours
Semester 1st				
1	PHY-111	Mechanics	Major	04
2	PHY-112	Lab-1	Major	01
3	GEN-111	Islamic Studies/Ethics	General	02
4	GEN-112	Functional English	General	03
5	GEN-113	Applications of Information and Communication Technologies	General	(2+1) 3
6	GEN-114	Natural Sciences – Everyday Sciences	General	(2+1) 3
7	MTS-301	Calculus-I	Interdisciplinary	03
		Total		**19**

S. #	Course Code	Course Title	Course Type	Credit Hours
Semester 2nd				
1	PHY-121	Electricity and Magnetism	Major	04
2	PHY-122	Heat and Thermodynamics	Major	03
3	PHY-123	Lab II	Major	01
4	GEN-121	Ideology and Constitution of Pakistan	General	02
5	GEN-122	Expository Writing	General	03
6	GEN-123	Civics and Community Engagement	General	02
7	MTS-401	Calculus-II	Interdisciplinary	03
		Total		**18**

		Semester 3rd		
1	**PHY-231**	Waves and Oscillations	Major	03
2	**PHY-232**	Optics	Major	03
3	**PHY-233**	Basic Electronics	Major	03
4	**PHY-234**	Lab-III	Major	01
5	**GEN-231**	Quantitative Reasoning-I	General	03
6	**GEN-232**	Arts and Humanities - Urdu	General	02
7	**MTS-404**	Deferential Equations	Interdisciplinary	03
		Total		**18**

		Semester 4th		
1	**PHY-241**	Modern Physics	Major	03
2	**PHY-242**	Computer Programming in Physics	Major	03
3	**PHY-243**	Lab-IV	Major	01
4	**GEN-241**	Quantitative Reasoning-II	General	03
5	**GEN-242**	Entrepreneurship	General	02
6	**GEN-243**	Social Sciences - Introduction to Economics	General	02
7	**MTS-511**	Numerical Analysis	Interdisciplinary	03
		Total		**17**

Total Credit Hours: 72

Eligibility Criteria:
BS Physics (Morning / Evening)
Duration: 4 years (8 semesters)
Credit Hours: 132
Eligibility: F. Sc or equivalent (with Physics and Mathematics) with at least 45% marks **or** D.A.E (Electrical / Mechanical) with at least 70% marks from any recognized institution.

BS Physics with Data Science (Morning / Evening)
Duration: 4 years (8 semesters)
Credit Hours: 144
Eligibility: F. Sc. **or** equivalent (with Physics and Mathematics) with at least 45% marks **or** D.A.E (Electrical / Mechanical) with at least 70% marks from any recognized institution.

BS Physics (Lateral Entry Program)

Duration: 2 years (4 semesters)
Credit Hours: 60
Eligibility: B. Sc. **or** equivalent (with Physics / Mathematics) with at least 45% marks from HEC recognized institution.

ADP Physics (2 Year Program) (Morning)

Duration: 2 years (4 semesters)
Credit Hours: 72
Eligibility: F. Sc. **or** equivalent (with Physics and Mathematics) with at least 45% marks **or** D.A.E (Electrical / Mechanical) with at least 60% marks from any recognized institution.

MS (Physics)

Duration: 2 years (4 semesters)
Credit Hours: 30 (24 for course work and 06 for thesis)
Eligibility: M. Sc. (Physics) **or** equivalent degree from HEC recognized institution/University with at least 1st division **or** CGPA 2.5/4.0.
Candidates will also have to qualify for departmental admission test and interview.
Note: Government employees should produce NOC from the concerned department before joining the session.

Ph.D. (Physics)

1. Applicants must have been awarded a Master's or MS degree or equivalent from a recognized institution.
2. Pass the admission test conducted by the university, with a minimum score of 60%, or pass an equivalent test conducted by a testing body accredited by HEC.
3. Candidates who have been awarded an Indira-disciplinary qualification and have passed the GRE-Subject/Equivalent Test with a minimum score of 50% in the discipline of admission can be considered for admission. A minimum CGPA of 3.0/4.0 or 60% is required for admission to the MS/MS/equivalent degree.
4. Candidates with a CGPA below 3.0/60% may be admitted to a Ph.D. program after completing additional courses (9-12 CH) at level 7 and scoring a minimum GPA of 3.00 out of 4.00.

DEPARTMENT OF COMPUTER SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

1 Introduction

Computing (a nucleus of all activities, including technical, academic, professional, and development practices relating to computers) provides a wide range of choices on how an individual might focus his or her professional life. This document provides an overview of the different kinds of degree programs in Computing that are currently available and the curriculum standards that are currently available. It is believed that this report may be an essential source for university faculty, administrators, students, parents, and professionals who need to be aware of Computing as a broad-based discipline that crosses the boundaries between science, engineering, and professional practice. In reality, Computing consists of several disciplines. Various questions are critical, including: What are the different kinds of computing degree programs? How are they similar? How are they different? The variety of degree programs in Computing presents prospective students, educators, and administrators with important choices where they may focus their efforts.

The following section introduces the objectives of the report, the basic concept of computing, and a brief overview of computer science, software engineering, information technology, and other disciplines. Further, the following sections of the report also provide complete details of the proposed curricula pertaining to Computer Science, Software Engineering, Artificial Intelligence, Information Technology, and other disciplines regarding the BS program. For each discipline, all details regarding the scheme of study, common course content with CLOs, and the overall structure of the degree programs are presented in this document. Computing is a dynamic field, and accordingly, good care has been taken to design a flexible structure that will maintain currency with the latest scientific and technological advancements in the field. Moreover, it seems that Computing is a discipline that incorporates scientific, engineering, and creative features. A reasonable emphasis has been placed on formal scientific and engineering areas to enhance the level of formalization in degree programs. Technology can play an important role in the implementation of Computing programs. Consequently, all programs are structured on essential dimensions, including scientific knowledge, technology, and design skills.

1.1 Objectives

Computing is one of the key factors driving progress in the 21st century - it will further transform how we live, learn, work, and play. Advances in Computing and its technologies have created new infrastructure for business, commerce, manufacturing, communication, scientific research, education, and social interaction. This expanding infrastructure provided us with new tools for communicating worldwide and acquiring knowledge and insight from information. It also provides a vehicle for economic growth. The following are the major objectives to consider while designing/developing new curricula.

1.   Vigorous Computing education, research, and development are essential for achieving our national aspirations in the 21st century. As we advance in the 21st century, the opportunities for innovation in Computing are larger than ever—and more important. The technical advances that led to today's information tools, such as electronic computers and the Internet, are accessible at a continuously decreasing cost.

2.   The nation needs significant efforts in education and research in Computing and communication systems. Suppose the results are to be available when needed. In that case, we must act now to reinvigorate the long-term Computing education and research endeavor and revitalize the university campus's computing infrastructure. We need to ensure that advances in Computing work should benefit us and that the majority of Pakistanis have the education and training required to prosper in a world that will increasingly depend on Computing. The benefits of these transformations caused by Computing for our national future are extraordinary. A networked society can reach out to all its citizens, bring us closer together, and address many societal issues.

3.   The proposed plan of Computing curricula directly supports the education and preparation of our young people for careers in Computing research and the training of workers who need to upgrade their skills to keep pace with a changing marketplace. Trained people are a major product of publicly supported research. These trained professionals are critical national human resources and will create and develop new ideas, form a talent pool for existing businesses, and launch new companies.

4.   Now that the current world is considered a global village due to the rapid flow of information from one place to another, the one who can share and access this information is regarded as a global village. The astronomical growth in Computing compels the whole professional world to reorient its efforts to maximize the utilization of Computing in their professional activities. This enables all the educational institutes, primarily responsible for creating trained manpower, to devise programs that will lead to an optimum utilization of Computing in different spheres of life. There is a tremendous challenge to creating well-equipped Computing professionals with the ability and expertise to respond adequately to the growing needs of the industry.

5.   Realizing the high market demands and shortage of quality in computing education at different levels and enhancing existing computing programs are proposed. This report is based on horizontal and vertical growth in those Computing disciplines. In contrast, high demand is recent, and it is well estimated that this will grow universally over the years to come. Thus, it is high time for our universities to focus their resources together to seize a maximum share of this exponentially growing market.

6.   The report conceptually and philosophically provides a two-dimensional model of the overall Computing Educational Infrastructure. The concept nicely reflects national and international frontiers in Computing education for the future.

7.   Our universities have quality human and technological resources and excellent infrastructure. The report provides new horizons, strategies, and challenges for transforming the existing infrastructure into leading Computing institutions.

This document presents revised computing curricula, known as 'the Computing Curricula 2023'. All previous curricula have been combined into a single document. Though a separate curriculum model is given for each subdomain of computing, these individual models are integrated by standard courses. These efforts primarily summarize and synthesize the current state of curriculum guidelines for academic programs that grant bachelor degrees in computing and offer flexibility for the universities/DAIs while implementing these guidelines. The curriculum models for the following computing discipline are presented in this document.

1.   Bachelor of Science in Computer Science
2.   Bachelor of Science in Software Engineering
3.   Bachelor of Science in Artificial Intelligence
4.   Bachelor of Science in Data Science
5.   Bachelor of Science in Cyber Security
6.   Bachelor of Science in Bioinformatics
7.   Bachelor of Science in Information Systems
8.   Bachelor of Science in Multimedia and Gaming
9.   Bachelor of Science in Information Technology
10.   Bachelor of Science in Computer Engineering

2   Curricula Consideration

Two major guidelines have been considered during the revision of the Computing Curricula (ACM and Seoul Accord). However, in some cases, the main focus of these guidelines is traditional primarily Computer Science program.

2.1   Association of Computing Machinery (ACM) - Guidelines

The Association of Computing Machinery (ACM), USA, is the largest body in the world for computer scientists. Its membership is spread over the entire globe. It has a pool of highly reputed professionals who meet after a few years to assess the directions being taken by the computing discipline. In view of its assessment, it identifies knowledge areas and also their relative importance in the years to come. Thus, ACM shows the path for computing academia and professionals worldwide. Computing curricula are designed with the following identified knowledge areas of ACM in view [ref # ACM 2013 curriculum report]. It has been tried to cover all knowledge areas reasonably without compromising the flexibility needed for a national model curriculum. The mapping of these key knowledge areas with the courses is given in the table below.

AL -   Algorithms and Complexity
AR -   Architecture and Organization

CN - Computational Science
DS - Discrete Structures
GV - Graphics and Visual Computing
HCI - Human-Computer Interaction
IAS - Information Assurance and Security
IM - Information Management
IS - Intelligent Systems
NC - Networking and Communications
OS - Operating Systems
PBD - Platform-based Development
PD - Parallel and Distributed Computing
PL - Programming Languages
SDF - Software Development Fundamentals
SE - Software Engineering
SF - Systems Fundamentals
SP - Social Issues and Professional Issues

T h e following knowledge areas have been addressed with the major computing courses.

Knowledge Areas in ACM CS 2013 Curriculum

#	Knowledge Area	CS 2013		ACM 2013 Subjects Taught in Various Universities	NCEAC Revised 2023 Subjects in Core
		Tier-1	Tier-2		
1	AL-Algorithms and Complexity	19	9	Algorithms; Algorithms and Data Structures; Algorithm Design and Analysis	Data structures, Analysis of Algorithms, Theory of Automata
2	AR-Architecture and Organization	0	16	Intro to Computer Architecture; DLD; Computer Engineering	DLD, Computer Org & Assembly Language, Computer Architecture
3	CN-Computational Science	1	0	eScience; Modeling and Simulation; Computer Graphics	HCI & Computer Graphics; (Elective: Numerical Analysis)
4	DS-Discrete Structures	37	4	Discrete Mathematics; Mathematical Foundations of CS; Probability for CS; Discrete Structures 1; Discrete Str 2	Discrete Structures, Probability & Statistics

5	GV-Graphics and Visualization	2	1	Computer Graphics; Computer Graphics	HCI & Computer Graphics; (Elective: Computer Graphics)
6	HCI-Human-Computer Interaction	4	4	Human Computer Interaction	HCI & Computer Graphics
7	IAS-Information Assurance and Security	3	6	Computer Systems Security	Information Security; (Elective: Cyber Security)
8	IM-Information Management	1	9	Database Systems	Database Systems; Adv Database Management Sys
9	IS-Intelligent Systems	0	10	Artificial Intelligence Programming; Artificial Intelligence	Artificial Intelligence
10	NC-Networking and Communication	3	7	Introduction to Computer Networking; Computer Networks	Computer Networks
11	OS-Operating Systems	4	11	Operating Systems	Operating Systems
12	PBD-Platform-based Development	0	0		(Electives: Web Technology {ASP, Javascript}, Visual Prog {C#}, Mobile App Dev {React/Flutter/Kotlin/Swift})
13	PD-Parallel and Distributed Computing	5	10	Parallel Programming Principle and Practice;	Parallel & Distributed Computing
14	PL-Programming Languages	8	20	Introduction toCompilers; Compilers; Introduction to Programming; Programming Languages	Programming Fundamentals,OOP, Compiler Construction

15	SDF-Software Development Fundamentals	43	0	Java Programming Introduction to Program Design:	Programming Fundamental,Object Oriented Programming,
				Introduction to Programming; OOP	Data Structures
16	SE-Software Engineering	6	22	Software Engineering	Software Engineering
17	SF-Systems Fundamentals	18	9	Computer Systems and Networks; Great Ideas in Computer Architecture; System Programming	DLD, Computer Networks, Computer Architecture
18	SP-Social Issues and Professional Practice	11	5	Ethics in Technology; Technology Consulting in the Community	Professional Practices
	Total Core Hours	**165**	**143**		
		308			

1.1 *Outcome Based Education (OBE) System and Seoul Accord:*

onsidering the latest transformation from a **knowledge-based education philosophy to an Outcome-based education** (OBE)system, the OBE model based on the Seoul Accord has also been considered Computing programs prepare students to attain educational objectives by ensuring that students demonstrate achievement of the following outcomes (derived from Graduate Attributes defined by Seoul Accord, www.seoulaccord.org).

S#	Program Learning Outcomes (PLOs)	Computing Professional Graduate
1	Academic Education	To prepare graduates as computing professionals.
2	Knowledge for Solving Computing Problems	Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.

3	Problem Analysis	Identify, formulate, research literature, and solve complex computing problems, reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
4	Design/ Development of Solutions	Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.
5	Modern Tool Usage	Create, select, adapt, and apply appropriate techniques, resources, and modern computing tools to complex computing activities with an understanding of the limitations.
6	Individual and Team Work	Function effectively as an individual and as a member or leader in diverse teams and multi-disciplinary settings.
7	Communication	Communicate effectively with the computing community and with society at large about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
8	Computing Professionalism and Society	Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts and the consequential responsibilities relevant to professional computing practice.
9	Ethics	Understand and commit to professional ethics, responsibilities, and norms of professional computing Practice.
10	Life-long Learning	Recognize the need, and have the ability to engage in independent learning for continual development as a computing professional.

3   BS Computing Curriculum Model

The combined structure of BS Degree Programs in Computing is proposed to meet the needs of students through theory and practical computing experience. The students are expected to gain a theoretical and practical understanding of the respective Computing fields. The proposed structure is dynamic and provides the basis for various options, including Breadth-Based, Depth-Based, and Integrated Breadth & Depth-Based specializations. Students may choose a particular option which is most appropriate to their planned future career.

The General structure of the BS degree in any Computing discipline is given in the table below. The whole degree program structure is divided into different categories/areas. Some of the categories are common and shall be covered by all degree programs of the computing discipline, for

example Computing Core, General Education, etc. The domain elective provides a high degree of flexibility to the program to excel in one or two areas. For example, any program would like to specialize in database or computer architecture, and seven courses (see category no. 5) can be offered to do so.

Table no. 3.1 Various Categories/Areas under Computing Discipline

C#	Category/Areas	Credit Hours	Courses	Remarks
1	Computing Core	46	14	Common to all Computing programs.
2	Domain Core	18	6	Related to the domain and must be different from one computing degree program to another.
3	Domain Elective	21	7	These courses are electives and would be very useful in providing in-depth special knowledge in a specific domain. For example – under the Computer Science – one can take seven courses from database or Artificial intelligence, etc.
4	Mathematics & Supporting Courses	12	4	Common to all computing degree programs.
5	Elective Supporting Courses	3	1	Common to all computing degree programs.
6	General Education Requirement	30	12	This is common to all computing degree programs and will be offered as per the HEC Guidelines; details can be found at the HEC URL. www.hec.gov.pk
	Totals	**130**	**44**	

3.1 Essential Requirements for the Computing Degree:

The following are the fundamental requirements to get admission and complete Computing degrees in universities/DAIs of Pakistan,

Eligibility Criteria, Duration of the Program and Award of Degree:
" Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics are required for admission in all BS Computing Programs other than BS Computing Engineering.

*An equivalency certificate by IBCC will be required in case of education from some other country or system.

" Minimum 60% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics are required for admission in BS Computer Engineering Program.

" The students who have not studied Mathematics at the intermediate level have to pass deficiency courses of Mathematics (06 credits) in the first two semesters.

" At minimum 130 credit hours are required to award BS degrees in any computing discipline mentioned in this document.

" The minimum duration for completion of a BS Computing degree is four years. The HEC allows a maximum period of seven years to complete the BS degree requirements.

" A minimum 2.0 CGPA (Cumulative Grade Point Average) on a scale of 4.0 is required to award a BS Computing Degree.

" The students, after successful completion of 04 semesters in BS Computing Programs, may exit with an Associate Degree in Computing subject to completion of all requirements for the award of associate degree, i.e., Credit Hours, CGPA, and compulsory courses.

3.2 General Layout and Courses:

To facilitate universities/DAIs offering computing degree programs, this section presents the general layout and course details under the various categories mentioned above. Ten different degree programs can be offered under the computing discipline (see section 1). In order to make it flexible and easy for institutes to execute Computing degree programs with the desired quality, a common layout has been designed to make a similar layout and plan for each degree offered under the computing domain. The table below shows courses under different categories. Some of the categories are shown with generic course titles, such as Domain Core 1, 2, and so on. Actual titles and other details are given in the later sections of this document. This section also provides guidelines about the coding scheme of courses.

3.3 Coding Scheme of Courses:

The university can design the code of the courses, but the following guidelines may be followed:

o The Coding Scheme is based on the following principles:

- Letter Code consists of two to four characters (three is preferred) to represent the title of the degree

o Such as CSC for Computer Science, SE for Software Engineering, DSC , Data Sciences

o MTH - Mathematics, PHY - Physics, etc.

- Numerical code consists of three digits

o 1st digit represents the level of difficulty

o 2nd digit represents the area/specialization

o 3rd digit represents the sequence in the area/specialization

o For example: 101 (1 - difficult level, 0 normally fundamental areas, 1 first course in the area)

Other examples

" For example - a course code CSC332

o Level of Difficulty - 3 (could be offered in year 3), 3 - the course belongs to Databases, and 2 -

this is 2nd course in the area of databases.
"   For example, a course code
CSC212
o   Level of Difficulty - 2 (could be offered in year 2), 1 - the course belongs to Programming, and 2
- this i s t h e 2nd course in the area of programming.
-   However, it is up to the university where they can use different type and
style

Table 3.2 : The Overall Degree Plan with Generic layout and Courses

#	Sem #	Code	Pre-Reqs	Course Title	Dom	CrHr
				Computing Core (46/130) 14 Courses (common to all computing programs)		
1	1	CS1xx		Programming Fundamentals	Core	4 (3-3)
2	2	CS1xx	PF	Object Oriented Programming	Core	4 (3-3)
3	2	CS1xx		Database Systems	Core	4 (3-3)
4	2	CS1xx		Digital Logic Design	Core	3 (2-3)
5	3	CS2xx	OOP	Data Structures	Core	4 (3-3)
6	3	CS2xx		Information Security	Core	3 (2-3)
7	3	CS2xx		Artificial Intelligence	Core	3 (2-3)
8	3	CS2xx		Computer Networks	Core	3 (2-3)
9	3	CS2xx		Software Engineering	Core	3 (3-0)
10	4	CS2xx	DLD	Computer Organization & Assembly Language	Core	3 (2-3)
11	5	CS3xx		Operating Systems	Core	3 (2-3)
12	7	CS4xx	DS	Analysis of Algorithms	Core	3 (3-0)
13	7	CS4xx		Final Year Project - I	Core	2 (0-6)
14	8	CS4xx	FYP-I	Final Year Project - II	Core	4 (0-12)
				Domain Core (18/130) 6 Courses – vary from program to program		
15	--	CSxxx		Domain Core 1	Domain Core	3 (2-3)
16	--	CSxxx		Domain Core 2	Domain Core	3 (2-3)
17	--	CSxxx		Domain Core 3	Domain Core	3 (2-3)
18	--	CSxxx		Domain Core 4	Domain Core	3 (2-3)
19	--	CSxxx		Domain Core 5	Domain Core	3 (2-3)
20	--	CSxxx		Domain Core 6	Domain Core	3 (2-3)
				(code from Domain such Domain Elective (21/130) 7 Courses – specific to the degree programas CS, SE, AI etc.		
21	--	DOMxxx		Domain Elective 1	Domain Elective	3 (2-3)
22	--	DOMxxx		Domain Elective 2	Domain Elective	3 (2-3)
23	--	DOMxxx		Domain Elective 3	Domain Elective	3 (2-3)
24	--	DOMxxx		Domain Elective 4	Domain Elective	3 (2-3)
25	--	DOMxxx		Domain Elective 5	Domain Elective	3 (2-3)
26	--	DOMxxx		Domain Elective 6	Domain Elective	3 (2-3)
27	--	DOMxxx		Domain Elective 7	Domain Elective	3 (2-3)
				Mathematics Supporting Courses Common to all degree programs (12/130) 4 Courses		
28	2	MT1xx	CAG	Multivariable Calculus	Maths	3 (3-0)
29	2	MT1xx	CAG	Linear Algebra	Maths	3 (3-0)
30	3	MT2xx		Probability & Statistics	Maths	3 (3-0)
31	7	EW4xx	CPS	Technical & Business Writing	EW	3 (3-0)

Elective Supporting Courses (3/130) 1 Course						
32	7	SS1xx		Social Science (Example: Introduction to Marketing)	SS	3 (3-0)
General Education Requirement as per HEC UG Education Policy (30/130) 12 Courses						
33	1	GE1xx		Application of Information & Communication Technologies	GER	3 (2-3)
34	1	GE1xx		Functional English	GER	3 (3-0)
35	2	GE1xx	ECC	Expository Writing	GER	3 (3-0)
36	1	GE1xx		Quantitative Reasoning – 1 (Discrete Structures)	GER	3 (3-0)
37	1	GE1xx		Quantitative Reasoning – 2 (Calculus and Analytic Geometry)	GER	3 (3-0)
38	4	GE2xx		Islamic Studies	GER	2 (2-0)
39	8	GE4xx		Ideology and Constitution of Pakistan	GER	2 (2-0)
40	4	GE2xx		Social Sciences (Example: Introduction to Management)	GER	2 (2-0)
41	4	GE2xx		Natural Sciences (Applied Physics)	GER	3 (2-3)
42	8	GE4xx		Arts & Humanities (Professional Practices)	GER	2 (2-0)
43	8	GE4xx		Civics and Community Engagement	GER	2 (2-0)
44	7	GE4xx		Entrepreneurship	GER	2 (2-0)

The following pages present each degree program, its introduction, and details of courses.

4 Computing Degree Programs

As mentioned, ten different degree programs can be offered in the Computing discipline. All these programs are presented in the following sections.

4.1 BS Computer Science

Computer science is the study of the theory, experimentation, and engineering that form the basis for the design and use of computers. It is the scientific and practical approach to computation and its applications and the systematic study of the feasibility, structure, expression, and mechanization of the methodical procedures (or algorithms) that underlie the acquisition, representation, processing, storage, communication of, and access to information [ref WordNet Princeton definition].

Computer Science is the application of a systematic, disciplined, and quantifiable approach to the design, development, operation, and maintenance of software systems. It is, in fact, the practice of designing and implementing large, reliable, efficient, and economical software by applying the principles and practices of engineering. The program aims to train students in all aspects of the software life cycle, from specification through analysis and design to testing, maintenance, and evaluation of software product.

Computer Science spans a wide range, from its theoretical and algorithmic foundations to cutting- edge developments in robotics, computer vision, intelligent systems, bioinformatics, and other exciting areas. The overall scope of Computer Science may be viewed into the following three categories:

"	To develop effective ways to solve computing problems. For example, Computer Science develops the best possible ways to store information in databases, send data over networks, and display complex images. The theoretical background offered by Computer Science allows for determining the best performance possible and their study of algorithms. It enables to develop new problem-solving approaches that provide better performance.

"   It devises new ways to use computers intelligently and effectively. Progress in the areas of networking, databases, and human-computer interface came together as a result of the worldwide-web, which changed the entire world. Now, researchers are working to make robots that are practical aides and demonstrate intelligence, databases that create new knowledge, and, in general, use computers to do new things.

"   It deals with the design and implementation of software systems. Computer Science provides training and skills for successfully implementing software systems that solve challenging programming jobs. Computer Science spans the range from theory to models, design, and programming. Computer Science offers a comprehensive foundation that permits graduates to adapt to new technologies and new ideas.

4.1.1 Curriculum Model for Bachelor of Science in Computer Science

The generic structure for computing degree program given before is mapped with the BSCS program in the following tables.

<p align="center"><u>Generic Structure for Computing Disciplines:</u></p>

Areas	Credit Hours	Courses
Computing Core	46	14
Domain Core	18	6
Domain Elective	21	7
Mathematics & Supporting Courses	12	4
Elective Supporting Courses	3	1
General Education Requirement	30	12
Totals	**130**	**44**

<p align="center">Mapping of BSCS Program on the Generic Structure</p>

<p align="center">Proposed Scheme of Study for BSCS as per NCEAC Guidelines 2023</p>

#	Sem #	Code	Pre-Reqs	Course Title	Dom	Cr
				Computing Core (46/130) 14 Courses		
1	1	CS1xx		Programming Fundamentals	Core	4 (3-3)
2	2	CS1xx	PF	Object Oriented Programming	Core	4 (3-3)
3	2	CS1xx		Database Systems	Core	4 (3-3)
4	2	CS1xx		Digital Logic Design	Core	3 (2-3)
5	3	CS2xx	OOP	Data Structures	Core	4 (3-3)
6	3	CS2xx		Information Security	Core	3 (2-3)
7	3	CS2xx		Artificial Intelligence	Core	3 (2-3)
8	3	CS2xx		Computer Networks	Core	3 (2-3)
9	3	CS2xx		Software Engineering	Core	3 (3-0)
10	4	CS2xx	DLD	Computer Organization & Assembly Language	Core	3 (2-3)
11	5	CS3xx		Operating Systems	Core	3 (2-3)
12	7	CS4xx	DS	Analysis of Algorithms	Core	3 (3-0)
13	7	CS4xx		Final Year Project - I	Core	2 (0-6)
14	8	CS4xx	FYP-I	Final Year Project - II	Core	4 (0-12)
				Domain Core (18/130) 6 Courses		

15	4	CS2xx		Theory of Automata		Domain Core	3 (3-0)
16	4	CS2xx	DB	Advance Database Management Systems		Domain Core	3 (2-3)
17	5	CS3xx		HCI & Computer Graphics		Domain Core	3 (2-3)
18	5	CS3xx	COAL	Computer Architecture		Domain Core	3 (2-3)
19	6	CS3xx	TA	Compiler Construction		Domain Core	3 (2-3)
20	6	CS3xx	OS	Parallel & Distributed Computing		Domain Core	3 (2-3)
Domain Elective (21/130) 7 Courses							
21	5	CS3xx		Web Technologies		Domain Elective	3 (2-3)
22	5	CS3xx		Mobile Application Development 1		Domain Elective	3 (2-3)
23	6	CS3xx	OOP	Advanced Programming (Old Name: Visual Programming)		Domain Elective	3 (2-3)
24	6	CS3xx		Numerical Analysis		Domain Elective	3 (2-3)
25	6	CS3xx	WT	Web Engineering		Domain Elective	3 (2-3)
26	6	CS3xx	IS	Cyber Security		Domain Elective	3 (2-3)
27	7	CS4xx		Software Testing & Quality Assurance		Domain Elective	3 (2-3)
.				Mobile Application Development 2		Domain Elective	3 (2-3)
.				Cloud Computing		Domain Elective	3 (2-3)
.				Computer Graphics		Domain Elective	3 (2-3)
.				Object Oriented Analysis & Design		Domain Elective	3 (2-3)
Mathematics & Supporting Courses (12/130) 4 Courses							
28	2	MT1xx	CAG	Multivariable Calculus		Maths	3 (3-0)
29	2	MT1xx	CAG	Linear Algebra		Maths	3 (3-0)
30	3	MT2xx		Probability & Statistics		Maths	3 (3-0)
31	7	EW4xx	ECC	Technical & Business Writing		EW	3 (3-0)
Elective Supporting Courses (3/130) 1 Course							
32	7	SS1xx		Social Science (Example: Introduction to Marketing)		SS	3 (3-0)
		SS1xx		Social Science (Example: Financial Accounting)		SS	3 (3-0)
General Education Requirement as per HEC UG Education Policy (30/130) 12 Courses							
33	1	GE1xx		Application of Information & Communication Technologies		GER	3 (2-3)
34	1	GE1xx		Functional English		GER	3 (3-0)
35	2	GE1xx	ECC	Expository Writing		GER	3 (3-0)
36	1	GE1xx		Quantitative Reasoning – 1 (Discrete Structures)		GER	3 (3-0)
37	1	GE1xx		Quantitative Reasoning – 2 (Calculus and Analytic Geometry)		GER	3 (3-0)
38	4	GE2xx		Islamic Studies		GER	2 (2-0)
39	8	GE4xx		Ideology and Constitution of Pakistan		GER	2 (2-0)
40	4	GE2xx		Social Sciences (Example: Introduction to Management)		GER	2 (2-0)
41	4	GE2xx		Natural Sciences (Applied Physics)		GER	3 (2-3)
42	8	GE4xx		Arts & Humanities (Professional Practices)		GER	2 (2-0)
43	8	GE4xx		Civics and Community Engagement		GER	2 (2-0)
44	7	GE4xx		Entrepreneurship		GER	2 (2-0)

#	Code	Pre-Reqs	Course Title	Domain Cr	hr (Cont hr)
			Semester 1		
1	CS1xx		Programming Fundamentals	Core 1	4 (3-3)
2	GE1xx		Application of Information & Communication Technologies	GER 1	3 (2-3)
3	GE1xx		Functional English	GER 2	3 (3-0)
4	MT1xx		Probability & Statistics	Maths1	3 (3-0)
5	GE1xx		Islamic Studies	GER 3	2 (2-0)
6	GE1xx		Natural Science (Applied Physics)	GER 4	3 (2-3)
7	NC111		Pre-Calculus-I(Non Credit)	NC 1	3 (3-0)
				Total Cr Hrs	**18 (16-9)/21(19-9)**

			Semester 2		
1	CS1xx	Programming Fundamentals	Object Oriented Programming	Core 2	4 (3-3)
2	GE1xx		Social Science (Example: Urdu)	GER 5	3 (3-0)
3	CS1xx		Digital Logic Design	Core 3	3 (2-3)
4	GE1xx	Probability & Statistics	Discrete Structures	GER 6	3 (3-0)
5	GE1xx		Ideology and Constitution of Pakistan	GER 7	2 (2-0)
6	GE1xx	Functional English	Expository Writing	GER 8	3 (3-0)
7	NC112		Pre-Calculus-II(Non Credit)	NC 2	3 (3-0)
				Total Cr Hrs	**19 (17-6) 21(20-6)**
			Semester 3		
1	CS2xx	Object Oriented Programming	Data Structures	Core 4	4 (3-3)
2	CS2xx		Domain Elective (Example: Visual Programming)	Domain Elective 1	3 (2-3)
3	GE2xx		Calculus and Analytic Geometry	GER 9	3 (3-0)
4	CS2xx		Computer Organization & Assembly Language	Core 5	3 (2-3)
5	EN2xx	Expository Writing	Technical & Business Writing	EN	3 (3-0)
6	CS2xx		Database Systems	Core 6	4 (3-3)
				Total Cr Hrs	**19(16-9)**
			Semester 4		
1	CS2xx		Operating Systems	Core 7	3 (2-3)
2	CS2xx		Theory of Automata	Domain Core 1	3 (3-0)
3	MT2xx	(Calculus and Analytic Geometry)	Linear Algebra	Maths 2	3 (3-0)
4	CS2xx	Database Systems	Advanced Database Management Systems	Domain Core 2	3 (2-3)
5	CS2xx		Artificial Intelligence	Core 8	3 (2-3)
6	CS2xx	Object Oriented Programming	Web Programming	Domain Elective 2	3 (2-3)
				Total Cr Hrs	**18 (14-12)**
			Semester 5		
1	CS3xx		Computer Networks	Core 9	3 (2-3)
2	CS3xx		Software Engineering	Core 10	3 (3-0)
3	CS3xx		Information Security	Core 11	3 (2-3)
4	CS3xx	Computer Organization & Assembly Language	Computer Architecture	Domain Core 3	3 (2-3)
5	CS3xx		Mobile Application Development	Domain Elective 3	3 (2-3)
6	MT3xx		Multivariable Calculus	Maths 3	3 (3-0)
				Total Cr Hrs	**18 (13-12)**
			Semester 6		
1	CS3xx		Compiler Construction	Domain Core 4	3 (2-3)
2	CS3xx		Advanced Programming	Domain Elective 4	3 (2-3)

3	GE3xx		Civics and Community Engagement	GER 10	2 (2-0)
4	CS3xx	Computer Networks	Mobile Communication and Networks	Domain Elective 5	3 (2-3)
5	CS3xx		Analysis of Algorithms	Core 12	3 (3-0)
6	CS3xx		Advanced Software Engineering	Domain Elective 6	3 (2-3)
				Total Cr Hrs	**17 (13-12)**
			Semester 7		
1	CS4xx		HCI & Computer Graphics	Domain Core 5	3 (2-3)
2	CS4xx		Parallel & Distributed Computing	Domain Core 6	3 (2-3)
3	CS4xx		Game Development	Domain Elective 7	3 (2-3)
4	CS4xx		Final Year Project – I	Core 13	2 (0-6)
5	SS4xx		Introduction to Marketing	Elective Supporting Course	3 (3-0)
6	GE4xx		Entrepreneurship	GER 11	2 (2-0)
				Total Cr Hrs	**16 (11-15)**
			Semester 8		
1	CS4xx		Final Year Project – II	Core 14	4 (0-12)
2	GE4xx		Professional Practices	Arts & Humanities	2 (2-0)
				Total Cr Hrs	**6 (2-12)**
			Total Credit Hours		**131**

Proposed list of Elective Courses for BSCS 4 years (New courses may be included as needed)

Course Code	Course Title	Credit Hours
CSELXXX	Web Systems & Technologies	3(2-3)
CSELXXX	Mobile Application Development	3(2-3)
CSELXXX	Wireless and Mobile Computing	3(3-0)
CSELXXX	Game Development	3(2-3)
CSELXXX	Network Security	3(3-0)
CSELXXX	Cyber Security	3(3-0)
CSELXXX	Introduction to Data Science	3(3-0)
CSELXXX	Advanced Programming	3(2-3)

Proposed list of Non-Credit Courses

Course Code	Course Title	Credit Hours
NC111	Pre-Calculus -I	3(3-0)
NC112	Pre-Calculus -II	3(3-0)

Proposed Scheme of Study for ADP CS (2 year)

#	Code	Pre-Reqs	Course Title	Domain Cr	hr (Cont hr)
			Semester 1		
1	CS1xx		Programming Fundamentals	Core 1	4 (3-3)
2	GE1xx		Application of Information & Communication Technologies	GER 1	3 (2-3)
3	GE1xx		Functional English	GER 2	3 (3-0)
4	MT1xx		Probability & Statistics	Maths1	3 (3-0)
5	GE1xx		Islamic Studies	GER 3	2 (2-0)
6	GE1xx		Natural Science (Applied Physics)	GER 4	3 (2-3)
7	NC111		Pre-Calculus 1(Non Credit)	NC 1	3 (3-0)
				Total Cr Hrs	**18 (16-9)/21(19-9)**
			Semester 2		
1	CS1xx	Programming Fundamentals	Object Oriented Programming	Core 2	4 (3-3)
2	CS2xx		Database Systems	Core 3	4 (3-3)
3	CS1xx		Digital Logic Design	Core 4	3 (2-3)
4	CS2xx		Operating Systems	Core 5	3 (2-3)
5	GE1xx		Ideology and Constitution of Pakistan	GER 5	2 (2-0)
6	GE1xx	Functional English	Expository Writing	GER 6	3 (3-0)
7	NC112		Pre-Calculus (Non Credit)	NC 2	3 (3-0)
				Total Cr Hrs	**19 (15-9) 22(18-9)**
			Semester 3		
1	CS2xx	Object Oriented Programming	Data Structures	Core 6	3 (2-3)
2	CS2xx		Visual Programming	Domain Elective 1	3 (2-3)
3	GE2xx		Calculus and Analytic Geometry	GER 7	3 (3-0)
4	CS2xx		Computer Organization & Assembly Language	Core 7	3 (2-3)
5	EN2xx	Expository Writing	Technical & Business Writing	EN	3 (3-0)
6	CS3xx		Software Engineering	Core 8	3 (3-0)
				Total Cr Hrs	**18(15-9)**
			Semester 4		
1	CS3xx		Computer Networks	Core 9	3 (2-3)
2	CS2xx		Artificial Intelligence	Core 10	3 (2-3)
3	CS4xx		Final Year Project – I	Core 11	3(0-9)
4	CS2xx	Object Oriented Programming	Web Programming	Domain Elective 2	3 (2-3)

5	CS3xx		Mobile Application Development	Domain Elective 3	3 (2-3)
6			Urdu	Arts & Humanities	3(3-0)
				Total Cr Hrs	18 (11-12)
Total Credit Hours					74

Proposed list of Elective Courses for BSCS 4 years (New courses may be included as needed)

Course Code	Course Title	Credit Hours
CSELXXX	Web Systems & Technologies	3(2-3)
CSELXXX	Mobile Application Development	3(2-3)
CSELXXX	Wireless and Mobile Computing	3(3-0)
CSELXXX	Game Development	3(2-3)
CSELXXX	Network Security	3(3-0)
CSELXXX	Cyber Security	3(3-0)
CSELXXX	Introduction to Data Science	3(3-0)
CSELXXX	Advanced Programming	3(2-3)

BSCS Bridge Degree Program (2 Years)

Eligibility Criteria:

The applicant should have completed 2 years of ADP with a minimum GPA of 2.5 in any computing discipline under the domain of NCEAC, including Computer Science/ Software Engineering/Artificial Intelligence/ Data Science/Cyber Security/Bioinformatics/Information Systems/BS in Multimedia and Gaming/Information Technology/Computer Engineering/ BSc Computer Science (2 years).

Proposed Scheme of Study for BSCS Bridge Degree Programm (2 Years)

#	Code	Course Title	Domain Cr	hr (Cont hr)
		Semester 5		
1	CS1xx	Digital Logic Design	Core 1	4 (3-3)
2	CS3xx	Information Security	Core 2	3 (2-3)
3	GE1xx	Expository Writing	GER 1	3 (3-0)
4	CS3xx	Computer Architecture	Domain Core 1	3 (2-3)
5	CS2xx	HCI & Computer Graphics	Domain Elective 1	3 (2-3)

6	CS3xx	Advanced Programming	Domain Elective 2	3 (2-3)
			Total Cr Hrs	**19 (13-15)**
		Semester 6		
1	CS2xx	Theory of Automata	Domain Core 2	3 (3-0)
2	GE1xx	Discrete Structures	GER 2	3 (3-0)
3	CS3xx	Mobile Application Development	Domain Elective 3	3 (2-3)
4	GE3xx	Civics and Community Engagement	GER 2	2 (2-0)
5	CS4xx	Advanced Database Management Systems	Domain Core 3	3 (2-3)
6	CS3xx	Mobile Communication and Networks	Domain Elective 4	3 (2-3)
			Total Cr Hrs	**17 (13-9)**
		Semester 7		
1	CS2xx	Web Programming	Domain Core 4	3 (2-3)
2	CS3xx	Compiler Construction	Domain Core 5	3 (2-3)
3	CS3xx	Analysis of Algorithms	Core 3	3 (3-0)
4	CS4xx	Parallel & Distributed Computing	Domain Core 6	3 (2-3)
5	CS4xx	Game Development	Domain Elective 5	3 (2-3)
6	GE4xx	Entrepreneurship	GER 3	2 (2-0)
			Total Cr Hrs	**17 (11-12)**
		Semester 8		
1	SS4xx	Introduction to Marketing	Elective Supporting Course	3 (3-0)
2	MT3xx	Multivariable Calculus	Maths 3	3 (3-0)
3	GE1xx	Social Science (Example: Urdu)	GER 4	2 (2-0)
4	CS4xx	Final Year Project – II	Core 4	3 (0-9)
5	CS4xx	Cloud Computing	Domain Elective 6	3 (3-0)
6	GE4xx	Professional Practices	Arts & Humanities	2 (2-0)
			Total Cr Hrs	**13 (7-9)**
		Total Credit Hours		**66**

Proposed list of Elective Courses for BSCS Bridge Degree Program (New courses may be included as

Course Code	Course Title	Credit Hours
CSELXXX	**Web Systems & Technologies**	**3(2-3)**
CSELXXX	**Mobile Application Development**	**3(2-3)**
CSELXXX	**Wireless and Mobile Computing**	**3(3-0)**
CSELXXX	**Game Development**	**3(2-3)**
CSELXXX	**Network Security**	**3(3-0)**

CSELXXX	Cyber Security	3(3-0)
CSELXXX	Introduction to Data Science	3(3-0)
CSELXXX	Advanced Programming	3(2-3)

Proposed Curriculum for Master Degrees in Computing as per HEC Guidelines

Introduction

Computing is emerging as a very important and inevitable tool in modern daily life and businesses.

Master Degree Programs in Computing

Computer Science   (MS-CS)
Data Science   (MS-DS)
Information Security   (MS-IS)
Information Technology   (MS-IT)
Software Engineering   (MSSE)
Software Project Management   (MS-SPM)

Eligibility Criteria

The minimum requirements for admission in a Master's degree program are

a. A degree earned after sixteen years of education in computing or a related discipline, and
b. At least CGPA of 2.0 (on a scale of 4.0) or 60% Marks

Duration

The **minimum duration** for completing an MS degree is two years. The HEC allows a **maximum of four years** to complete the requirements.

Degree Completion Requirements

To become eligible for the award of an MS degree, a student must satisfy the

following requirements:

a) Must have studied and passed the **prescribed courses, totaling at least 30 credit hours**.

b) Must have earned a **CGPA** (Cumulative Grade Point Average) **of at least 2.5 on a scale of 4.0**.

MS Computer Science

Program Objectives:

The MS (Computer Science) includes both coursework and research. Four core courses strengthen students' understanding and competence in computer science fundamentals. The University expects its MS graduates to pursue careers as 'Computer Science Faculty Members' or 'Software Development Managers' in the industry.

Learning Outcomes:

1. Students will be able to possess advanced knowledge of the Computer Science field.
2. Students will be able to think creatively and critically; to solve non-trivial problems
3. Students will be able to use computing knowledge to develop efficient solutions for real-life problems
4. Students will be able to design solutions and can conduct research-related activities

Eligibility:

Degree in a relevant subject, earned from a recognized university after 16 years of education with at least 60% marks or CGPA of at least 2.0 (on a scale of 4.0).

The following core courses are recommended to be completed before entering the MS (CS) program.

1. Analysis of Algorithms
2. Assembly Lang. / Computer Architecture

3. Computer Networks
4. Computer Programming
5. Data Structures
6. Database Systems
7. Operating Systems
8. Software Engineering
9. Theory of Automata

A student selected for admission who is deficient in the above-stated courses may be required to study a maximum of FOUR courses, which must be passed in the first two semesters. The Graduate Studies Committee shall determine the deficiency courses before admitting the student.

A student cannot register in MS courses unless all specified deficiency courses have been passed. A student has the option to pursue MS by undertaking either a 6 credit-hour MS Thesis or a three-credit-hour taught course and a three-credit-hour MS Project.

Tentative Study Plan of MS (Computer Science)

Semester – I	
CS 502 Core Course — I	3
CS 503 Core Course — II	3
CS 504 Core Course — III	3
Total	9
Semester– II	
CS 506 Core Course — IV	3
CSE 501 Elective — I	3

CS507 Research Methodology	3
Total	9
Semester– III	
CSE 502 Elective– II	3
CSE 503 MS Thesis -I/ CSE 504 Elective– III	3
Total	6

Semester– IV	
CSE 505 Elective -IV	3
CSE 503 MS Thesis -II	3
Total	6

Registration in "MS Thesis - I" is allowed, provided the student has

   a. Earned at least 18 credits

   b. Passed the "Research Methodology" course; and

CGPA is equal to or more than 2.5.

Core Courses for MS (Computer Science)

At least four courses must be taken from the following

1. CS501 Advanced Analysis of Algorithms
2. CS505 Advanced Operating Systems
3. CS507 Theory of Programming Languages
4. CS534 Theory of Automata - II
5. CS535 Research Methodology
6. CS508 Advanced Computer Architecture

List of Electives (Can be extended as needed)

1. CSE 501
    Information Security
2. CSE 502 Internet of Things
3. CSE 503 Machine Learning
4. CSE 504Web Mining
5. CSE 505 Cloud
    Computing Security

Award of Degree

For the award of an MS degree, a student must have the following:

a. Passed courses totaling at least 30 credit hours, including four core courses.

b. Obtained a CGPA of 2.5 or more.

Ph.D. Program (Computer Science)

1. Objective

The main objective of this Ph.D. program is to empower candidates with the knowledge, training, and expertise at the highest level in the major areas of computer science. The program will facilitate the candidates to contribute to the existing knowledge by producing novel research work.

2. Admissions

2.1 Eligibility

a. According to the HEC proposed model program admission requirements of the program are as follows:

b. For admission into the Ph.D., a minimum CGPA of 3.0 (out of 4.0 in the Semester System) or First Division (in the Annual System) in M.Phil, M.S, or Equivalent is required.

c. Subject test conducted by the National Testing Service (NTS) or ETS, USA, in the area of specialization chosen at the Ph.D. level, must be cleared prior to admission to the Ph.D. Program.

d. In the case of the GAT Subject test, a minimum of 60% marks is required to pass the test.

e. In the case of the GRE subject test, the minimum 60% percentile score will be acceptable.

2.2 Procedure

A Departmental Research Committee (DRC) will interview candidates who fulfill the admission requirement. Candidates are required to submit a research proposal and defend it before DRC. The final decision on admissions rests with DRC. Selected candidates may be required to complete additional prerequisite courses.

3. Program Structure

This highest academic degree program is intended for candidates wishing to pursue a research-oriented career in either academia or industry. The fields of research will depend on the expertise of the faculty and the available resources.

The program is developed in accordance with the HEC guidelines. The program requires a candidate to complete 18 credit hours of coursework. Afterward, a comprehensive exam will be conducted to determine a Ph.D. candidacy. Then Ph.D. researcher will research to make a novel contribution to knowledge which will be assessed according the HEC guidelines.

3.1 Course Work

The coursework consists of core courses and elective courses in the specialized fields. Table 1 shows the scheme of the core courses and elective courses. This distribution ensures that all the

students in the program get strong foundation in the field of study through advance core courses and then acquire knowledge & expertise in their chosen specialized area through elective courses.

Table 1 Scheme of Ph.D. course work

Category or Area	Number of Courses	Credit Hours
Core	2	6
Electives	4	12
Total Credit Hours		**18**

The coursework is constructed according to the HEC proposed Ph.D. (CS) model program. Proposed programs course work will be offered in two semesters, i.e., one year of study.

Table 2 represents the coursework distributions.

Table 3 presents the list of offered elective courses in proposed specialized areas of research.

Table 2 Courses work distribution

Course Code	Course Title	Credits	Semester
CSC-601	Research Methodology I	3	I
CSC-602	Research Methodology II	3	II
CSE-6XX	Elective I	3	I
CSE-6XX	Elective II	3	I
CSE-6XX	Elective III	3	II
CSE-6XX	Elective IV	3	II

Table 3 List of proposed elective courses

Course Code	Course Title	Credits
CSE-603	Advanced Emerging Wireless Networks	3+0
CSE-604	Advanced Wireless Network Security	3+0
CSE-605	Advanced Wireless Sensor Networks	3+0
CSE-606	Advanced Ubiquitous and Pervasive Computing	3+0
CSE-607	Advanced Routing & QoS Protocols	3+0
CSE-608	Next Generation Networks	3+0
CSE-609	Advanced Enterprise Architecture	3+0
CSE-610	Advanced Knowledge Management	3+0
CSE-611	Advanced Mobile Computer System	3+0
CSE-612	Advanced Information Systems	3+0

CSE-613	Advanced Ubiquitous Information Interaction	3+0
CSE-614	Advanced Modeling of Web Information	3+0
CSE-615	Advanced Design of Usability	3+0
CSE-616	Advanced Signal Processing	3+0
CSE-617	Advanced Image Processing and Vision	3+0
CSE-618	Advanced Machine learning & data mining	3+0
CSE-619	Advanced Neural Network	3+0
CSE-620	Advanced Simulation and Modeling	3+0
CSE-621	Advanced Big Data Analytics	3+0
CSE-622	Advanced Text Minin g	3+0
CSE-623	Advanced Distributed Computing	3+0
CSE-624	Advanced Image Processing for Recognition	3+0
CSE-625	Data Science Techniques using Time Series forecasting	3+0

3.2 Ph.D. candidacy examination

After completing the coursework, the candidate is required to submit a comprehensive synopsis to the DRC. The committee will conduct the oral synopsis defense in which the candidate has to defend his synopsis by giving a short presentation followed by a viva. The DRC will decide whether the synopsis justifies a potential to acquire a Ph.D. or if it needs improvement. In the latter case, the student has an opportunity to re-submit a revised synopsis within three months to DRC for evaluation. In case the synopsis still does not hold ground for research toward Ph.D., the student enrollment will be cancelled.

3.3 Research Work

During the research period, the student will submit a progress report bi-annually for evaluation to the DRC. After evaluation, the DRC will forward the report to the university's graduate research management council (GRMC).

In case of a weak progress report, the student must improve according to the supervisors' recommendations. If a student's performance is consistently poor, the case will be forwarded to the DRC for necessary action, which may result in the cancelation of the enrolment.

4. Evaluation of the Ph.D. Thesis

The student is required to submit at least four copies of the dissertation to the DRC for evaluation. The DRC will ensure the HEC requirements for the thesis submission have been met.

Research Paper:

Acceptance/publication of at least one research paper in HEC approved "X" category journal is a required.

Plagiarism Test:

The DRC member will check the Plagiarism test of the dissertation before its submission to the two foreign experts. In case of a high similarity score, the thesis is referred back to the student and supervisor for correction. Persistent plagiarism could result in a cancellation of the enrollment.

The thesis evaluation will be performed according to the HEC as follows:

Foreign Expert Evaluation:

The Ph.D. The dissertation must be evaluated by at least two Ph.D. experts from technologically/academically advanced foreign countries.

Local Expert Evaluation:

After obtaining a positive report from the foreign evaluators the dissertation is required to be evaluated by at least two local experts in the relevant field.

Open defense and Viva:

After obtaining positive reports from the foreign and local experts, the student will be required to give an open presentation followed by a closed oral defense. The examiners could recommend the following:

· Award of a Ph.D.

· Award of a Ph.D. after minor corrections

· Award of a Ph.D. after major corrections

· Award of a Ph.D. after major corrections and reexamination.

· Award of an M.Phil.

DEPARTMENT OF BUSINESS ADMINISTRATION

DEPARTMENT OF BUSINESS ADMINISTRATION

VISION

FUUAST aspires to become a comprehensive business department achieving excellence through research, academics, leadership, and ethics; to prepare our students for national and international roles as business graduates.

MISSION

We aspire to provide our students with unmatched, holistic business education through teaching and research to create entrepreneurs, leaders, job creators, and future learners.

MESSAGE FROM THE HEAD OF DEPARTMENT

At the Department of Business Administration, we aim to nurture excellence and provide you with an exceptional learning experience that will encourage you to become an independent thinker ready to pursue your chosen career path. Our success is evident from our high points, such as our professional, foreign-qualified, highly experienced faculty, diverse degree programs, research achievements, and alums working in highly esteemed organizations nationwide and worldwide. I take pride in welcoming my students to the department where they will always have my facilitation and will find me standing with them at every step during and after university tenure.

INTRODUCTION OF DEPARTMENT

Department of Business Administration is one of the largest departments of FUUAST, with an enrollment of approximately 600 students. Over the years, the department has launched and offered innovative and industry-oriented programs. The employability of its students is a testament to the above-par performance of the department. The flexibility of its programs allows students to tailor their studies according to their career needs and preferences. The department is currently enrolling students in the following programs: Bachelor in Science in Business Administration (BSBA) 4-year program, associate degree program (ADBA) - 2-year program, Masters of Business Administration (MBA), Masters of Science in Business Administration (MS) and Doctor of Philosophy in Business Administration (Ph.D.).

Board of Study for Bachelor of Science in Business Administration BS (BA) And ADP program.

Semester 1	BBA	
Course Code	Course Title	Course Credits
GEN-113	Application of Information and Communication Technologies	3(2,1)
GEN-112	Functional English	3
IRM- 123	Globalization & International Relations	3
MGT-410	International Business	3
GEN-118	Introduction to Psychology	2
UR111	Islamic Studies / Ethics	2
Semester 2		
Course Code	Course Title	Course Credits
GEN-206	Business Mathematics	3
GEN-124	Civics and Community Engagement	2
GEN-122	Expository Writing	3
ACT-413	Financial Accounting	3
GEN-121	Ideology and Constitution of Pakistan	3
MGT-414	Principles of Management	3
Semester 3		
Course Code	Course Title	Course Credits
GEN-232	Arts & Humanities _Urdu	3
IT-543	Information System Analysis	3
GEN-231	Statistics	3
ACT-451	Cost & Managerial Accounting	3
FIN-432	Introduction to Business Finance	3
MKT-433	Principles of Marketing	3
Semester 4		
Course Code	Course Title	Course Credits
PM-473	Project Management	3
GEN-246	Every Day Science	(2 + 1) 3

FIN-462	Financial Management	3
HRM-441	Human Resource Management	3
GEN-241	Entrepreneurship	2
MKT-446	Marketing Management	3

Semester 5

Course Code	Course Title	Course Credits
ECO-334	Business Economics	3
MGT-471	Strategic Management	3
IRM-485	Introduction to International Development	3
MGT-463	Small & Medium Enterprises Management	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3

Semester 6

Course Code	Course Title	Course Credits
MGT-466	Production & Operation Management	3
MGT-454	Business Research Methods	3
MGT-453	Organizational Behavior	3
MGT-412	Introduction to Business	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3

Semester 7

Course Code	Course Title	Course Credits
MGT-483	Leadership & Teamwork	3
ACT-465	Auditing	3
ACT-444	Business Taxation	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3

Semester 8

Course Code	Course Title	Course Credits
PROJ-811	Capstone Project	3
MGT-390	Internship	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3
Specialization	Fin/MKT/HRM/IT/PM/MGT	3

List of Core Courses

Course Code	Course Title	Course Credits
MGT-410	International Business	3
MKT-412	Introduction to Business	3

ACT-413	Financial Accounting	3
MGT-414	Principles of Management	3
FIN-432	Introduction to Business Finance	3
HRM-441	Human Resource Management	3
MKT-433	Principles of Marketing	3
PM-473	Project Management	3
MGT-454	Business Research Methods	3
MKT-446	Marketing Management	3
ACT-444	Business Taxation	3
ACT-451	Cost & Managerial Accounting	3
MGT-471	Strategic Management	3
MGT-463	Small & Medium Enterprise Management	3
MGT-466	Production & Operation Management	3
MGT-453	Organizational Behavior	3
MGT-483	Leadership & Teamwork	3
ACT-465	Auditing	3
FIN-462	Financial Management	3

List of General Education Courses

Course Code	Course Title	Course Credits
GEN-112	Functional English	3
GEN-118	Introduction to Psychology	2
GEN-111	Islamic Studies/Ethics	2
GEN-113	Application of Information and Communication	3(2,1)
GEN-124	Civics and Community Engagement	3
GEN-206	Business Mathematics	3
GEN-122	Expository Writing	3
GEN-121	Ideology and Constitution of Pakistan	3
GEN-232	Arts & Humanities Urdu	3
GEN-231	Statistics	3
GEN-246	Everyday Sciences	(2+1)
GEN-241	Entrepreneurship	2

List of General Major Courses (Specialization Courses)

The specialization will be offered in following domains.

1. Marketing
2. Human Resources Management
3. Finance
4. Project Management
5. Information Technology

MARKETING

Course Code	Course Title	Course Credits
MKT-401	Strategic Brand Management	3
MKT-402	Advertising	3
MKT-403	Consumer Behavior	3
MKT-404	Marketing Research & Analysis	3
DMKT-405	Customer Relationship Management in Digital Age	3
MKT-406	Services Marketing	3
RMKT-407	Retail & Sales Management	3
MKT-408	International Marketing	3
DMKT-409	Social Commerce	3
DMKT-410	Digital Content Marketing	3
RMKT-411	Real Estate Marketing	3
MKT-412	Sales Promotion & Event Marketing	3
DMKT-413	Digital Marketing in Hospitality & Tourism	3
DMKT-414	Digital Marketing Analytics	3
DMKT-415	Digital Marketing Management	3
DMKT-416	Special Question in Digital Marketing	3

HUMAN RESOURCE MANAGEMENT

Course Code	Course Title	Course Credits
HRM-450	Recruitment and Selection	3
HRM-451	Training and development	3
HRM-452	Human Resource Development	3
HRM-453	Performance Management	3
HRM-454	Compensation and Reward Management	3
HRM-456	HR Analytics	3
HRM-457	Workforce Diversity Management	3
HRM-458	Employer Branding	3
HRM-459	Digital Human Resource	3

HRM-460	Talent Management	3
HRM-461	Labor Relationship Management	3
HRM-462	Conflict and Negotiation	3
HRM-463	Organizational Development Management	3
HRM-464	Advance Topics in Compensation Management	3
HRM-465	Employee Well-Being and Management Health in The Workplace	3

FINANCE

Course Code	Course Title	Course Credits
FIN-451	Corporate Finance	3
FIN-452	Financial Risk Management	3
FIN-453	Financial Statements Analysis	3
FIN-461	Security Analysis and Portfolio Management	3
FIN-462	International Finance	3
FIN-463	Behavioral Finance	3
FIN-471	Islamic Banking and Finance	3
FIN-472	Micro Finance and SMEs	3
FIN-473	Financial Institutions and Markets	3
FIN-474	Corporate Governance	3
FIN-475	Financial Derivative: Theory and Practice	3
FIN-476	Financial Econometrics	3
FIN-477	Digital Finance	3
FIN-478	Entrepreneurial Finance	3
FIN-479	Financial Market Regulation	3
FIN-481	Public Finance and Policy	3
FIN-482	Accounting and Finance Analytics	3
FIN-483	Corporate Restructuring	3
FIN-484	Financial Modeling	3
FIN-485	Investment Alternatives	3
FIN-486	Fintech And Block chain Technology	3
FIN-487	Forensic accounting and Audit	3
FIN-488	Financial Engineering	
FIN-489	Corporate Regulations and Ethics in Finance	3

INFORMATION TECHNOLOGY

Course Code	Course Title	Course Credits
IT-401	Fundamental of Programming	3
IT-402	Database System	3
IT-403	Managing Business Data for Analytics	3
IT-404	Digital Transformation in Business Organization	3
IT-405	Decision Support System	3
IT-406	Advance Topics in Management Information System	3
IT-407	Business Software Application	3
IT-408	System Analysis and Design	3
IT-409	Data Mining & Decision Support System	3
IT-410	Data Communication	3
IT-411	Intelligence Computing & Artificial Intelligence	3
IT-412	Network Management	3
IT-413	System security	3
IT-414	Telecom Technology	3

PROJECT MANAGEMENT

Course Code	Course Title	Course Credits
PM-401	Project Management Process Model	3
PM-402	HR for Project Management	3
PM-403	Software Project Management	3
PM-404	Project Cost and Schedule Control	3
PM-405	Project Risk and Portfolio Management	3
PM-406	Advance Topics in Project Management	3
PM-407	Advance Project Management	3
PM-408	Advance Project Management Information System	3
PM-409	Contract and Procurement Management	3
PM-410	Project Communication and Stakeholder Management	3
PM-411	Scope and Integration Management	3
PM-412	Managing Megaprojects Management	3
PM-413	Global Supply Chain Management in projects	
PM-414	Logistical Projects in ERP	
PM-415	Project Governance framework and Quality Management	

LIST OF MINOR COURSES (SPECIALIZATION COURSES) FINANCE

Course Code	Course Title	Course Credits
FIN-451	Corporate Finance	3
FIN-452	Financial Risk Management	3
FIN-453	Financial Statements Analysis	3
FIN-461	Security Analysis and Portfolio Management	3
FIN-462	International Finance	3
FIN-463	Behavioral Finance	3

INFORMATION TECHNOLOGY

Course Code	Course Title	Course Credits
IT-401	Fundamental of Programming	3
IT-402	Database System	3
IT-403	Managing Business Data for Analytics	3
IT-404	Digital Transformation in Business Organization	3
IT-405	Decision Support System	3
IT-406	Advance Topics in Management Information System	3

PROJECT MANAGEMENT

Course Code	Course Title	Course Credits
PM-401	Project Management Process Model	3
PM-402	HR for Project Management	3
PM-403	Software Project Management	3
PM-404	Project Cost and Schedule Control	3
PM-405	Project Risk and Portfolio Management	3
PM-406	Advance Topics in Project Management	3

MARKETING

Course Code	Course Title	Course Credits
MKT-401	Strategic Brand Management	3
MKT-402	Advertising	3
MKT-403	Consumer Behavior	3
MKT-404	Marketing Research and Analysis	3

DMKT-405	Customer Relationship Management in Digital Age	3
MKT-406	Services Marketing	3

HUMAN RESOURCE MANAGEMENT

Course Code	Course Title	Course Credits
HRM-450	Recruitment and Selection	3
HRM-451	Training and development	3
HRM-452	Human Resource Development	3
HRM-453	Performance Management	3
HRM-454	Compensation and Reward Management	3
HRM-456	HR Analytics	3

List of Interdisciplinary Courses

Course Code	Course Title	Course Credits
IT-543	Information System Analysis	3
Eco-334	Business Economics	3
IRM-123	Globalization & Informational Relations	3
IRM-485	Introduction to International Development	3

Course Descriptions of Core Courses

1. Fundamental of Accounting

In this course, students will learn the basics of accounting. Students will learn all about financial accounting, managerial accounting, and income taxes. They will review balance sheets, income statements, cash flow statements, etc. This course delivers examples to build accounting skills.

2. Functional English

Functional English is the usage of the English language required to perform functions like academic study or career progression. Functional English provides the essential knowledge, skills, and understanding that will enable the user to operate confidently, effectively, and independently in life and at work.

3. Introduction to Business

This course is designed to equip students with the basic concepts of business. The course intends to help students understand business language and the general understanding of a business and its role in society and the economy.

8.1 Semester -1   MBA

Serial No.	Course Code	Course Title	Credit Hours (Format)	Pre-requisite (if any Course Code)
1	ACT 511	Accounting in Decision Making	3(3,0)	
2	FIN 512	Financial Management	3(3,0)	
3	MKT 513	Principals of Marketing	3(3,0)	
4	MGT 514	Business Communication	3(3,0)	
5	MGT 515	Business Research Methods	3(3,0)	
6	MGT 516	Management Fundamentals and Practices	3(3,0)	

8.2 Semester -ii

Serial No.	Course Code	Course Title	Credit Hours (Format)	Pre-requisite (if any Course Code)
1	ACT512	Cost and Managerial Accounting	3(3,0)	
2	FIN522	Financial Markets and Institutes	3(3,0)	
3	MKT523	Intro to Markets Strategies	3(3,0)	
4	MGT524	Advance Managerial Economics	3(3,0)	
5	MGT525	Business research Development and investigation	3(3,0)	
6	MGT526	Organizational Behavior and Leadership	3(3,0)	

8.3 Semester -iii

Serial No.	Course Code	Course Title	Credit Hours (Format)	Pre-requisite (if any Course Code)
1	PM631	Fundamentals of Project Management	3(3,0)	
2	-	Specialization 1*	3(3,0)	
3	-	Specialization 2*	3(3,0)	
4	-	Specialization 3*	3(3,0)	

| 5 | - | Specialization 4* | 3(3,0) | |
| 6 | - | Thesis/Course | 3(3,0) | |

Courses will be offered from the list of specialization courses offered by the university.

8.4 Semester -IV   MBA

Serial No.	Course Code	Course Title	Credit Hours (Format)	Pre-requisite (if any Course Code)
1	IT 641	Management Information System	3(3,0)	
2	-	Specialization 5*	3(3,0)	
3	-	Specialization 6*	3(3,0)	
4	-	Thesis/Course	3(3,0)	

* Course will be offered from the list of specialization courses the University offers.

8.5 Exemption to be granted (30-36 CH or 10-12 Courses)

As per NCRC guidelines, a maximum of 36 Cr. Hrs. can be exempted to students with relevant business degrees (such as BBA, BAF, BS Management Sciences, B. Com (Hons), and BBIT (Hons). Hence, it is proposed that followed courses may be exempted.

6.3 List of Specialization Courses

Serial No.	Course Code	Course Title	Credit Hours (Format)	Pre-requisite (if any Course Code)
6.3.1 Finance				
1	FIN 601	SAPM	3(3,0)	
2	FIN 602	Corporate Finance	3(3,0)	
3	FIN 603	Analysis of Financial Statement	3(3,0)	
4	FIN 604	International Finance	3(3,0)	
5	FIN 605	Financial Risk Management	3(3,0)	
6	FIN 606	Business Finance	3(3,0)	
7	FIN 607	Financial Econometrics	3(3,0)	
8	FIN 608	Applied Portfolio and Funds Management	3(3,0)	
9	FIN 609	Islamic Banking and Finance	3(3,0)	

10	FIN610	Business Taxation Policy and practice	3(3,0)	
11	FIN 611	Financial Derivatives	3(3,0)	
12	FIN 612	Entrepreneurial and Small Business Finance	3(3,0)	
13	FIN 613	Real Estate and Financial Management	3(3,0)	

6.3.2 Marketing				
14	MKT 601	Strategic Brand Management	3(3,0)	
15	MKT 602	Advertising	3(3,0)	
16	MKT 603	Consumer Behavior	3(3,0)	
17	MKT 604	Digital and Social Media Marketing	3(3,0)	
18	MKT605	Market research and Analysis	3(3,0)	
19	MKT606	Global Marketing	3(3,0)	
20	MKT607	Customer Relationship Management	3(3,0)	
21	MKT608	Personal Sales	3(3,0)	
22	MKT609	Services Marketing	3(3,0)	
23	MKT610	Social, Non Profit and Public Sector Marketing	3(3,0)	
24	MKT611	Business to Business Marketing	3(3,0)	
25	MKT612	Event Management and Marketing	3(3,0)	
26	MKT613	Tourism and Hospitality Marketing	3(3,0)	
27	MKT614	Retail Marketing	3(3,0)	
28	MKT615	Marketing Information System	3(3,0)	
29	MKT616	Marketing Management of Online Platforms	3(3,0)	

6.3.3 Human Resource Management

30	HRM601	Training and Development		

31	HRM602	Labour Relationship Management	3(3,0)	
32	HRM603	Recruitment and Selection	3(3,0)	
33	HRM604	Performance Management	3(3,0)	
34	HRM605	Strategic Human Resource Development	3(3,0)	
35	HRM606	Compensation and Reward Management	3(3,0)	
36	HRM607	Organizational Development	3(3,0)	
37	HRM608	Workforce Diversity Management	3(3,0)	
38	HRM609	Advance Topics in Compensation Management	3(3,0)	
39	HRM610	Conflict and Negotiation	3(3,0)	
40	HRM611	Talent Management	3(3,0)	
41	HRM612	Art of Leadership and Motivation	3(3,0)	
42	HRM613	HRM in Global Business Management	3(3,0)	
43	HRM614	Marketing Employee Relation	3(3,0)	
44	HRM615	HR Information System Analysis	3(3,0)	

6.3.4 Project Management

45	PM601	Software Project Management	3(3,0)	
46	PM602	Project Cost and Schedule Control	3(3,0)	
47	PM603	Project Risk and Project Portfolio Management	3(3,0)	
48	PM604	HR for Project Management	3(3,0)	
49	PM605	Advance Project Management	3(3,0)	
50	PM606	Contract and Procurement Management	3(3,0)	
51	PM607	Project Management Process Model	3(3,0)	
52	PM608	Project Preparation and Formation Self Content Analysis	3(3,0)	
53	PM609	Govt.Projects (PCI-PC5)	3(3,0)	

54	PM610	Project Communication and Stakeholder Management	3(3,0)	
55	PM611	Project Management Constraints	3(3,0)	
56	PM612	Scope and Integration Management	3(3,0)	
57	PM613	Seminars in Project Management	3(3,0)	

6.3.5 Banking and Finance

58	BF601	Money and Banking	3(3,0)	
59	BF602	Banking Law and Practice	3(3,0)	
60	BF603	Tax Management	3(3,0)	
61	BF604	Consumer Banking	3(3,0)	
62	BF605	Islamic Mode of Financing	3(3,0)	
63	BF606	Credit and Risk Management	3(3,0)	
64	BF607	Investment and Portfolio Management	3(3,0)	
65	BF608	Analysis of Financial Statements	3(3,0)	
66	BF609	Business Finance	3(3,0)	
67	BF610	Corporate Finance	3(3,0)	
68	BF611	Management of Financial Institution	3(3,0)	

6.3.6 General Management

69	MGT 474	International Management	3(3,0)	
70	MGT475	Team Work and Group Functioning	3(3,0)	
71	MGT476	Change Management	3(3,0)	
72	MGT 477	Knowledge Management	3(3,0)	
73	MGT 478	Operation Management	3(3,0)	
74	MGT 479	Supply Chain Management	3(3,0)	
75	MGT480	Comparative Management Style	3(3,0)	
76	MGT481	Quality Management	3(3,0)	

MS (BUSINESS ADMINISTRATION)

Semester-1

S.No.	Course Code	Course Title	Credit Hours
1	MGT 761	Research Design and Investigation	3
2	MGT 762	Advance Research Methods in Management Science	3
3	MGT 763	Critical Literature Review	3
4	MGT 764	Qualitative Methods In Management	3
Total			12

Semester-2

S.No.	Course Code	Course Title	Credit Hours
5	QNT 771	Business Statistical Analysis: An Introduction	3
6	MGT765	Seminar in Contemporary Writing	3
7	Elective Course	Elective -I	3
8	Elective Course	Elective- II	3
Total Course Work		2 semester (Core & Optional Courses)	24
Thesis		3rd Semester	6
Total Program		3 semester	30

MS Students can choose elective courses based on their respective specialization from among the list of elective courses given below:

16. TENTATIVE LIST OF ELECTIVE COURSES

16.1 Finance:

1. FIN-701 Seminar in Empirical Finance/Advanced case studies in Finance/Independent study.

2. FIN-702 Time Series Analysis for Finance /Theory of Finance /Independent study
3. FIN-703 Advanced Investment Analysis/Case Studies in International Finance /
Independent Study.
4. FIN-704 Financial Econometrics
5. FIN-705 Forecasting Techniques in Financial Markets
6. FIN-706 Derivatives and Risk Management

16.2 HRM/OB:

1. HRM-801 Advanced Topics in Organizational Behavior
2. HRM-802 Special Topics in organizational Behavior/Human Resource Management
3. HRM-803 Human Resource Development
4. HRM-804 Leadership and Motivation Theory
5. HRM-805 Advance Topics in Organization Theory & Design
6. HRM-806 Staffing Organizations
7. HRM-807 Organizational Change and Development
8. HRM-808 Reward Systems, Theory and practice
9. HRM-809 Diversity Management
10. HRM-International Human Resource Management

16.3 Marketing

1. MKT-901 Building Models for Marketing Research
2. MKT-902 Consumer Behavior Research
3. MKT-903 Applied Marketing Analytics
4. MKT-903 Integrated Marketing and Communications
5. MKT-904 International Marketing
6. MKT-905 International Advertising

17. RULES AND REGULATIONS

Candidates will need to secure a B+ grade on average before proceeding to start work on their research thesis. Candidates who can improve their aggregate GPA by registering for a single additional course can be allowed to do so before proceeding to work on their thesis.

Ph.D. (Business Administration)
Semester -1

S.No.	Course Code	Course Title
1	DP-901	Research Design and Investigation
2	DP-902	Data Analysis and Empirical Investigation
3	DP-903	Seminar in Academic Writing

Semester -2

S.No.	Course Code	Course Title
4	Elective Course	Elective I
5	Elective Course	Elective II
6	Elective Course	Elective III
**Thesis	3rd - 6th Semesters (4 Semesters)	

Elective Courses List

Finance

Course Code	Course Title
DPF-905	Seminar in Empirical Finance / Advanced case Studies in Finance /Independent Study.
DPF-906	Time Series Analysis for Finance /Theory of Finance /Independent Study
DPF-907	Advanced Investment Analysis/ Case studies in International Finance/Independent Study.
DPF-908	Financial Econometrics
DPF-909	Forecasting Techniques in Finance Markets
DPF-910	Derivatives and Risk Management
HRM/OB	
DPHR-911	Advanced Topics in Organization Behavior
DPHR-912	Special Topics in Organizational Behavior/Human Resource Management
DPHR-913	Human Resource Development
DPHR-914	Advanced Topics in Organization Theory & Design
DPHR-915	Staffing Organizations
DPHR-916	Organizational Change and Development
DPHR-917	Reward Systems, Theory and Practice
DPHR-918	Diversity Management
DPHR-919	Leadership and Motivation Theory
Marketing	
DPM-920	Building Model for Marketing
DPM-921	Consumer Behavior Research
DPM-922	Applied Marketing Analysis
DPM-923	Integrated Marketing and Communications
DPM-924	International Marketing
DPM-925	International Advertising

DEPARTMENT OF COMMERCE

Department of Commerce

Introduction

The Department of Commerce was established in 2012 at the Islamabad Campus to cater to the needs of a wide range of candidates interested in commerce. Since its launch, the department has grown rapidly. Over 3000 students have passed out, attaining B. Com, BS Commerce, and M.Com degrees. In total, thirteen full-time faculty members with different areas of specialization are rendering their services. We also have highly professional and experienced visiting faculty with Ph.D. and MS degrees from reputed universities. For our students, we regularly conduct seminars, field trips, and workshops to help them find the best place in the job market. Currently, we are offering the following programs in our commerce department.

I.   BS Commerce 4 Year (Morning & Evening) Eight (8) Semesters (4 Years)

II.   ADP in Commerce   (Morning & Evening) Four (4) Semesters (2 Years)

III.   BS. Commerce 3rd Year Mid Induction(Morning & Evening) Four (4) Semesters (2 Years)

Vision

To become the center of excellence, the commerce department fosters innovation and produces highly skilled graduates capable of addressing global business challenges and contributing to sustainable economic growth.

Mission

In alignment with the Federal Urdu University of Arts, Science, and Technology Islamabad's vision, the Commerce Department is committed to:

1. Providing a dynamic and inclusive learning environment equips students with the knowledge, skills, and ethical grounding.
2. Encouraging research and innovation to address contemporary business challenges and contribute to advancing the field.
3. Developing socially responsible graduates who can drive positive change and economic development in Pakistan and beyond.
4. Collaborating with industry partners to ensure the relevance and practical application of our curriculum, thereby enhancing our students' employability and entrepreneurial capabilities.

Bachelor of Science in Commerce

The BS (Commerce) at Federal Urdu University of Arts, Science and Technology, Islamabad, is designed to develop broad managerial and accounting competence in graduates to enable them to deal with diversified business situations in an appropriate way. Our focus is the development of the individual through the concentration on basic disciplines and skills as well as specific subject areas as:

1. Accounting
2. Finance
3. Management
4. Marketing
5. Banking

Scheme of Studies for BS. Commerce 4 years (Morning, Evening) Program

Courses Offered in 1st Year

SEMESTER I		
Course Code	**Course Title**	**Credit Hours**
IB 311	Introduction to Business	3
GEN-112	Functional English	3
PA 321	Principles of Accounting-1	3
GEN-118	Introduction to Psychology	2
GEN-111	Islamic Studies/Ethics	2
GEN-113	Application of Information & Communication Technology (ICT)	3

SEMESTER II		
Course Code	**Course Title**	**Credit Hour**
IMB 322	Introduction to Money & Banking	3
GEN-121	Ideology & Constitution of Pakistan	2
GEN-122	Expository Writing	3
GEN 123	Mathematics	3
PA 332	Principles of Accounting-II	3
GEN 124	Civics and Community Engagement	2

Courses Offered in 2nd Year

SEMESTER III		
Course Code	**Course Title**	**Credit Hours**
QTRM 311	Quantitative Techniques in Research	3
PA 431	Principles of Auditing	3
PM 451	Principles of Management	3
GEN 232	Urdu	2
GEN 231	Statistics	3
PE 321	Principles of Economics	3

SEMESTER IV		
Course Code	**Course Title**	**Credit Hours**
PM 452	Principles of Marketing	3
CA 453	Cost Accounting	3
BT 442	Business Taxation	3
PHRM 432	Principles of HRM	3
GEN-245	Introduction to Ecology	3
GEN-241	Entrepreneurship	2

Courses Offered in 3rd Year

SEMESTER V		
Course Code	**Course Title**	**Credit Hours**
DE 422	Development Economics	3
SM 531	Strategic Marketing	3
BIL 421	Business & Industrial Law	3
BM 541	Business Mathematics II	3
FA 551	Financial Accounting	3
FM 632	Financial Management	3

SEMESTER VI		
Course Code	**Course Title**	**Credit Hours**
MA 631	Advanced Management	3
MIS 612	Management Information System	3
OB 532	Organizational Behavior	3
AA 441	Advance Accounting	3
TQM 651	Total Quality Management	3
BRM 512	Business Research Method	3

Courses Offered in 4th Year

SEMESTER VII		
Course Code	**Course Title**	**Credit Hours**
SM 622	Strategic Management	3
FIN 671	Managerial Accounting	3
IB 621	International Business	3
OD 661	Organizational Development	3
	Elective I	3
	Elective II	3

SEMESTER VIII		
Course Code	**Course Title**	**Credit Hours**
GM 811	Global Marketing	3
HTP 812	HRM Theory & Practices	3
INT 833	Internship	3
CP 834	Capstone Project	3
	Elective I	3
	Elective II	3

List of Courses for BS Com 7th Semester (Specialization)

I. Accounting	
Acc 651	Taxation
Acc 661	Governmental Accounting
Acc 671	Computerized Accounting
Acc 681	Accounting Function in Business
II. Finance	
Fin 670	Corporate Finance
Fin 672	Financial Statement Analysis
Fin 671	Working Capital Management
Fin 681	Investments
III. Management	
Mgt 651	International Business Management
Mgt 662	Change Management
Mgt 671	Regulation and Control Legal Environment of Business
Mgt 681	Production Management
IV. Marketing	
Mkt 651	Marketing Management
Mkt 661	Industrial Marketing

Mkt 671	Marketing Research
Mkt 681	Brand Management

V. Banking	
Bnk 651	Islamic Banking
Bnk 661	Islamic Mode of Finance
Bnk 671	E-Banking
Bnk 681	Seminar on Current Banking Issues

List of Courses for BS Com 8th Semester (Specialization)

I. Accounting	
Acc 652	Specialized Accounting
Acc 662	Accounting System
Acc 672	corporate Law/Advance Accounting
Acc 682	Advance Auditing (Application)
II. Finance	
Fin 652	Financial Institutions
Fin 653	International Finance
Fin 654	Security Analysis &Portfolio Management
Fin 682	Financial Management Decision Marking
III. Management	
Mgt 652	Quantitative Techniques in Management
Mgt 662	Strategic Human Resource Management
Mgt 673	Supply Chain Management
Mgt 683	International Management

IV. Marketing	
Mkt 652	Advertising and Promotion
Mkt 662	Global Marketing
Mkt 672	International Marketing Seminar
Mkt 682	Marketing Policy
V. Banking	
Bnk 652	Regulation for Financial Intuitions
Bnk 662	Marketing of Financial Services
Bnk 672	Bank Risk Management
Bnk 682	Credit Management in Bank

Note:
- If there are fewer than 10 (ten) students in any Specialization class, the department will not offer that particular Specialization Course.
- The Department will not offer dual Specialization.

ADP Commerce 2-Years

Associate Diploma Program (ADP) in Commerce

The ADP (Commerce) at Federal Urdu University of Arts, Science and Technology, Islamabad is designed to develop broad managerial and accounting competence in graduates, enabling them to deal appropriately with diversified business situations. Our focus is on the development of the individual through the concentration on basic disciplines and skills.

Scheme of Studies for ADP. Commerce

SEMESTER I		
Course Code	**Course Title**	**Credit Hours**
IB 311	Introduction to Business	3
GEN-112	Functional English	3
PA 321	Principles of Accounting-1	3

GEN-118	Introduction to Psychology	2
GEN-111	Islamic Studies/Ethics	2
GEN-113	Application of Information & Communication Technology (ICT)	3

SEMESTER II		
Course Code	**Course Title**	**Credit Hour**
IMB 322	Introduction to Money & Banking	3
GEN-121	Ideology & Constitution of Pakistan	2
GEN-122	Expository Writing	3
GEN 123	Mathematics	3
PA 332	Principles of Accounting-II	3
GEN 124	Civics and Community Engagement	2

Courses Offered in 2nd Year

SEMESTER III		
Course Code	**Course Title**	**Credit Hours**
EC 421	E-Commerce Data Sciences	3
PA 431	Principles of Auditing	3
PM 451	Principles of Management	3
GEN 232	Urdu	2
GEN 231	Statistics	3
PE 321	Principles of Economics	3

SEMESTER IV		
Course Code	**Course Title**	**Credit Hours**
PM 452	Principles of Marketing	3
CA 453	Cost Accounting	3
BT 442	Business Taxation	3
PHRM 432	Principles of HRM	3

GEN-245	Introduction to Ecology	3
GEN-241	Entrepreneurship	2

Bachelor of Science in Commerce 3rd Year Mid Induction

The BS (Commerce) 3rd Year Mid Induction program at Federal Urdu University of Arts, Science and Technology, Islamabad, is designed to develop broad managerial and accounting competence in graduates to enable them to deal with diversified business situations in an appropriate way. Our focus is the development of the individual through the concentration on basic disciplines and skills as well as specific subject areas as:

1. Accounting
2. Finance
3. Management
4. Marketing
5. Banking

SEMESTER II		
Course Code	**Course Title**	**Credit Hours**
MA 631	Advanced Management	3
MIS 612	Management Information System	3
OB 532	Organizational Behavior	3
AA 441	Advance Accounting	3
TQM 651	Total Quality Management	3
BRM 512	Business Research Method	3

Courses Offered in 2nd Year

SEMESTER III		
Course Code	**Course Title**	**Credit Hours**
SM 622	Strategic Management	3
FIN 671	Managerial Accounting	3
IB 621	International Business	3
OD 661	Organizational Development	3
	Elective I	3
	Elective II	3

SEMESTER IV		
Course Code	**Course Title**	**Credit Hours**
GM 811	Global Marketing	3
HTP 812	HRM Theory & Practices	3
INT 833	Internship	3
CP 834	Capstone Project	3
	Elective I	3
	Elective II	3

List of Courses for BS Com 3rd Year III Semester (Specialization)

I. Accounting	
Acc 651	Taxation
Acc 661	Governmental Accounting
Acc 671	Computerized Accounting
Acc 681	Accounting Function in Business
II. Finance	
Fin 670	Corporate Finance
Fin 672	Financial Statement Analysis
Fin 671	Working Capital Management
Fin 681	Investments
III. Management	
Mgt 651	International Business Management
Mgt 662	Change Management
Mgt 671	Regulation and Control Legal Environment of Business
Mgt 681	Production Management
IV. Marketing	
Mkt 651	Marketing Management
Mkt 661	Industrial Marketing
Mkt 671	Marketing Research

Mkt 681	Brand Management

V. Banking	
Bnk 651	Islamic Banking
Bnk 661	Islamic Mode of Finance
Bnk 671	E-Banking
Bnk 681	Seminar on Current Banking Issues

List of Courses for BS Com 3rd Year IV Semester (Specialization)

I. Accounting	
Acc 652	Specialized Accounting
Acc 662	Accounting System
Acc 672	corporate Law/Advance Accounting
Acc 682	Advance Auditing (Application)
II. Finance	
Fin 652	Financial Institutions
Fin 653	International Finance
Fin 654	Security Analysis &Portfolio Management
Fin 682	Financial Management Decision Marking
III. Management	
Mgt 652	Quantitative Techniques in Management
Mgt 662	Strategic Human Resource Management
Mgt 673	Supply Chain Management
Mgt 683	International Management
IV. Marketing	
Mkt 652	Advertising and Promotion
Mkt 662	Global Marketing

Mkt 672	International Marketing Seminar
Mkt 682	Marketing Policy
V. Banking	
Bnk 652	Regulation for Financial Intuitions
Bnk 662	Marketing of Financial Services
Bnk 672	Bank Risk Management
Bnk 682	Credit Management in Bank

Note:

- In case the number of students is less than 10 (ten) in any Specialization class, the department will not offer that particular Specialization Course.

- The Department will not offer dual Specialization.

DEPARTMENT OF ENGLISH

Department of English

Introduction

The Department of English at the Federal Urdu University of Arts, Sciences & Technology (FUUAST) started the BS English (Language & Literature) Program in 2022. The syllabus for the program strikes a harmonious balance between Literature and Language. The curriculum gradually proceeds from foundational to advanced courses to build conceptual understanding of students in the core areas of Literature and Linguistics. We have adopted a future-oriented comprehensive approach to ensure our students develop effective reading, writing, and presentation skills to thrive in the competitive professional environment. One of the distinguishing features of the Department of English is its focus on co-curricular activities. The department organizes various literary and co-curricular activities through the English Literary Society (ELS). The students get the opportunity to build confidence and express their creativity through these activities. The Department of English at FUUAST is emerging as one of the best departments, enrolling 250 plus students within a short span of one year.

Vision

The Department of English at FUUAST offered its first-degree program, BS English, in Fall 2023. Since its inception, the Department has attracted a number of students from around the country. The Department envisions to develop students in-depth understanding and appreciation of English literature and Linguistics. This Department also envisions fostering and supporting English language proficiency and inculcating the ability to think critically through an integrative scheme of studies. The Department envisions establishing itself as a center of excellence in English literature and linguistics through research orientation. Some of the important components of our department's vision are to inculcate respect for diversity, inclusion, tolerance, and peaceful coexistence in our students.

Mission

The Department of English at FUUAST envisages guiding its students to enhance their knowledge of English language and literature according to the modern-day requirements of their professional life. The four years BS degree program in English aims to cover the main literary genres in English

literature and the key historical periods by focusing on the representative works from different eras. The program also aims to cover the key areas of English linguistics (Phonetics & Phonology, Morphology & Syntax, Semantics, Pragmatics, and Sociolinguistics) along with the latest research methods and approaches in the field of linguistics. To develop an understanding of various literary genres and forms of expression (poetry, prose, novels, drama, non-fiction), as well as linguistic and rhetorical skills through frequent reading and writing assignments, class presentations and discussions, the emphasis is placed on the comprehensiveness and depth of the subjects covered. The Linguistic modules aim to provide an understanding of the historical, social, and psychological factors that shape the language used in everyday life, while the Literature modules are designed to foster interpretive skills applying to a wide range of genres and historical periods. We anticipate that this course of study, delivered by our incredibly passionate and skilled faculty members, will develop in students a love for reading, writing and research. To pursue this mission, the department aims at providing students the conducive academic environment where they can learn knowledge and relevant skills to excel in their professional life. The department also wants to focus on the character building and personality development of its students by involving them in different extra-curricular activities so that they can become responsible citizens of their country and play a positive role in building a successful nation.

Objectives

1. Enabling students to master the four basic language skills in the context of varied functions of communication and genres.
2. Training students to carry out critical analyses of linguistic and literary texts and to place them in their historical, philosophical, cultural, social, and global context.
3. Providing students with a solid knowledge and understanding of English prose, poetry, fiction, and drama.
4. Helping students acquire a sound understanding of major schools of language and literary criticism.
5. Training students in doing academic research in accordance with standard research methodology with emphasis on creativity, and integrity.
6. Helping students understand and relate to other cultures.

Head of Department Message

It is a pleasure to Head the department of English at Federal Urdu University of Arts, Sciences & Technology (FUUAST), Islamabad. The department of English launched its first degree awarding program in Fall 2022 offering a four-year BS in English. Within a very short period, the department of English has established itself into a great height. A team of well qualified, experienced, and motivated teachers is the hallmark of our department. We are fully committed to impart extensive theoretical and well as practical knowledge about English language and literature. We put special efforts in improving the English language proficiency of our students by engaging them in class discussion, presentations and reading-writing tasks. My personal mission is to see that every student of FUUAST department of English should have the ability to communicate effectively and use language as a tool for success both personally and professionally. I am proud to state that the department of English at FUUAST has pioneered in establishing co-curricular Clubs for students. Initially there are four clubs which are being led by the faculty: Dramatics & Debating Club, Reading & Writing Club, Seminar Club, Sports Club. Through these clubs we have created an exclusive space for students so that they can unleash their talent, explore their creativity, and learn outside the classroom. The department strives to work for the overall growth and personality development of the students to inculcate qualities

which are essential for building a just and peaceful society. In order to instill the spirit of volunteerism for community development, the department encourages and supports students to take initiatives for social causes. Turning our students into academically competent, professionally committed and socially responsible individuals is the prime aim of our department. I am confident that the graduates of our department will carve a niche for themselves in the academic and professional field of English language and literature.

BS English (4Years & 8 Semester Program)

Semester- 1				
S. #	**Course Code**	**Course Title**	**Type of Course**	**Cr. Hours Hours**
1.	GNE-111	Islamic Studies/Ethics	General	2
2.	GNE-112	Functional English	General	3
3.	GNE-113	Applications of Information and Communication Technologies in English	General	(2+1)3
4.		Social Sciences (One Course will be selected from the list below)	General	2
	GNE-114	Introduction to Political Science		
	GNE-115	Introduction to International Relations		
	GNE-116	Introduction to Economics		
	GNE-117	Introduction to Mass Communication		
	GNE-118	Introduction to Psychology		
	GNE-119	Basic Concepts of Social Sciences		
5.	ENG-120	Introduction to Literature	Major	3
6.	ENG-121	Introduction to Linguistics	Major	3
Total				**16**

Semester- 2

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1.	**GNE-121**	Ideology and Constitution of Pakistan	General	2
2.	**GNE-122**	Expository Writing	General	3
3.	**GNE-123**	Mathematics	General	3
4.	**GNE-124**	Civics and Community Engagement	General	2
5.	**ENG-125**	History of English Literature I	Major	3
6.	**ENG-126**	Phonetics & Phonology	Major	3
		Total		**16**

Semester- 3

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1.	**GNE-231**	Statistics	General	3
2.	**GNE-232**	Arts and Humanities - Urdu	General	3
3.	**ENG-233**	History of English Literature II	Major	3

4.	**ENG-234**	Poetry I- (Classical Poetry)	Major	3
5.	**ENG-235**	Morphology and Syntax	Major	3
	Total			**15**

Semester- 4				
S. #	**Course Code**	**Course Title**	**Type of Cours e**	**Cr. Hours**
1.	**GNE-241**	Entrepreneurship	General	2
2.		**Natural Sciences (One Course will be selected from the list below)**	General	(2+1)3
	GNE-242	Introduction to Physics		
	GNE-243	Introduction to Chemistry		
	GNE-244	Introduction to Biology		
	GNE-245	Introduction to Ecology		
	GNE-246	Every Day Sciences		
	GNE-247	Food& Nutrition		
3.	**ENG-248**	Poetry II – Romantic & Modern Poetry	Major	3
4.	**ENG-249**	Semantics	Major	3

5.	ENG-250	Sociolinguistics	Major	3
Total				14

Semester- 5

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1.	ENG-351	Literary Criticism	Major	3
2.	ENG-352	Novel I	Major	3
3.	ENG-353	Drama I	Major	3
4.	ENG-354	Pragmatics	Major	3
5.	ENG-355	Communication & Presentation Skills	Interdisciplinary	3
Total				15

Semester-6

S. #	Course Code	Course Title	Type of Course	Cr. Hours
1.	ENG-361	Novel II	Major	3
2.	ENG-362	Drama II	Major	3

3.	**ENG-363**	Stylistics	Major	3
4.	**ENG-364**	Psycholinguistics	Major	3
5.	**ENG-365**	Essays and Short Stories	Major	3
6.	**ENG-366**	Critical Reading & Academic Writing	Interdisciplinary	3
	Total			**18**

Semester- 7				
S. #	**Course Code**	**Course Title**	**Type of Course**	**Cr. Hours**
1.	**ENG-471**	Literary Theory	Major	3
2.	**ENG-472**	Research Methods	Major	3
		Select any two courses from the list of Elective Courses given below		
3.	**ENG-473**	Pakistani Literature in English	Major	3
4.	**ENG-474**	Postcolonial Women's Writing	Major	3
5.	**ENG-475**	Bilingualism	Major	3
6.	**ENG-476**	Second Language Acquisition	Major	3

7.	**ENG-477**	English Language Teaching	Inter disciplinary	3
8.	**ENG-478**	Internship	Field Work	3
Total				**18**

Semester- 8				
S. #	**Course Code**	**Course Title**	**Type of Course**	**Cr. Hours**
1.	**ENG-481**	Discourse Analysis	Major	3
2.	**ENG-482**	Postmodern Literature	Major	3
		Select any two courses from the list of Elective Courses given below		
3.	**ENG-483**	American Literature	Major	3
4.	**ENG-484**	South Asian Literature	Major	3
5.	**ENG-485**	Language and Gender	Major	3
6.	**ENG-486**	Ecolinguistics	Major	3
7.	**ENG-487**	Translation Studies	Inter disciplinary	3
8.	**ECAP-488**	Capstone Project	Research Project	3

Total	18
A student can start Field Experience/Internship from fifth semester for minimum six weeks (preferably undertaken during semester or summer break). b Capstone Project will be undertaken/registered from fifth semester.	

Note:
I.   1st Four Semester Courses will be offered to students of Associate Degree Program.
II.   Last Four Courses will be offered to the students of 3rd Year 5th semester 2 years Degree Program.
III.   List of all Courses are mentioned above.

DEPARTMENT OF SOFTWARE ENGINEERING

Software Engineering Department

Vision:

To enable the graduates of the Department of Software Engineering to be recognized as innovative leaders in the fields of computing and software engineering. This recognition will come from their work in software development in a myriad of application areas and through their work in advanced study and research. The faculty is and will continue to be, known for their passion for teaching and for their knowledge, expertise, and innovation in advancing the frontiers of knowledge in computer science and software engineering.

Mission:

The Department of Software Engineering's Mission is the development of professionals who can produce high-quality, cutting-edge, and cost-effective software systems. The department provides a forward-thinking approach in an inclusive environment that encourages students to become pioneers in the field by developing in-depth knowledge through the hands-on design of innovative products. As engineering teams construct complex software systems in the real world, our curriculum focuses on team-based activities emphasizing collaboration and the design process. Students receive mentorship to become world-class engineers and conduct world-class research by closely collaborating with both faculty and industry.

Programs Offered

1. BS Software Engineering
2. BS Artificial Intelligence
3. Associate Degree Program, ADP (Software Engineering)

1. Bachelors of Science in Software Engineering Program (BSSE) (Morning/ Evening)

BS Software Engineering is a 4-year BS degree program with 8 semesters. As we rely more on technology as a part of everyday life, there is an increasing demand for people with the skills to update, maintain, and improve the software we depend on. The BS Software Engineering program equips students with the skills to work in the fast-moving software industry. Students learn about software development processes, system analysis, design, and how to create innovative software solutions to real-world problems through a blend of theoretical knowledge and practical application. The curriculum covers software engineering principles, programming languages, and frameworks. Graduates of this program can pursue diverse career opportunities, including roles such as computer programmer, web developer, software engineer, IT solution analyst, or app developer.

Software Engineering applies a systematic, disciplined, and quantifiable approach to software systems design, development, operation, and maintenance. It is, in fact, the practice of designing and implementing large, reliable, efficient, and economical software by applying the principles and practices of engineering. The department aims to train students in all aspects of the software life cycle, from specification through analysis and design to testing, maintenance, and evolution of software product.

1.1 Software Engineering Department Laboratory

The department has state-of-the-art software engineering computing labs where students implement their theoretical concepts into practical applications.

1.2 Program Objectives

PO-1. To produce graduates with strong Computer and Software Engineering theoretical and practical knowledge in all aspects of the software life cycle and to have the expertise to tackle technological challenges related to the computing industry.

PO-2. To produce practical engineers equipped with comprehensive analytical and problem-solving skills.

PO-3. To produce graduates with high ethical standards and responsible professionals with sound leadership and communication skills.

PO-4. To produce graduates with a strong desire to further their careers by involving themselves in sustained lifelong learning.

1.3 Eligibility Criteria

o Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics

o The students who have not studied Mathematics at the intermediate level must pass deficiency Mathematics courses (06 credits) in the first two semesters.

1.4 Suggested Semester/Study Plan for BSSE

2. Bachelors of Science in Artificial Intelligence Program (BSAI) (Morning/Evening)

BS (AI) is a 4-year degree program that is spread over 8 semesters. The BS (AI) program is designed to provide students with an in-depth understanding of artificial intelligence and its applications. In an increasingly AI-driven world, this program equips students with the knowledge and skills to transform complex scenarios into actionable decisions. The curriculum covers a wide range of areas within AI, including:

Foundations of AI: Students learn programming, discrete mathematics, and algorithm design.

Data Science and Machine Learning: Topics include natural language processing and human-AI interaction.

Knowledge Representation, Reasoning, and Interactions: This area covers data visualization, knowledge engineering, and formal verification.

Optimization, Planning, and Autonomous Agents: Students explore autonomous robot programming, logic, and network optimization.

Ethics and Philosophy of AI: The program addresses legal, social, ethical, and professional issues related to AI and robotics system development.

AI Engineering: Students gain expertise in internet and web systems, cloud-based services, AI security, and privacy.

Graduates of this program are well-prepared for exciting roles in the field, ranging from big data engineers to robotics engineers

2.1 Artificial Intelligence Program Laboratory

A dedicated laboratory has been set up for BSAI program where students can perform practical work related to their lab work, assignments and projects.

2.2 Program Objectives

PO-1 Utilize knowledge with required practical skills to solve real-world problems with a sound understanding of theory, principles, and methods of Artificial Intelligence.

PO-2 To prepares students with effective communication skills, both oral and written, to convey their knowledge and ideas clearly and confidently whether they work independently or as a team.

PO-3 To teach students to take professional responsibilities by considering societal and ethical concerns regarding the application of artificial intelligence.

PO-4 To make students learn to explore and identify new fields and areas to apply their knowledge of Artificial Intelligence and continuously improve themselves and help benefit humanity with their research.

2.3 Eligibility Criteria

o Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics

o The students who have not studied Mathematics at intermediate level have to pass deficiency courses of Mathematics (06 credits) in first two semesters.

2.4 Suggested Semester/Study Plan for BSAI

3.0 Associate Degree Program ADP (Software Engineering) (Morning /Evening)

Associate Degree Program is a 2-year degree program with 4 semesters equivalent to 14 years of education. The program is designed to cover all basic and intermediate aspects of software engineering including problem analysis, software design and development, software verification and validation, etc.

3.1 Eligibility Criteria

o Minimum 50% marks in Intermediate/12 years schooling/A- Level (HSSC) or Equivalent with Mathematics

o Students who have not studied Mathematics at the intermediate level must pass deficiency courses of Mathematics (06 credits) in the first two semesters.

BS(Software Engineering 4 Years Program
(As per Guidelines of NCEAC 2023)

#	Code	Pre-Reqs	Course Title	Domain	Cr hr (Cont hr)
			Semester 1		
1	SE1xx		Programming Fundamentals	Core 1	4 (3-3)
2	GE1xx		Application of Information & Communication Technologies	GER 1	3 (2-3)
3	GE1xx		Functional English	GER 2	3 (3-0)
4	GE1xx		Islamic Studies	GER 3	2 (2-0)
5	GE1xx		Natural Science (Applied Physics)	GER 4	3 (2-3)
6	MT1xx		Probability & Statistics	Maths1	3 (3-0)
7	NC1xx		Math 1/ Pre-Calculus 1(Non Credit)	NC 1	3 (3-0)
				Total Cr hrs	**18 (15-9) / 21(18-9)**
			Semester 2		
1	SE1xx	Programming Fundamentals	Object Oriented Programming	Core 2	4 (3-3)
2	SE1xx		Digital Logic Design	Core 3	3 (2-3)
3	GE1xx		Social Science (Example: Urdu, Intro to Management)	GER 5	2 (2-0)
4	GE1xx	Probability & Statistics	Discrete Structures	GER 6	3 (3-0)
5	GE1xx		Ideology and Constitution of Pakistan (Pakistan Study)	GER 7	2 (2-0)
6	GE1xx	Functional English	Expository Writing	GER 8	3 (3-0)
7	NC1xx		Math 2/ Pre-Calculus 2(Non Credit)	NC 2	3 (3-0)
				Total Cr hrs	**17 (15-6)/ 20 (18-6)**
			Semester 3		
1	SE2xx	Object Oriented Programming	Data Structures	Core 4	4 (3-3)
2	SE2xx		Computer Organization & Assembly Language	Core 5	3 (2-3)
3	SE2xx		Database Systems	Core 6	4 (3-3)
4	GE2xx		Calculus and Analytic Geometry	GER 9	3 (3-0)
5	EN2xx	Expository Writing	Technical & Business Writing	EW	3 (3-0)
6	SE2xx		Software Engineering	Core 7	3 (3-0)
				Total Cr Hrs	**20 (16-12)**
			Semester 4		
1	SE2xx		Operating Systems	Core 8	3 (2-3)
2	SE2xx		Computer Networks	Core 9	3 (2-3)
3	SE2xx		Domain Core 1 (Software Requirement Engineering)	Domain Core 1	3 (3-0)
4	SE2xx		Domain Core 2 (Software Design & Architecture)	Domain Core 2	3 (2-3)
5	MT2xx	(Calculus and Analytic Geometry)	Linear Algebra	Maths 2	3 (3-0)
6	SE2xx		Domain Elective 1	Domain Elective 1	3 (2-3)
				Total Cr Hrs	**18 (14-12)**

Semester 5
1	SE2xx		Domain Elective 2	Domain Elective 2	3 (2-3)
2	SE2xx		Artificial Intelligence	Core 8	3 (2-3)
3	SE3xx		Domain Core 3 (Software Construction & Development)	Domain Core 3	3 (2-3)
4	SE3xx		Domain Elective 3	Domain Elective 3	3 (2-3)
5	MT3xx		Multivariable Calculus	Maths 3	3 (3-0)
6	SE3xx		Analysis of Algorithms	Core 12	3 (3-0)
				Total Cr Hrs	**18(13-15)**
Semester 6
1	SE3xx		Domain Core 4 (Software Quality Engineering)	Domain Core 4	3 (2-3)
2	SE3xx		Domain Elective 4	Domain Elective 4	3 (2-3)
3	GE3xx		Civics and Community Engagement	GER 10	2 (2-0)
4	SE3xx		Domain Elective 5	Domain Elective 5	3 (2-3)
5	SE3xx		Information Security	Core 11	3 (2-3)
6	SE3xx		Domain Elective 6 / MDEE-I	Domain Elective 6	3 (2-3)
				Total Cr Hrs	**17 (13-12)**
Semester 7
1	SE4xx		Domain Core 5 (Software Project Management)	Domain Core 5	3 (2-3)
2	SE4xx		Domain Core 6 (Parallel & Distributed Computing)	Domain Core 6	3 (2-3)
3	SE4xx		Domain Elective 7 / MDEE-II	Domain Elective 7	3 (2-3)
4	SE4xx		Final Year Project – I	Core 13	2 (0-6)/ 3 (0-9)
5	SS4xx		Introduction to Marketing (Elective Supporting Course)	SS 1	3 (3-0)
6	GE4xx		Entrepreneurship	GER 11	2 (2-0)
				Total Cr Hrs	**16 (11-15)/ 17(11-18)**
Semester 8
1	SE4xx		Final Year Project - II	Core 14	4 (0-12)/ 3(0-9)
2	GE4xx		Arts & Humanities (Professional Practices)	GER 12	2 (2-0)
				Total Cr Hrs	**6 (2-12)/ 5 (2-9)**

Scheme of Study Plan for BS(Artificial Intelligence)4 Years Program
(As per Guidelines of NCEAC 2023)

#	Code	Pre-Reqs	Course Title	Domain Cr	hr (Cont hr)
Semester 1					
1	AI1xx		Programming Fundamentals	Core 1	4 (3-3)
2	GE1xx		Application of Information & Communication Technologies	GER 1	3 (2-3)
3	GE1xx		Functional English	GER 2	3 (3-0)
4	GE1xx		Islamic Studies	GER 3	2 (2-0)
5	GE1xx		Natural Science (Applied Physics)	GER 4	3 (2-3)
6	MT1xx		Probability & Statistics	Maths1	3 (3-0)
7	NC1xx		Math 1/ Pre-Calculus 1(Non Credit)	NC 1	3 (3-0)
				Total Cr hrs	**18 (15-9) / 21(18-9)**
Semester 2					
1	AI1xx	Programming Fundamentals	Object Oriented Programming	Core 2	4 (3-3)
2	AI1xx		Digital Logic Design	Core 3	3 (2-3)
3	GE1xx		Social Science (Example: Urdu, Intro to Management)	GER 5	2 (2-0)
4	GE1xx	Probability &Statistics	Discrete Structures	GER 6	3 (3-0)
5	GE1xx		Ideology and Constitution of Pakistan (Pakistan Study)	GER 7	2 (2-0)
6	GE1xx	Functional English	Expository Writing	GER 8	3 (3-0)
7	NC1xx		Math 2/ Pre-Calculus 2 (NonCredit)	NC 2	3 (3-0)
				Total Cr hrs	**17 (15-6)/ 20 (18-6)**
Semester 3					
1	AI2xx	Object Oriented Programming	Data Structures	Core 4	4 (3-3)
2	AI2xx		Database Systems	Core 5	4 (3-3)
3	AI2xx		Domain Elective 1 (Natural Language Processing)	Domain Elective 1	3 (2-3)
4	GE2xx		Calculus and Analytic Geometry	GER 9	3 (3-0)
5	EN2xx	Expository Writing	Technical & Business Writing	EW	3 (3-0)
6	AI2xx		Domain Core 1 (Programming for AI)	Domain Core 1	3 (2-3)
				Total Cr Hrs	**20 (16-12)**
Semester 4					
1	AI2xx		Operating Systems	Core 7	3 (2-3)
2	AI2xx		Computer Organization & Assembly Language	Core 8	3 (2-3)
3	AI2xx		Domain Core 2 (Machine Learning)	Domain Core 2	3 (3-0)
4	AI2xx		Artificial Intelligence	Core 6	3 (2-3)
5	MT2xx	(Calculus and Analytic Geometry)	Linear Algebra	Maths 2	3 (3-0)
6	AI2xx		Domain Elective 2 (Data Mining)	Domain Elective 2	3 (2-3)
				Total Cr Hrs	**18 (14-12)**

Semester 5					
1	AI3xx		Computer Networks	Core 9	3 (2-3)
2	AI3xx		Software Engineering	Core 10	3 (3-0)
3	AI3xx		Information Security	Core 11	3 (2-3)
4	AI3xx		Domain Core 3 (Artificial Neural Networks & Deep Learning)	Domain Core 3	3 (2-3)
5	AI3xx		Domain Elective 3 (Speech Processing)	Domain Elective 3	3 (2-3)
6	MT3xx		Multivariable Calculus	Maths 3	3 (3-0)
				Total Cr Hrs	18 (13-15)
Semester 6					
1	AI3xx		Domain Core 4 (Knowledge Representation & Reasoning)	Domain Core 4	3 (2-3)
2	AI3xx		Domain Elective 4 (Reinforcement Learning)	Domain Elective 4	3 (2-3)
3	GE3xx		Civics and Community Engagement	GER 10	2 (2-0)
4	AI3xx		Domain Elective 5 (Theory of Automata)	Domain Elective 5	3 (3-0)
5	AI3xx		Analysis of Algorithms	Core 12	3 (3-0)
6	AI3xx		Domain Elective 6 (HCI & Computer Graphics)	Domain Elective 6	3 (2-3)
				Total Cr Hrs	17 (13-12)
Semester 7					
1	AI4xx		Domain Core 5 (Computer Vision)	Domain Core 5	3 (2-3)
2	AI4xx		Domain Core 6 (Parallel & Distributed Computing)	Domain Core 6	3 (2-3)
3	AI4xx		Domain Elective 7 (Agent based modeling)	Domain Elective 7	3 (2-3)
4	AI4xx		Final Year Project – I	Core 13	2 (0-6)/ 3 (0-9)
5	SS4xx		Introduction to Marketing (Elective Supporting Course)	SS 1	3 (3-0)
6	GE4xx		Entrepreneurship	GER 11	2 (2-0)
				Total Cr Hrs	16 (11-15)/ 17(11-18)
Semester 8					
1	AI4xx		Final Year Project - II	Core 14	4 (0-12)/ 3(0-9)
2	GE4xx		Arts & Humanities (Professional Practices)	GER 12	2 (2-0)
				Total Cr Hrs	6 (2-12)/ 5 (2-9)

Proposed Scheme of Study for ADP SE (2 year)

#	Code	Pre-Reqs	Course Title	Domain Cr	hr (Cont hr)
			Semester 1		
1	SE1xx		Programming Fundamentals	Core 1	4 (3-3)
2	GE1xx		Application of Information & Communication Technologies	GER 1	3 (2-3)
3	GE1xx		Functional English	GER 2	3 (3-0)
4	MT1xx		Probability & Statistics	Maths1	3 (3-0)
5	GE1xx		Islamic Studies	GER 3	2 (2-0)
6	GE1xx		Natural Science (Applied Physics)	GER 4	3 (2-3)
7	NC1xx		Pre-Calculus 1(Non Credit)	NC 1	3 (3-0)
				Total Cr hrs	**18 (16-9)/ 21(19-9)**
			Semester 2		
1	SE1xx	Programming Fundamentals	Object Oriented Programming	Core 2	4 (3-3)
2	GE1xx		Discrete Structures	GER 5	3 (3-0)
3	SE1xx		Digital Logic Design	Core 3	3 (2-3)
4	SE1xx		Social Sciences	GER 6	2 (2-0)
5	GE1xx		Ideology and Constitution of Pakistan	GER 7	2 (2-0)
6	GE1xx	Functional English	Expository Writing	GER 8	3 (3-0)
7	NC1xx		Pre-Calculus 2 (Non Credit)	NC 2	3 (3-0)
				Total Cr hrs	**17 (15-6)/ 20(18-6)**
			Semester 3		
1	SE2xx	Object Oriented Programming	Data Structures	Core 4	3 (2-3)
2	GE2xx		Arts & Humanities (Professional Practices)	GER 9	2 (2-0)
3	GE2xx		Calculus and Analytic Geometry	GER 10	3 (3-0)
4	SE2xx		Computer Organization & Assembly Language	Core 5	3 (2-3)
5	SE2xx		Database Systems	Core 6	4 (3-3)
6	SE2xx		Software Engineering	Core 7	3 (3-0)
				Total Cr hrs	**18(15-9)**
			Semester 4		
1	SE2xx		Operating Systems	Core 8	3 (2-3)
2	SE2xx		Artificial Intelligence	Core 9	3 (2-3)
3	SE2xx		Final Year Project – I	Core 10	3(0-9)
4	GE2xx		Civics and Community Engagement	GER 11	3 (2-3)
5	GE2xx		Entrepreneurship	GER 12	3 (2-3)
6	SE2xx		Domain Elective 1	Domain Elective	3 (3-0)
				Total Cr hrs	**18 (8-21)**
				Total Credit Hours	**71**

Proposed list of Elective Courses for ADP SE 2 years (New courses may be included as needed)

			Domain Elective Courses		
1	SE2xx		Software Verification and Validation (Testing & QA)	Domain Elective	3 (2-3)
2	SE2xx		Object Oriented Analysis & Design	Domain Elective	3 (2-3)
3	SE2xx		Computer Architecture	Domain Elective	3 (2-3)
4	SE2xx		Theory of Automata	Domain Elective	3 (3-0)
5	SE2xx		HCI & Computer Graphics	Domain Elective	3 (2-3)
6	SE2xx		Web Technologies	Domain Elective	3 (2-3)
7	SE2xx		Advanced Database Management	Domain Elective	3 (3-0)
.			Web Engineering	Domain Elective	3 (2-3)
.			Data Science	Domain Elective	3 (2-3)
.			Software Re-Engineering	Domain Elective	3 (2-3)
.			Mobile Application Development 1	Domain Elective	3 (2-3)

DEPARTMENT OF MATHEMATICAL SCIENCES

Head of Department Message

I am immensely pleased to welcome you to the Department of Mathematical Sciences, FUUAST, Islamabad. The department consists of highly qualified researchers and educationists. The faculty of Mathematics has earned great respect among its contemporaries. They are well-versed in modern scientific and technological research trends. The faculty is the driving force of innovation and technology. It offers a variety of modern courses in ADP, BS(Hon's), and BS- Hon's Special degrees. If you are interested in pursuing a degree in Mathematics, we will provide you with a conducive environment for nurturing excellent researchers and scholars.

Looking forward to welcoming you here and hope you will enjoy yourself in transforming to become the best in your field of study.

Vision:

1. To contribute to the nation through quality education and research in Mathematics.
2. To become a valuable resource for industry and society and a center of excellence.

Mission:

The mission of the Department of Mathematical Sciences is to provide an innovative and supportive environment where students can develop a thorough understanding and appreciation for the mathematical sciences. The department endeavors to empower students through the mastery of core content and the ability to apply their knowledge.

To this end, the department strives to provide quality instruction that builds a rigorous and comprehensive foundation for a diverse student body preparing to enter various professions.

In particular, the department is devoted to maintaining a strong undergraduate and graduate curriculum that provides a broad spectrum of courses in pure and applied mathematics, as well as statistics, to support Students in fulfilling the quantitative literacy component of their

undergraduate education.

o   Students fulfilling the mathematical curriculum component of their majors.

o   Students majoring in mathematics or statistics who intend to utilize their disciplines in industry or graduate study.

To create an ambiance in which state-of-the-art undergraduate, postgraduate, and doctoral programs will flourish. To identify different industrial problems through industry-academia interaction and to undertake collaborative projects for long-term development. To generate human resource with the finest capabilities who can emerge as leaders in a range of professions.

BS Mathematics 4-Year Program

Semester I			
S. No	Course Code	Course Title	Credit Hours
1	MTS 301	Calculus- I	4 + 0
2	MTS 303	Discrete Structure & Logic	3 + 0
3	ENG101	English I	3 + 0
4	PHY 301	Mechanics (Physic-Is)	3 + 1
5	STA 301	Basic Statistics	3 + 1
		Total	16 + 2
Semester II			
S. No	Course Code	Course Title	Credit Hours
1	MTS 302	Mathematical Methods	4 + 0
2	ENG102	English II	3 + 0
3	ISL 351	Islamic Studies	3 + 0
4	PHY 302	Waves Oscillation & Thermodynamics	3 + 1
5	STA 302	Probability & Applied Statistics	3 + 1
		Total	16 + 2

		Semester III	
S. No	**Course Code**	**Course Title**	**Credit Hours**
1	MTS 401	Multivariable Calculus	4 + 0
2	MTS 403	Algebra	3 + 0
3	URBS 112	Urdu	3 + 0
4	PHY 401	Electromagnetism/Electricity & Magnetism	3 + 1
5	STA 401	Continuous Prob Distribution & Elements of Sampling	3 + 1
		Total	**16 + 2**

		Semester IV	
S. No	**Course Code**	**Course Title**	**Credit Hours**
1	MTS 402	Mechanics	4 + 0
2	MTS 404	Differential Equations	3 + 0
3	PST-451	Pakistan Studies	3 + 0
4	PHY-402	Modern Physics	3 + 1
5	STA-402	Statistical Methods	3 + 1
		Total	**16 + 2**

Third Year/ 5th Semester intake

		Semester V	
S. No	**Course Code**	**Course Title**	**Credit Hours**
1	MTS 501	Topology	3 + 0
2	MTS 503	Modern Algebra	3 + 0
3	MTS 505	Real Analysis	3 + 0
4	MTS 507	Mathematical Physics I	3 + 0

5	MTS 509	Differential Geometry I	3 + 0
6	MTS 511	Numerical Analysis I	3 + 0
		Total	**18 + 0**

Semester VI

S. No	Course Code	Course Title	Credit Hours
1	MTS 502	Computing Tools for Mathematician	2 + 1
2	MTS 504	Linear Algebra	3 + 0
3	MTS 506	Complex Analysis	3 + 0
4	MTS 508	Mathematical Physics II	3 + 0
5	MTS 510	Differential Geometry II	3 + 0
6	MTS 512	Numerical Analysis II	3 + 0
		Total	**17 + 1**

Semester VII

S. No	Course Code	Course Title	Credit Hours
1	MTS 601	Functional Analysis I	3 + 0
2	MTS 603	Mathematical Statistics	3 + 0
3		Elective A- I	3 + 0
4		Elective A - II	3 + 0
5		Elective A - III	3 + 0
		Total	**15 + 0**

Semester VIII

S. No	Course Code	Course Title	Credit Hours
1	MTS 602	Functional Analysis II	3 + 0
2	MTS 604	Statistical Analysis	3 + 0

3		Elective- IV	3 + 0
4		Elective A - V	3 + 0
5		Elective A - VI	3 + 0
		Total	**15 + 0**

List of Courses for BS In Mathematics

Compuslory Courses			
S. No	**Course Code**	**Course Title**	**Credit Hours**
1	ENG101	English– I	3 + 0
2	ENG102	English- II	3 + 0
3	URBS 112	Urdu	3 + 0
4	ISL 351	Islamic Studies	3 + 0
5	PST-451	Pakistan Studies	3 + 0
		Total	**15 + 0**

Elective Courses

Pure Mathematics

S. No.	Course Code	Course Title	Cr. Hours
1	MTS - 605	Algebraic Topology - I	3 + 0
2	MTS - 606	Algebraic Topology - II	3 + 0
3	MTS - 607	Algebraic Geometry - I	3 + 0
4	MTS - 608	Algebraic Geometry - II	3 + 0
5	MTS - 609	Homological Algebra - I	3 + 0
6	MTS - 610	Homological Algebra - II	3 + 0
7	MTS - 611	Axiomatic Set Theory	3 + 0
8	MTS - 612	Mathematical Logic	3 + 0
9	MTS - 613	Differentiable Manifolds - I	3 + 0
10	MTS - 614	Differentiable Manifolds - II	3 + 0

11	MTS - 615	Commutative Algebra - I	3 + 0
12	MTS - 616	Commutative Algebra - II	3 + 0
13	MTS - 617	Representative Theory - I	3 + 0
14	MTS - 618	Representative Theory - II	3 + 0
15	MTS - 619	Advance Abstract Algebra - I	3 + 0
16	MTS - 620	Advance Abstract Algebra - II	3 + 0
17	MTS - 621	Abelian Groups	3 + 0
18	MTS - 622	Module Theory	3 + 0
19	MTS - 623	Category Theory - I	3 + 0
20	MTS - 624	Category Theory - II	3 + 0
21	MTS - 625	Elliptic Curves	3 + 0
22	MTS - 626	Modular Forms	3 + 0
23	MTS - 627	Algebraic Cycle - I	3 + 0
24	MTS - 628	Algebraic Cycle - II	3 + 0
25	MTS - 629	Arithmetic Algebraic Geometry	3 + 0
26	MTS - 630	Poly Logarithms	3 + 0
27	MTS - 631	Number Theory	3 + 0
28	MTS - 632	Projective Geometry	3 + 0
29	MTS - 633	Project - I	
30	MTS - 634	Project - II	

Elective Courses

Applied Mathematics

S. No.	Course Code	Course Title	Cr. Hours
1	MTS - 651	Astronomy - I	3 + 0
2	MTS - 652	Astronomy - II	3 + 0
3	MTS - 653	Fluid Dynamics - I	3 + 0
4	MTS - 654	Fluid Dynamics - II	3 + 0
5	MTS - 655	Quantum Mechanics - I	3 + 0
6	MTS - 656	Quantum Mechanics - II	3 + 0
7	MTS - 657	Control Theory - I	3 + 0

8	MTS - 658	Control Theory - II	3 + 0
9	MTS - 659	Operation Research - I	3 + 0
10	MTS - 660	Operation Research - II	3 + 0
11	MTS - 661	Wavelet Analysis	3 + 0
12	MTS - 662	Theory of Elasticity	3 + 0
13	MTS - 663	Special Functions	3 + 0
14	MTS - 664	Electromagnetism - I	3 + 0
15	MTS - 665	Electromagnetism - II	3 + 0
16	MTS - 666	Financial Mathematics - I	3 + 0
17	MTS - 667	Financial Mathematics - II	3 + 0
18	MTS - 668	Special Theory of Relativity	3 + 0
19	MTS - 669	General Theory of Relativity	3 + 0
20	MTS - 670	Integral Equations	3 + 0
21	MTS - 671	Classical Mechanics	3 + 0
22	MTS - 672	Project - I	3 + 0
23	MTS - 673	Project - II	3 + 0

M. Phil (MATHEMATICS) PROGRAM

The MS degree in Mathematics focuses on strengthening a student's ability in Mathematical reasoning and logical thinking. Students in this program prepare themselves either for further development in mathematics or for jobs in academic, industrial, business, and government organizations. The program offers a flexible framework, including a scheme of courses covering major areas of Mathematics like Algebra, Analysis, Topology, Computational Mathematics, Foundations of Mathematics, and Financial Mathematics. An institution may design its own MS program within this framework considering available resources, the demand of students, and approval by statutory bodies.

Admission Criterion
- To be eligible for admission to M. Phil, a candidate Shall possess an MA/MSc degree or equivalent in the relevant discipline. Shall have obtained first division in MA/MSc or BA/BSc or at least 60% marks in BS (Hons) and all other 4-5 years degrees.
- Shall not have obtained third division in BA/BSc or MA or MSc.
- In the case of a third division in FA/FSc, the candidate should have obtained first division in both BA/BSc and MA/MSc or at least 60% marks in BS (Hons) and all other 4-5 years degrees.
- GAT-General (NTS), Higher Education Aptitude Test (HAT) conducted by the

National Testing Service with a minimum cumulative score of 50% or departmental test with 60 % marks will be required at the time of admission. Provided that any of the conditions (2) - (4) above may be relaxed by the Vice-Chancellor in case of a teacher of a university/college and or an employee of a research organization.

The Program

- The student must complete 24 CH coursework with CGPA. 2.5.
- Having obtained CGPA 2.5 in coursework, the M.Phil.
- the student will complete a 12-credit hour thesis and successfully defend it to qualify for the award of an M. Phil degree.
- One external examiner (from a university in Pakistan other than the university of enrollment) and one internal examiner will conduct the thesis evaluation and viva voce.

Semester-Wise Breakdown

First year					
First Semester			Second Semester		
#	Course Title	Cr. Hr	#	Course Title	Cr. Hr.
1	Core-1 (MTS-701)	3	1	Core-1 (MTS-702)	3
2	Core-2 (MTS-703)	3	2	Core-2 (MTS-704)	3
3	Core-2 (MTS-705)	3	3	Core-2 (MTS-706)	3
4	Optional	3	4	Optional	3
Total		12			12

Second year (Semester Three and Four)	
M.Phil Thesis	12 Credit Hours

Compulsory (Core)	
RESEARCH METHODOLOGY (MTS-701)	ADVANCED INTEGRAL EQUATIONS (MTS - 702)
BASICS OF THE THEORY OF FLUIDS (MTS-703)	MATHEMATICAL TECHNIQUES FOR BOUNDARY VALUE PROBLEMS (MTS-704)
ALGEBRAIC CODING THEORY (MTS-705)	FIXED POINT THEORY (MTS-706)
Optional	
Pure Mathematics	Applied Mathematics
INTRODUCTION TO ALGEBRAIC CRYPTOGRAPHY (MTS-707)	ADVANCED PARTIAL DIFFERENTIAL EQUATIONS (MTS-708)
THEORY OF GROUP ACTIONS (MTS-709)	NON-NEWTONIAN FLUID MECHANICS (MTS-710)
THEORY OF GROUP GRAPHS (MTS-711)	ADVANCED HEAT AND MASS TRANSFER ANALYSIS (MTS-712)
COMMUTATIVE ALGEBRA -I (MTS-713)	ELASTODYNAMICS-I (MTS-714)
COMMUTATIVE ALGEBRA -II (MTS-715)	ELASTODYNAMICS-II (MTS-716)
BANACH ALGEBRAS (MTS-717)	NUMERICAL SOLUTIONS OF ORDINARY DIFFERENTIAL EQUATIONS (MTS-718)
THEORY OF SIMIRINGS (MTS-719)	NUMERICAL SOLUTIONS OF PARTIAL DIFFERENTIAL EQUATIONS (MTS-720)

DEPARTMENT OF ELECTRICAL ENGINEERING

Introduction

The Department of Electrical Engineering, established in 2004, is one of the prestigious departments in the field of Electrical Engineering and Computer Engineering in Pakistan. The department aspires to prepare its students to handle modern life challenges better. In this regard, Outcome an education (OBE) curriculum is designed to enable the students to cram techniques required to solve complex engineering problems and equip them with managerial and professional skills. The department graduates are not only able to serve in Pakistan but also represent the country in various industries and academic institutions abroad.

Vision

To emerge as a leading department for excellence in engineering to produce highly motivated graduates able to apply engineering knowledge to cater to the challenges of modern industry.

Mission

The Mission of the department is to provide high-quality engineering education and research environment to produce cutting edge Engineers, innovators, researchers, and entrepreneurs with high human values to serve society, industry, nation, and the world.

Dean's Message

Welcome to the Department of Electrical Engineering at the Federal Urdu University of Arts, Sciences & Technology, Islamabad. Established in 2004, our department is dedicated to providing high-quality engineering education and fostering a research environment that produces cutting-edge engineers, innovators, researchers, and entrepreneurs. We aim to produce graduates who are highly motivated and capable of applying their engineering knowledge to meet the challenges of modern industry. We offer a comprehensive range of programs, including undergraduate degrees in BSc Electrical Engineering and BS Computer Engineering, as well as graduate degrees in MS and Ph.D. in Electrical Engineering.

Our BSc Electrical Engineering program is accredited by the Pakistan Engineering Council under the Washington Accord, ensuring our curriculum meets international standards. Additionally, we implement an Outcome-Based Education (OBE) system to equip our students with the skills and knowledge necessary for their professional careers.

Our state-of-the-art facilities include eight modern laboratories and two computer labs with advanced technology and fast internet access. Students benefit from access to the IEEE digital library and other research resources provided by the HEC. Our faculty members are engaged in quality research and participate in international conferences and seminars.

We continuously review and update our curriculum based on industry feedback and faculty research to ensure it meets the field's evolving needs. We are committed to innovation and excellence, constantly upgrading our infrastructure and establishing new laboratories.

We welcome prospective students, potential faculty members, and industry partners to connect with us. Join us in our mission to advance engineering knowledge and contribute to the betterment of society through innovation and excellence.

Dr. Rahat Ullah

Incharge Dean, Faculty of

Engineering

Federal Urdu University of Arts, Sciences & Technology, Islamabad

State-of-the-Art Laboratories

The Department of Electrical Engineering at the Federal Urdu University of Arts, Sciences & Technology, Islamabad, boasts a suite of state-of-the-art laboratories designed to provide students with hands-on experience and practical knowledge. Our laboratories are equipped with the latest technology and tools, ensuring that our students receive the highest quality education and are well-prepared for the challenges of the engineering profession. Below is a list of our premier labs:

1. **Basic Electronics Lab**

   This lab introduces students to the fundamentals of electronics, including the study of electronic components, circuit design, and analysis. It serves as the foundation for more advanced electronic courses.

2. **Telecommunication Lab**

   Equipped with modern communication systems and testing equipment, this lab allows students to explore the principles of telecommunication, including signal processing, modulation, and transmission.

3. **Computer Simulation Lab**

   This lab provides access to powerful computers and advanced simulation software, enabling students to model, analyze, and design complex electrical systems and circuits.

4. **Electrical Machine & Control Systems Lab**

   Here, students learn about operating and controlling various electrical machines, such as motors and generators. The lab also covers control systems theory and its practical applications.

5. **Electrical Engineering Workshop Lab**

    This workshop is designed for hands-on training in various aspects of electrical engineering, including wiring, circuit assembly, and the use of industry-standard tools and equipment.

6. **Industrial and Power Electronics Lab**

    Focused on industrial applications, this lab covers power electronics, including studying power converters, inverters, and industrial control systems. It prepares students for careers in the industrial and power sectors.

7. **Digital Systems Lab**

    This lab explores digital electronics and systems, including designing and analyzing digital circuits, microprocessors, and programmable logic devices. It is essential for students interested in digital technology and computing.

8. **Project & Research Lab**

Dedicated to student projects and research, this lab provides the resources and environment necessary for innovation and experimentation. Students can work on capstone projects, research initiatives, and collaborative endeavors.

Our laboratories are integral to our educational philosophy, providing students with the practical skills and experience needed to excel in their careers. By combining theoretical knowledge with hands-on practice, we ensure that our graduates are well-equipped to meet the demands of the rapidly evolving field of electrical engineering.

Programs

Undergraduate

BSc Electrical Engineering
BS Computer Engineering

Graduate

MS Electrical Engineering
Ph.D. Electrical
Engineering

Undergraduate Programs

BSc Electrical Engineering

About The Program

The Department of Electrical Engineering at the Federal Urdu University of Arts, Sciences & Technology, Islamabad, provides a solid foundation for students pursuing a career in Electrical Engineering. Our program combines in-depth theoretical knowledge with diverse practical skills, aligned with the latest industry trends.

Strong partnerships with industry and funded research projects offer our students excellent opportunities for research, hands-on projects, and internships, providing relevant real-world experience. Our supportive environment fosters both professional and personal development, enhancing students' personality and ethical values.

Our highly qualified and experienced faculty, many with advanced degrees from prestigious institutions worldwide, are actively involved in teaching, research, and industrial R&D. By implementing Outcome-Based Education (OBE) principles, we ensure that our graduates are well-prepared to meet the challenges of modern industry and contribute positively to society.

Join us in our mission to produce innovative engineers who will lead with excellence and integrity.

Admission Requirements

Higher Secondary School Certificate (FSc Pre-Engineering, FSc Pre-Medical, or Diploma of Associate Engineer (DAE) in relevant discipline, securing at least 60% marks.

The candidates have to pass the Admission Test as per PEC criteria

Program Educational Objectives

PEO 1 - Have the ability to investigate and solve engineering problems using modern knowledge and techniques.

PEO 2 - Practice electrical engineering skills to pursue industrial and entrepreneurial

based careers.

PEO 3 - Demonstrate commitment to their ethical and social responsibilities both as individuals and in collaborative environments

PEO 4 - Capable of maintaining and improving their technical competence through research and advanced degree programs.

Program Learning Outcomes (PLO)

PLO 1: Engineering Knowledge
Apply knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to solve complex engineering problems.

PLO 2: Problem Analysis
Identify, formulate, research literature, and analyze complex engineering problems, reaching substantiated conclusions using the first principles of mathematics, natural sciences, and engineering sciences.

PLO 3: Design/Development of Solution
Design solutions for complex engineering problems and design systems, components, or processes that meet specified needs with appropriate consideration for public health and safety and cultural, societal, and environmental concerns.

PLO 4: Investigation
Conduct investigation into complex problems using research-based knowledge and research methods, including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

PLO 5: Modern Tool Usage
Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations.

PLO 6: The Engineer   and Society
Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PLO 7: Environment and Sustainability
Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

PLO 8: Ethic
Apply ethical principles and commit to professional ethics responsibilities and norms of engineering practice.

PLO 9: Individual and Team Work

Function effectively as an individual and as a member or leader in diverse teams and in multi-disciplinary settings.

PLO 10: Communication

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive.

PLO 11: Project Management

A n ability to demonstrate management skills and apply engineering principles to one's own work as a member and/or leader in a team to manage projects in a multidisciplinary environment.

PLO 12: Lifelong Learning

An ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.

BSc Electrical Engineering(Electronics)

Knowledge Area	Course Code	Name of Course	Theory Credit Hours	Practical Credit Hours	Total Credit Hours	Semester Credit Hours
SEMESTER WISE SUBJECTS						
Semester 1st						
EE Foundation	EET-111	Basic Electrical Engineering	3	0	3	17
	EEL-111	Basic Electrical Engineering Lab	0	1	1	
EE Foundation	EEL-112	Workshop Practice	0	1	1	
Computing	CET-110	Applications of ICT	2	0	2	
	CEL-110	Applications of ICT Lab	0	1	1	
Humanities (English)	HU-114	Functional English	3	0	3	
Natural Science (Math)	NS-115	Calculus & Analytical Geometry	3	0	3	
Natural Science(Physics)	NS-116	Applied Physics	3	0	3	
EE Foundation	EET-127	Electronic Devices & Circuits	3	0	3	17
	EEL-127	Electrionic Devices & Circuits Lab	0	1	1	
EE- Foundation	EEL-122	Engineering Drawing	0	1	1	
Computing	CET-113	Introduction to Programming	3	0	3	
	CET-113	Introduction to Programming Lab	0	1	1	
IDEE	IDE – 128	Engineering Mechanics & Thermodynamics	3	0	3	
Humanites (Culture)	HU-215	Islamic Studies	2	0	2	
Natural Science (Elective-1)	NS - 126	Multivariable Calculus	3	0	3	
Semester 3						
Computing	CEL-123	Object Oriented Progamming and Data Strutures	3	0	3	17
	CEL-123	Object Oriented Progamming and Data Strutures Lab	0	1	1	
EE Foundation	EET-212	Digital Logic Design	3	0	3	
	EEL212	Digital Logic Design Lab	0	1	1	
EE Breadth Core	EET-213	Electronic Circuit Design	3	0	3	
	EEL-213	Electronic Circuit Design Lab	0	1	1	
Humanites (Culture)	HU-217	Ideology and Constitution of Pakistan	2	0	2	
Natural Science (Elective-II)	NS-314	Complex Variables and Trasforms	3	0	3	

Semester 4						
EE Breath Core	EET – 222	Electrical Machines	3	0	3	
	EEL – 222	Electrical Machines Lab	0	1	1	
EE Breath Core	EET-211	Electrical Network Analysis	3	0	3	
	EEL-211	Electrical Network Analysis Lab	0	1	1	17
Natural Science (Math)	NS - 225	Differential Equations	3	0	3	
Social Science	SS - 226	Civic and Community Engagement	2	0	2	
Natural Science (Math)	NS-216	Linear Algebra	3	0	3	
IDEE	IDE – 128	Occupational Health and Safety	1	0	1	
EE Foundation	EE-311	Signals and System	3	0	3	
	EE-311	Signals and System Lab	0	1	1	
EE Foundation	EET – 221	Microprocessor & Microcontroller	3	0	3	
	EEL – 221	Microprocessor & Microcontroller Lab	0	1	1	18
EE Foundation	EET-312	Probability Methods in Engineering	3	0	3	
Humanities (English)	HU -326	Expository Writing	3	0	3	
EE Breadth Core	EET-501	Power Electronics	3	0	3	
	EEL-501	Power Electronics Lab	0	1	1	
EE Breadth Core	EE -321	Digital Signal Processing	3	0	3	
	EE -321	Digital Signal Processing Lab	0	1	1	
EE Breadth Core	EE -322	Linear Control Systems	3	0	3	
	EE -322	Linear Control Systems Lab	0	0	1	17
EE Breadth Core	EE -323	Electromagnetic Field Theory	3	1	3	
EE Breadth Core	EE -324	Communication Systems	3	0	3	
	EE -324	Communication Systems Lab	0	0	1	
Management Science	MS-413	Project Management	2	0	2	
EE Project	EE-411	Electrical Engineering Project I	0	2	2	
Management Sciences	MS-419	Entrepreneurship	2	0	2	
EE Depth	EET-414	Revewable Energy Systems	3	0	3	
EE Breadth Core	EET-506	Computer Communication and Networks	3	0	3	18
	EEL-506	Computer Communication and Networks	0	1	1	
EE Depth Elective	EET-XXX	Elective -I	3	0	3	
	EET-XXX	Elective-II	3	0	3	
	EEL-XXX	Elective-II Lab	0	1	1	
EE project	EEP-421	Electrical Engineering Project-II	0	4	4	
Humanites (Culture)	HU-219	Urdu	3	0	3	
EE Depth Elective	EET-XXX	Elective-III	3	0	3	15
	EEL-XXX	Elective-III Lab	0	1	1	
EE Depth Elective	EET-XXX	Elective-IV	3	0	3	
	EEL-XXX	Elective -IV Lab	0	1	1	

Total Credit Hours =   136

BS Computer Engineering

About The Program

The BS Computer Engineering program at the Federal Urdu University of Arts, Sciences & Technology, Islamabad, is designed to cover a wide spectrum of cutting-edge technologies, aligning with the latest global trends. This program aims to produce highly motivated and competent computer engineers in the fields of Embedded Systems, Artificial Intelligence, Internet of Things (IoT), Cyber Security, Machine Learning and Data Engineering. These fields are anticipated to be in high demand in the coming years, fulfilling the high-tech HR requirements of the country.

Our curriculum is designed based on Outcome-Based Education (OBE) principles, offering a blend of courses that provide in-depth theoretical knowledge and diverse practical skills to enhance the technical expertise of our students. We are committed to creating a research environment that nurtures innovators, researchers, and entrepreneurs with high human values. The program is

designed to significantly impact the professional and ethical development of our students, preparing them to meet the challenges of modern industry and contribute to society, industry, the nation, and the world.

Admission Requirements

- Higher Secondary School Certificate (FSc Pre-Engineering, FSc Pre-Medical*, ICS) or Diploma of Associate Engineer (DAE) in a relevant discipline, securing at least 60% marks.
- The students who have not studied Mathematics at the intermediate level must pass deficiency Mathematics courses (06 credits) in the first two semesters.

Program Educational Objectives

PO 1 -	Have the ability to investigate and solve computer engineering problems using modern knowledge and techniques.
PO 2 -	Demonstrate commitment to their ethical and social responsibilities both as individuals and in collaborative environments.
PO 3 -	Able to pursue academic, research, entrepreneurial, and Industrial-based careers.

Graduate Attributes (Gas) Computer Engineering

1	**Academic Education:**	Completion of an accredited program of study designed to prepare graduates as computing professionals.
2	**Knowledge for Solving Computing Problems:**	Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
3	**Problem Analysis:**	Identify and solve complex computing problems reaching, substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
4	**Design/ Development of Solutions:**	Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs.

5	**Modern Tool Usage:**	Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
6	**Individual and Team Work:**	Function effectively as an individual and as a member or leader of a team in multidisciplinary settings.
7	**Communication:**	Communicate effectively with the computing community about complex computing activities by being able to comprehend and write effective reports, design documentation, make effect ive presentations, and give and understand clear instructions.
8	**Computing Professionalism and Society:**	Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice
9	**Ethics:**	Understand and commit to professional ethics, responsibilities, and norms of professional computing practice.
10	**Life-long Learning:**	Recognize the need and have the ability to engage in independent learning for continual development as a computing professional.

Scheme of Studies Computer

Computer Engineering				
Semester 1st				
Course Code	**Name of Course**	**Theory Credit Hours**	**Practical Credit Hours**	**Total Credit Hours**
GE-111	Applied Physics	3	0	3

CE-112	Programming Fundamentals	3	1	4
GE-113	Functional English	3	0	3
GE-114	Discrete Structures	3	0	3
GE-115	Calculus & Analytical Geometry	3	0	3
GE-116	Applications of Information & Communication Technologies	3	0	3
Semester 2				
CE-121	Information Security	3	0	3
CE-122	Object Oriented Programming	3	1	4
GE-123	Islamic Studies	2	0	2
CE-124	Circuit Analysis	3	1	4
GE-125	Urdu	2	0	2
MT-126	Multivariable Calculus	3	0	3
Semester 3				
CE-211	Digital Logic Design	3	1	4
CE-212	Data Structures	3	1	4
GE-213	Ideology and Constitution of Pakistan	2	0	2
CE-214	Electronic Devices & Circuits	3	1	4
MT-215	Linear Algebra	3	0	3
Semester 4				
CE-221	Database Systems	3	1	4
CE-222	Electrical Network Analysis	3	1	4
GE-223	Expository Writing	3	0	3
MT-224	Probability Methods in Engineering	3	0	3
CE-225	Computer Architecture	3	0	3
Semester 5				
CE-311	Computer Organization & Assembly Language	3	1	4
CE-312	Elective-I (Embedded Systems)	3	1	4

CE-313	Operating Systems	3	0	3
CE-314	Signals and Systems	3	1	4
CE-315	Artificial Intelligence	3	0	3
Semester 6				
CE -321	Parallel and Distributed Computing	3	1	4
CE -322	Elective-II (Digital Signal Processing)	3	1	4
CE -323	Software Engineering	3	0	3
CE -324	Computer Communication and Networks	3	1	4
CE -325	Elective-III (Control Engineering)	3	1	4
Semester 7				
CEP-411	Computer Engineering Project I	0	3	3
SS-412	Entrepreneurship	2	0	2
SS-413	Professional Practices	2	0	2
CE-414	Analysis of Algorithms	3	0	3
CE-415	Elective - IV (Digital Image Processing)	3	0	3
Semester 8				
CEP-421	Computer Engineering Project-II	0	3	3
SS-422	Civic and Community Engagement	2	0	2
CE-423	Elective-V (Digital System Design)	3	1	4
CE-424	Elective-VI (Internet of Things)	3	0	3

Graduate Programs

MS Electrical Engineering

About The Program

The MS program in Electrical Engineering at the Federal Urdu University of Arts, Sciences & Technology, Islamabad, emphasizes practical applications and specialized skill development. Our curriculum is designed to align with industry demands and technological advancements, ensuring graduates are prepared to excel in Research and Development, Industry, Academia, Defence Organizations, and beyond. Through rigorous academic training and hands-on experiences, students gain the expertise to tackle complex challenges and contribute effectively to their professions and society.

Specializations offered include:

- Control Systems
- Signal Processing
- Renewable Energy Systems
- Microelectronics & Microwave
- Wireless Communication & Networks
- Internet of Things

Join us in preparing for a future of innovation and impact in Electrical Engineering.

Admission Requirements

A minimum of 16 years of education leading to BS/BE/BSc in Electrical / Electronics / Telecommunications Engineering or equivalent.
Minimum 2.5/4.00 CGPA (as per HEC Policy)
University Admission Test/HEC Approved Test, Interview

Program Duration

This is a two years program comprising 4 semesters. There will be a Fall and a Spring semester each year. The maximum duration to complete an MS in Electrical Engineering is 4 years.

Degree Requirements

- 24 Cr. Hrs. Course Work.
- 6 Cr. Hrs. Research Work.
- Synopsis Defence.
- Thesis Evaluation (Internal/External).
- Final Defence/Viva.

Ph.D. Electrical Engineering

About The Program

The Ph.D. program in Electrical Engineering at the Federal Urdu University of Arts, Sciences & Technology, Islamabad, is designed to foster advanced research and innovation in the field. This program offers doctoral candidates the opportunity to specialize in areas such as Control Systems, Signal Processing, Renewable Energy Systems, Microelectronics & Microwave, Telecommunication & Networks, and the Internet of Things.

Our curriculum is structured to meet the highest academic standards and align with global research trends and industrial needs. Ph.D. students engage in cutting-edge research under the mentorship of experienced faculty members who are actively involved in academic pursuits and industry collaborations. Graduates emerge from our program equipped with the expertise to lead in academia, industry research, and technology development, making significant contributions to their fields and society.

Admission Requirements

- MS degree in relevant discipline
- Minimum CGPA 3.0/4.0
- Admission Test / HEC approved Test
- Interview

Program Duration

- his is a three-year program consisting of six semesters. There will be a Fall and a Spring semester in each year. The maximum duration to complete Ph.D. in Electrical Engineering is seven years.

Degree Requirements

- 18 Cr. Hrs. Coursework with minimum CGPA 3.00/4.00.
- Comprehensive Examination.
- 12 Cr. Hrs. Research Work.
- Synopsis Defence.
- Publication of at least one research paper in an HEC approved "W" or "X" category journal is a requirement for the award of Ph.D. degree (HEC Policy).
- Thesis Foreign Evaluation.
- Local Defence.

DEPARTMENT OF INTERNATIONAL RELATIONS

Introdcution

The Department of International Relations, established in 2021, seeks to advance the science of politics and international relations through teaching and research. For this purpose, the department focuses on grooming students to take up responsibilities as successful professionals. Our courses are designed to develop a strong conceptual background in our students, equip them with up-to-date information, and inculcate critical thinking. This approach is beneficial for developing a trend of advanced research in the subject, creating future leaders capable of delivering the services that citizens expect today. Through education, research, and public engagement, the department focuses on the most pressing foreign policy problems and international issues, ensuring that future policy professionals are prepared with the hard and soft skills necessary to understand how power, influence, and change move through political circles. Our vision is a world with a broader political power and process understanding.

Programs

BS Four Years Program
BS 3rd Years Program
Associate Degree Program

Sr. #	Course Code	Course Title	Type of Course	Credit Hours
		Semester 1st		
1	GEN-111	Islamic Studies/ Ethics	General	2
2	GEN-112	Functional English	General	3
3	GEN-113	Application of information and Communication technologies in IR	General	3 (2+1)

4	GEN-118	Introduction to Psychology (Social Sciences)	General	2
5	IRU-111	Introduction to International Relations	Major	3
6	IRU-112	Introduction to Political Sciences	Major	3

Semester 2nd				
Sr. #	Course Code	Course Title	Type of Course	Credit Hours
1	GEN-121	Ideology and Constitution of Pakistan	General	2
2	GEN-122	Expository Writing	General	3
3	GEN-123	Quantitative Reasoning I (Mathematics)	General	3
4	GEN-124	Civics and Community Engagement	General	2
5	IRU-121	International Relations 1648 -1945	Major	3
6	ID-001	Introduction to Geography	Interdisciplinary	3

Semester 3rd				
Sr. #	Course Code	Course Title	Type of Course	Credit Hours
1	GEN-231	Quantitative Reasoning II Statistics	General	3
2	GEN-232	Arts Humanities/Urdu	General	3
3	IRU-231	International Relations Since 1945	Major	3
4	IRU-232	Introduction to International Security	Major	3
5	IRU-233	Foreign Policy Analysis	Major	
6	ID-002	Introduction to Economics	Interdisciplinary	3

Semester 4th				
Sr. #	Course Code	Course Title	Type of Course	Credit Hours
1	GEN-241	Entrepreneurship	General	2
2	GEN-245	Introduction to Ecology/Natural Sciences	General	(2+1)3
3	IRU-241	Foreign Policy of Pakistan	Major	3
4	IRU-242	Regional & International Organizations	Major	3
5	IRU-243	Globalization & International Relations	Major	3
6	IRU-244	Geopolitics Structure of the World	Major	3

Semester 5th				
Sr. #	Course Code	Course Title	Type of Course	Credit Hours
1	IRU-351	Theories and Approaches of IR	Major	3
2	IRU-352	Research Methodology	Major	3
3	IRU-353	Public & International Law I	Major	3
4	IRU-354	Foreign Policies of Major Powers	Major	3

5	IRU-355 IRU-356	Regional Studies International Politics of Central Asia & Caucasus or International Politics of Europe	Major	3
6	ID-003	Introduction to Mass Communication	Interdisciplinary	3

Semester 6th				
Sr. #	**Course Code**	**Course Title**	**Type of Course**	**Credit Hours**
1	IRU-361	Strategic Studies	Major	3
2	IRU-362	Public & International Law II	Major	3
3	IRU-363	International Political Economy	Major	3
4	IRU-364 IRU-365	(Concept & Issues) Dynamics of Kashmir Conflict Or International Politics of Energy Security	Major	3
5	IRU-366 IRU-367	(Regional Studies) Understanding China in Global perspective or North America	Major	3
6	ID-004	Introduction to International Development	Interdisciplinary	3

Semester 7th				
Sr. #	**Course Code**	**Course Title**	**Type of Course**	**Credit Hours**
1	IRU-471	International Politics of Human	Major	3
2	IRU-472	Contemporary Regional & Global Order	Major	3
3	IRU-473	Regional Connectivity BRI& CPEC	Major	3
4	IRU-474 IRU-475	Concept & Issues Geo Politics of India Ocean and Maritime Potential of Pakistan or Cyber Politics In International Relations.	Major	3
5	IRU-476 IRU-477	(Regional Studies) International Politics of Middle East & North Africa or International Politics of South America	Major	3
6		Internship		3

Semester 8th				
Sr. #	**Course Code**	**Course Title**	**Type of Course**	**Credit Hours**
1	IRU-481	Nuclear Studies	Major	3
2	IRU-482	Conflict Management & Conflict Resolution	Major	3
3	IRU-483	International politics of Environment	Major	3
4	IRU-484 IRU-485	(Concept & Issues) Non-State Actors in International Relations or Ethnic Conflict and International Relations.	Major	3
5	IRU-486 IRU-487	(Regional Studies) International Politics of South East Asia or International Politics of South Asia	Major	3
6		Capstone Project		3

1. **List of Interdisciplinary Courses**

Note: Interdisciplinary course will be selected from the following list.

S. No.	Course Code	Course Title	Credit Hours
1	ID-001	Introduction to Geography	03
2	ID-002	Introduction to Economics	03
3	ID-003	International to Mass Communication	03
4	ID-004	Introduction to International Development	03
5	ID-005	History of the Muslim World	03
6	ID-006	Introduction to Anthropology	03

2. **List of social Sciences Courses**

Note: Social Sciences courses will be selected from the following list.

S. No.	Course Code	Course Title	Credit Hours
1	GEN- 114	Introduction to Political Science	02
2	GEN-115	Basic Concepts of Social Sciences	02
3	GEN-116	Fundamental of Economics	02
4	GEN-117	Introduction to Sociology	02
5	GEN-118	Introduction to Psychology	02

3. **List of Natural Sciences Courses**

Note: Natural Sciences courses will be selected from the following list.

S. No.	Course Code	Course Title	Credit Hours
1	GEN-231	Every Day Sciences	(2+1)3
2	GEN-245	Introduction to Ecology	(2+1)3
3	GEN-233	Introduction to Biology	(2+1)3
4	GEN-234	Introduction to Chemistry	(2+1)3
5	GEN-235	Introduction to Physics	(2+1)3
6	GEN-236	Food & Nutrition	(2+1)3

Note: The above-mentioned list of courses is for 3 Degree programs

I. All Courses are for 4 years degree program.

II. The first four semesters' courses will be offered to students of the Associate Degree program.

III. The Last four semesters' courses will be offered to students of the third-year Degree program.

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List of all Courses are given above mentioned.

- General Courses including lists of social sciences and natural sciences.
- Interdisciplinary Courses
- Major Courses
- Research project and internship will be mandatory for all students.

Coding Criteria

 I. All codes are alpha-numeric

II. Numeric code: Ist digit+= first year, 2nd digit=semester,3rd digit= course

III.GEN stands for General (courses), and ID stands for Interdisciplinary (courses)

DEPARTMENT OF MASS COMMUNICATION

Introduction

The Department of Mass Communication was established in 2021 with the modest start of a specialized bachelor's program in Mass Communication. The Department of Mass Communication FUUAST Islamabad Campus plays a significant role in disseminating and strengthening media education in the country. The Department offers a four-year BS program per the directives and policy of the Higher Education Commission of Pakistan. The Department receives a large number of admission applications every year and grants admission to a limited number of students purely on a merit basis. Department offered its. The Department has highly qualified faculty members with excellent teaching experience at different levels. The role of this Department has been appreciated at various national and international journalism, mass communication, and media studies forums.

Vision

To become a center of excellence in media and communication studies for teaching, student mentoring, research and creative endeavors.

Mission

We believe in professional preparation and a liberal education rooted in the arts and sciences. Therefore, essential to our mission is a commitment to teach students to think critically and creatively. We prepare students to be leaders in mass communication fields and to be thoughtful, productive citizens in their communities and public life generally. We commit to doing so in a dynamic, interactive, and intellectually challenging environment. We believe in producing research graduates who are rigorously educated in theoretical concepts and research methods, will engage in critical analysis of media content, performance, and audiences, add to basic and applied knowledge in the field, bring critical and normative perspectives to their analysis, perform with distinction in the academic and professional worlds, and provide leadership nationally and internationally. Our mission is not simply to be a depository of knowledge but to produce creators of knowledge.

Objectives

The fundamental objective of the Department is to strengthen media education and research in Pakistan for working and budding journalists/media researchers/analysts, and teachers.

HOD Message

The Department of Mass Communication has been envisioned as a center of excellence for promoting media and communication studies in the country. We aim to accomplish this in a manner that can be useful for media professionals, academic scholars, researchers, NGOs, policymakers, and regulators. The department offers a unique opportunity to combine innovative media and communication studies with involvement in joint research projects, engaging prominent media institutions and experts of national and international repute. Efforts are underway to affiliate the Department of Mass Communication with internationally acclaimed teaching institutions to enhance excellence in learning. The department believes that professional training and a liberal arts education should be well-equipped to face contemporary challenges. Hence, the department prepares students not only to become professionals but also to be leaders in mass communication. With its state-of-the-art facilities, the department offers practice-based education underpinned by professional knowledge and rigorous theoretical inquiry through research. The students are provided opportunities to publish their monthly newsletter, join field visits to media organizations, and access a series of national and foreign scholars' lectures, seminars, and workshops to enhance their scholastic and professional skills, in addition to their extracurricular activities. The department has its own television studios, professional cameras, and lighting equipment. The latest editing suites are also available along with other post-production facilities.

BS Mass Communication 4 Years

Eligibility: At least 45% marks in Intermediate or equivalent.

Duration: 04 Year Program (04 Semesters)

First Semester

Course Code	Course Title	Category	Credit Hours
GEN-111	Islamic Studies/ Ethics	General	2
GEN-112	Functional English	General	3
GEN-114	Political Science (Social Sciences)	General	2
GEN-113	Introduction to Information & Communication Technologies	General	3 (2+1)
ID-100	Introduction to IR	Interdisciplinary	3
MCU-111	Introduction to Mass Communication	Major	3

Second Semester

Course Code	Course Title	Category	Credit Hours
GEN-121	Ideology and Constitution of Pakistan	General	2
GEN-122	Expository Writing	General	3
GEN-124	Civics and Community Engagement	General	2
GEN-123	Mathematics	General	3
MCU-112	Media Industry in Pakistan	Major	3
	Feature, Column & Editorial Writing	Major	3

3rd Semester

Course Code	Course Title	Category	Credit Hours
GEN-231	Statistics	General	3
GEN-232	Arts and Humanities- Urdu	General	3 (2+1)
MCU-231	Current affairs (National & international)	Major	3
MCU-232	Introduction to news and news writing	Major	3
MCU-233	Mobile Journalism Production and Broadcasting	Major	3
MCU-234	Introduction to social media	Major	3

4th Semester

Course Code	Course Title	Category	Credit Hours
GEN-241	Entrepreneurship	General	2
GEN-246	Natural Sciences- Everyday Science	General	3
MUC-241	Communication theories	Major	3
MCU-242	Contemporary World Media	Major	3
MCU-243	Introduction to performing arts (Theater, Drama and Film)	Major	3
ID-200	Psychology	Interdisciplinary	3

5th Semester

Course Code	Course Title	Category	Credit Hours
ID-300	Islamic History	Interdisciplinary	3
MCU-351	Theories of mass communication	Major	3
MUC-352	Conflict Reporting	Major	3
MCU-353	Introduction to Advertising and PR	Major	3
MCU-354	Introduction to Broadcast Media	Major	3
MCU-355	Electronic media I	Major	3

6th Semester

Course Code	Course Title	Category	Credit Hours
MCU-361	Introduction to Economics	Interdisciplinary	3
MCU-362	Electronic media II	Major	3
MCU-363	Photojournalism in the Digital Era	Major	3
MCU-364	Research in Mass Communication I	Major	3
MCU-365	Development Support Communication (DSC)	Major	3
MCU-366	Computer Applications in Mass Communication	Major	3

<u>**7th Semester**</u>

Course Code	Course Title	Category	Credit Hours
MCU-471	Digital Journalism	Major	3
MCU-472	Media laws and Ethics	Major	3
MCU-473	Research in Mass Communication II	Major	3
MCU-474	Media and Society	Major	3
MCU-475	Conflict Crisis and Communication	Major	3
MCU-476	Internship	Major	3

<u>**8th Semester**</u>

Course Code	Course Title	Category	Credit Hours
MCU-481	Media Management	Major	3
MCU-482	Convergent Media	Major	3
MCU-483	Specialization	Major	6 (3+3)
MCU-484	Capstone Project	Major	3

Associate degree Program-2 Years

(Associate Degree in Mass Communication)

S. #	Course Code	Course Title	Type of Course	Credit Hours
		Semester 1st		
1	GEN-111	Islamic Studies/ Ethics	General	2
2	GEN-112	Functional English	General	3
3	GEN-114	Political Science	General	2
4	GEN-113	Introduction to Information and Communication Technologies	General	3 (2+1)
5	MCU-111	Introduction to Mass Communication	Major	3
		Semester 2nd		
1	GEN-121	Ideology and Constitution of Pakistan	General	2
2	GEN-122	Expository Writing	General	3
3	GEN-124	Civics and Community Engagement	General	2
4	MCU-121	Media Industry in Pakistan	Major	3
5	MCU-122	Contemporary World media	Major	3
6	MCU-123	Urdu for Journalism	Major	3
				16

		Semester 3rd		
1	**GEN-123**	Mathematics	General	3
2	**GEN-246**	Everyday Science	General	3(2+1)
3	**MCU-231**	International Journalism and World media organizations	Major	3
4	**MCU-232**	Introduction to news and news writing	Major	3
5	**MCU-233**	Introduction to mobile journalism	Major	3
				15
		Semester 4th		
1	**GEN-232**	Arts Humanities/ Urdu***	General	2
2	**GEN-231**	Statistics	General	3
3	**GEN-241**	Entrepreneurship	General	2
4	**MCU-241**	Communication theories	Major	3
5	**MCU242**	Introduction to social media	Major	3
6	**MCU-243**	Introduction to performing arts. (Theater, drama, and Film)	Major	3
				16
			Grand Total	Gen 30 Major 30 **60**

BS Mass Communication 2 Years 5th Semester Intake

1st Semester

Course Code	Course Title	Category	Credit Hours
ID-300	Islamic History	Interdisciplinary	3
MCU-351	Theories of mass communication	Major	3
MUC-352	Conflict Reporting	Major	3
MCU-353	Introduction to Advertising and PR	Major	3
MCU-354	Current Affairs (National and International)	Major	3
MCU-355	Electronic media I	Major	3

2nd Semester

Course Code	Course Title	Category	Credit Hours
MCU-361	Introduction to Economics	Interdisciplinary	3

Course Code	Course Title	Category	Credit Hours
MCU-362	Electronic media II	Major	3
MCU-363	Photojournalism in the Digital Era	Major	3
MCU-364	Research in Mass Communication I	Major	3
MCU-365	Development Support Communication (DSC)	Major	3
MCU-366	Computer Applications in Mass Communication	Major	3

3rd Semester

Course Code	Course Title	Category	Credit Hours
MCU-471	Digital Journalism	Major	3
MCU-472	Media laws and Ethics	Major	3
MCU-473	Research in Mass Communication II	Major	3
MCU-474	Media and Society	Major	3
MCU-475	Conflict Crisis and Communication	Major	3
MCU-476	Internship	Major	3

4th Semester

Course Code	Course Title	Category	Credit Hours
MCU-481	Media Management	Major	3
MCU-482	Convergent Media	Major	3
MCU-483	Specialization	Major	6 (3+3)
MCU-484	Capstone Project	Major	3

ELIGIBILITY CRITERIA/ DURATION

DEPARTMENT OF COMPUTER SCIENCE

BS (Computer Science) - (Morning / Evening)
Duration: 4 Years (8 Semesters)
Eligibility: HSSC, A Level, or equivalent with at least 50% marks from any recognized Board /Institution. If a student has not taken math subject in intermediate, he/she must take 6 credit hours of two math deficiency courses in the first two semesters.
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BS (Computer Science) - 3rd Year Program (Morning/Evening) 2Year 4 semesters.
Duration: 2 Years (4 Semesters)
Eligibility: B.A, B.Sc. Math, Computer Science 2 year or ADP, CS, I.T, SE, at least with 50% marks or 2.50 / 4.00 CGPA from HEC-recognized educational institutions.

ADP (Computer Science) (Morning / Evening) 2Year 4 semesters.
Duration: 4 Years (8 Semesters)
Eligibility: HSSC, A Level, or equivalent with at least 50% marks from any recognized Board /Institution. If a student has not taken math subject in intermediate, he/she must take 6 credit hours of two math deficiency courses in the first two semesters.

MS (Computer Science)
Duration: 2 Years (4 Semesters)
Eligibility: M.Sc. computer science two years or BS (CS) 4 years with at least 2.50 / 4.00 CGPA, or 60% marks from any HEC recognized University/Institute. Candidates will be required to pass 60% of the departmental test and interview.

Ph.D. (Computer Science)

Duration: 2 Years (4 Semesters)

Eligibility: MS/M. Phil CS or equivalent two-year with thesis at least 3.00/4.00 CGPA or first division with the annual system from any HEC-recognized university /institute. If the eligible candidate has passed the GAT test with a minimum of 60% marks or 60 scores in the GRE subject, then the departmental test will be exempted. If the GAT or GRE test is not cleared, then the eligible candidate will have to pass the departmental test/interview with 70% marks.

DEPARTMENT OF SOFTWARE ENGINEERING

BS (Software Engineering) - (Morning / Evening)
Duration: 4 Years (8 Semesters)
Eligibility: HSSC, A Level, or equivalent with at least 50% marks from any recognized Board /Institution. If a student has not taken math subject in intermediate, he/she must take 6 credit hours of two math deficiency courses in the first two semesters.

ADP (Software Engineering) - Morning/Evening) 2Year 4 semester.

Duration: 2 Years (4 Semesters)
Eligibility: HSSC, A Level, or equivalent with at least 50% marks from any recognized Board /Institution. If a student has not taken math subject in intermediate, he/she must take 6 credit hours of two math deficiency courses in the first two semesters.

BS (Artificial Intelligence) - (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate/HSSC/ A Level, or equivalent with at least 50% marks from any recognized Board /Institution. If a student has not taken math subject in intermediate, he/she must take 6 credit hours of two math deficiency courses in the first two semesters.

DEPARTMENT OF PHYSICS

BS (Physics) - (Morning / Evening)
Duration: 4 Years (8 Semesters)
Eligibility: F.Sc. or equivalent (with Physics and Mathematics) with at least 45% marks or DAE (Electrical or Mechanical) with at least 70% marks from any recognized institutions.

BS (Physics) - 3rd Year Program (Morning/2Year 4 semester.
Duration: 2 Years (4 Semesters)
Eligibility: B.Sc. with Physics, Math, ADP (Physics) with at least 45 % marks from HEC-recognized institutions.

ADP (Physics) (Morning / 2Year 4 semester.
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate, A level (Physics, Math) or equivalent at least 45 % marks from any recognized board or DAE at least 60% marks from any recognized institutions.

M. Phil Physics
Duration: 2 Years (4 Semesters)
Eligibility: BS Physics / BS Applied Physics 4 years or M.Sc. Physics /M.Sc. Applied Physics with at least 2.50/4.00 CGPA or 60% marks from annual system HEC-recognized institution/University. Candidates will also have to qualify for departmental admission tests and interviews. Candidates who have passed the GAT general test or NTS, HAT ETC test HEC with 50% marks and the same is still valid in due time, will be exempted from the departmental test.

DEPARTMENT OF BUSINESS ADMINISTRATION

BBA (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate A Level or equivalent with at least 45% marks from recognized institutions.

MBA (Morning)
Duration: 2 Years (4 Semesters) with Thesis
Eligibility: B.COM 4 years, BBA 4 Years, BS (Economics & Finance) 4 years, Bachelor of Accounting & Finance 4 Years, M. Com 2 Years with minimum CGPA 3.00/4.00 or 60% marks from HEC recognized institute/University. Eligible candidates will be required to pass the departmental test and interview

MS Business Administration (Morning)
Duration: 2 Years (4 Semesters) with Thesis
Eligibility: MBA /MPA/M.COM/BBA 4 years/B.COM 4 years, with at least 2.50/4.00 CGPA or annual system 60 % marks from HEC-recognized Universities/Institutions. Eligible candidates will be required to pass the departmental test and interview. Candidates who have passed the GAT general test or NTS,HAT ETC test HEC with 50% marks and the same is still valid, will be exempted from the departmental test.

Ph.D. Business Administration (Morning)
Duration: 3 Years (6 Semesters) with Thesis
Eligibility: MS Business Administration with at least 3.00/4.00 CGPA or 70% marks from the annual system and recognized by HEC-University/ Institutions. Eligible candidates will be required to pass the departmental test and interview. Candidates who have passed the GAT general test or NTS,HAT, ETC test HEC with 60% marks and the same is still valid will be exempted from the departmental test.

DEPARTMENT OF COMMERECE

BS (Commerce) (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from any recognized institutions/Board.

ADP (Commerce) (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from any recognized institutions/Board.

BS (Commerce) (Morning) 3rd Year Program 5th semester 2Year 4 semester.
Duration: 2 Years (4 Semesters)
Eligibility: B. Com 2 year with at least 2.50/4.00 CGPA or 45% marks ADP Commerce from HEC recognized University/ Institutions.

DEPARTMENT OF ECONOMICS

BS (Economics) - (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from recognized institutions/ Board.

BS (Economics and Finance) (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from recognized institutions/ Board.

BS (Economics with Data Science) (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from a recognized institution/ Board.

ADP (Economics) - (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from a recognized institutions/ Board.

ADP (Economics and Finance) (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate, A level or equivalent with at least 45 % marks from a recognized institutions/ Board.

BS (Economics) - (Morning) 3rd year program 5th semester
Duration: 2 Years (4 Semesters)
Eligibility: B.A, BCS, Associate Degree with at least 45 % marks or 2.500/4.00 CGPA from HEC-recognized institutions. Eligible candidates will be admitted to BS 3rd year, 5th semester, as per the rules and regulations of the University.

BS (Economics & Finance) - (Morning) 3rd year program 5th semester
Duration: 2 Years (4 Semesters)
Eligibility: B.A, BCS, Associate Degree with at least 45 % marks or 2.500/4.00 CGPA from HEC-recognized institutions. Eligible candidates will be admitted to BS 3rd year 5th semester as per the rules and regulations of the University.

M.Phil. (Economics) (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: M.Sc. / BS Economics/Economics& Finance/Agriculture Economics /Environmental

Economics/Development Economics/Public Policy Economics/Health Economics or equivalent to 1st Davison in the annual system while with the semester system, it is 2.50/4.00 CGPA from an HEC-recognized institution/university. Eligible candidates will be required to pass the departmental test and interview with 60% percent marks. Candidates who have passed the GAT Subject General test or NTS, HAT, ETC test HEC with 60% marks and the same is still valid will be exempted from the departmental test.

Ph.D. (Economics)

Duration: 3 Years (6 Semesters)

Eligibility: M.Phil./M.Sc./Economics & Finance /Agriculture Economics/Environmental Economics/Development Economics/Public Policy Economics/Health Economics or equivalent with least First Division while in semester system 3.00/ 4.00 CGPA from HEC recognized institution/University. Eligible candidates will be required to pass the departmental test and interview with 70% percent marks. Candidates who have passed the GAT Subject General test or NTS, HAT, ETC test HEC with 70% marks and the same is still valid will be exempted from the departmental test.

DEPARTMENT OF ELECTRICAL ENGINEERING

B.Sc. Electrical Engineering (Morning)
Duration: 4 Years (8 Semesters) Recognized with (PEC)
Eligibility: F.Sc. Pre-Engineering, pre-Medical or DAE or B.Tech Honors. or equivalent with at least 60 % marks from recognized institutions/ Board.

BS Computer Engineering (Morning/Evening)
Duration: 4 Years (8 Semesters) Recognized with (NCEAC)
Eligibility: F.Sc. Pre-Engineering, pre-medical or DAE or B. Tech Honors. or equivalent with at least 60 % marks from recognized institutions/ Board.

MS Electrical Engineering (Evening)
Duration: 2 Years (4 Semesters) with Thesis
Eligibility: B.Sc. Engineering (Electrical /Electronic/Telecom /Computer/Power) with PEC recognized program with at least 2.50/4.00 CGPA. Candidates are required to qualify for departmental admission test and interview.
Note: Candidates must write the PEC registration number on the admission form.

Ph.D. Electrical Engineering
Duration: 3 Years (6 Semesters) with Thesis
Eligibility: B.Sc. Engineering (Electrical /Electronic/Telecom /Computer/Power) with PEC recognized program with at least 2.50/4.00 CGPA. Candidates are required to qualify for departmental admission test and interview. Candidates who have passed the GAT Subject General test or NTS, HAT, ETC test HEC with 60% marks and the same is still valid will be exempted from the departmental test.

DEPARTMENT OF URDU

BS Urdu (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate, A level, or equivalent with at least 45 % marks from any recognized institutions/Board.

ADP Urdu (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate, A level, or equivalent with at least 45 % marks from any recognized institutions/Board.

BS Urdu (Morning) 3rd year program 5th semester
Duration: 2 Years (4 Semesters)
Eligibility: B.A, B.Sc or equivalent or 14 years of education with at least 45 % marks. Eligible candidates will be admitted to BS 3rd year 5th semester as per the rules and regulations of the University.

M. Phil Urdu (Morning)
Duration: 2 Years (4 Semesters) with Thesis
Eligibility: BS Urdu 4 year or M.A Urdu annual system with at least 50 % marks while in semester system 2.500/4.00 CGPA HEC recognized institutions/university. After the admission, the student will have to complete the coursework and research paper as per the prevailing rules of HEC. The student who is an employee in any institution must submit the NOC of his/her institution along with the admission form. Eligible candidates will be required to pass the departmental test and interview with 60% percent marks. Candidates who have passed the GAT General test or NTS, ETC test, HAT HEC with 70% marks and the same is still valid will be exempted from the departmental test

Ph.D. (Urdu)
Duration: 3 Years (6 Semesters) with Thesis
Eligibility: M.Phil. Urdu with at least 3.00/4.00 CGPA or equivalent with first division in the annual system from a recognized institution/University. The student who is an employee in any institution must submit the NOC of his/her institution along with the admission form. Eligible candidates will be required to pass the departmental test and interview with 70% percent marks. Candidates who have passed the GAT General test or NTS, , ETC test, HAT HEC with 60% marks and the same is still valid will be exempted from the departmental test.

DEPARTMENT OF ISLAMIC STUDIES

BS (Islamiat)
Duration: 4 Years (8 Semesters)
Eligibility: FA/F.Sc. / O.Level or equivalent with at least 45% marks from any recognized institutions/Board.

ADP (Islamiat)
Duration: 4 Years (8 Semesters)
Eligibility: FA/ F.Sc./ O.Level or equivalent with at least 45% marks from any recognized institutions/Board.

BS (Islamiat) - (Morning) 3rd year program 5th semester
Duration: 2 Years (4 Semesters)
Eligibility: B.A, B.Sc, Associate Degree or equivalent 14 years of education with at least 45 % marks or 2.500/4.00 CGPA from HEC-recognized institutions. Eligible candidates will be admitted to BS 3rd year, 5th semester, as per the rules and regulations of the University.

M.Phil. (Islamiat)
Duration: 2 Years (4 Semesters)
Eligibility: BS Islamiat 4 year or MA (Islamiat) or equivalent certificate from HEC in case of shahadat ul alamia with annual system exams 50% marks while in semester 2.500/4.00CGPA

Eligible candidates will be required to pass the departmental test and interview with 60% percent marks. Candidates who have passed the GAT General test or NTS or HAT, ETC test HEC with 70% marks and the same is still valid will be exempted from the departmental test. The student who is an employee in any institution must submit the NOC of his/her institution along with the admission form. After admission, the student will have to complete the coursework and research paper as per the prevailing rules of HEC.

DEPARTMENT OF MATHEMATICAL SCIENCE

BS Mathematics (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate with Mathematics /A level or equivalent with at least 45% marks or DAE with at least 60% marks from any recognized institutions/Board.

ADP (Math) (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate with Mathematics /A level or equivalent with at least 45% marks or DAE with at least 60% marks from any recognized institutions/Board.

BS Math 3rd Year Program 5th semester (Morning) 2Year 4 semesters.
Duration: 2 Years (4 Semesters)
Eligibility: B.A/B.Sc. or equivalent 14 years of education with Mathematics at least 45% marks or ADP mathematics 45% marks or 2.500/4.00 CGPA HEC recognized educational institutions. Eligible candidates will be admitted to BS 3rd year 5th semester as per the rules and regulations of the University.

DEPARTMENT OF ENGLISH

BS English (Morning)
Duration: 4 Years (8 Semesters)
Eligibility: Intermediate /A level or equivalent with 45% marks from any recognized institution / Board.

ADP English (Morning)
Duration: 2 Years (4 Semesters)
Eligibility: Intermediate /A level or equivalent with 45% marks from any recognized institution / Board.

BS English 3rd Year Program 5th semester (Morning) 2Year 4 semesters.
Duration: 2Years (4 Semesters)
Eligibility: B.A /B.Sc./ or equivalent 14 years of education with at least 45% marks or ADP English with 2.500/4.00 CGPA from a recognized institution. Eligible candidates will be admitted to BS 3rd year 5th semester as per the rules and regulations of the University.

DEPARTMENT OF INTERNATIONAL RELATIONS

BS International Relations (MORNING)
Duration: 4 Years (8 Semesters)

Eligibility: Intermediate / A level or equivalent with at least 45 % from a recognized institution/Board.

ADP International Relations (MORNING)
Duration: 2 Years (4 Semesters)

Eligibility: Intermediate / A level or equivalent with at least 45 % from a recognized institution/Board.

BS (I.R) 3rd Year Program 5th semester (Morning) 2Year
Eligibility: B.A/B.Sc. or equivalent 14 years of education with at least 45% marks or ADP (I.R) 2.500/4.00CGPA HEC recognized institution. Eligible candidates will be admitted to BS 3rd year 5th semester as per the rules and regulations of the University.

DEPARTMENT OF MASS COMMUNICATION

BS Mass Communication (MORNING)
Duration: 4 Years (8 Semesters)

Eligibility: Intermediate /A level or equivalent with at least 45%marks from a recognized institution / Board.

ADP (Mass Communication) (Morning)
Duration: 2 Years (4 Semesters)

Eligibility: Intermediate /A level or equivalent with at least 45%marks from a recognized institution / Board.

BS Mass Communication 3rd Year Program 5th semester (Morning)
Duration: 2 Years (4 Semesters)

Eligibility: B.A, B.Sc. or equivalent 14 years of education with 45% marks or ADP (Mass Communication) 2.50/4.00 CGPA from HEC-recognized institutions. Eligible candidates will be admitted to BS 3rd year 5th semester as per the rules and regulations of the University.

SPORTS & CO-CURRICULAR ACTIVITIES

Recognizing the importance of extracurricular activities, FUUAST holds sports week once every semester. Since 2006, a variety of events and sports have been held, keeping in mind the students' diverse interests.

FUUAST believes that extracurricular activities provide students and youth with many opportunities to grow physically and emotionally. Moreover, participation in outdoor games allows students to build social skills through teamwork and peer interaction. Extracurricular activities help teach youth to develop many essential skills. When students enter the practical field, they face competition everywhere. Participation in competition activities at the student level gives them an opportunity to understand the healthy aspects of competition in a friendly environment. The students involved in sports are more active in academics and social life. The University organizes the following events during the sports week.

- Drama Competition
- Urdu Debates
- English Debates
- Naat & Qirat Competition
- Flowers Arrangement Competition
- Printing Competition
- Cricket Match
- Football Match
- Badminton Match
- Table Tennis Match
- Volley Ball Match
- Indoor Games

At the end of the sports week, a well-organized closing ceremony is arranged, where the winning students are given shields and prizes for their encouragement and appreciation.

DOCUMENTS REQUIRED
FOR ADMISSION

Under Graduate

Program Bs 4 Years

Program

1. Attested copies of Academic Certificate, (Matric/O-Level/F.A/F.Sc./DAE) marks sheet.
2. Four passport size photographs.
3. Attested copy of National Identity Card.
4. Affidavit on stamp paper with two witness CNIC copies attested.
5. Hope certificate for result awaited candidates (Optional).
6. Only those students who submit the affidavit whose admission will be confirmed in the merit list.

Associate Degree Program (ADP) 2 Year

1. Attested copies of Academic Certificate, (Matric/O-Level/F.A/F.Sc./DAE) marks sheet.
2. Four passport size photographs.
3. Attested copy of National Identity Card.
4. Affidavit on stamp paper with two witness CNIC copies attested.
5. Hope certificate for result awaited candidates (Optional).
6. Only those students who submit the affidavit whose admission will be confirmed in the merit list.

Bs 3rd Year Program 5th Semester Intake 2 year

1. Attested copies of Academic Certificates (Matric/O-Level/F.A/F.Sc./ ADP/B.A/B.Sc).
2. Four passport size photographs.
3. Attested copy of National Identity Card.
4. Affidavit on stamp paper with two witnesses CNIC copies attested on the time of verification of original documents of academics.
5. Only those students who submit the affidavit whose admission will be confirmed in the merit list.

Post Graduate Program

MS/M. Phil 2 Year program

1. Attested copies of Academic Certificates (Matric/O-Level/F.A/F.Sc./ ADP/B.A/B.Sc/ BS/M.A/M.Sc).
2. Four passport size photographs.
3. Attested copy of National Identity Card.
4. NOC required from serving institution (In case an applicant is employed).
5. Affidavit on stamp paper with two witness CNIC copies attested.
6. Only those students who submit the affidavit whose admission will be confirmed in the merit list.

Ph.D. (3 Year program)

1. Attested copies of Academic Certificates (Matric/O-Level/F.A/F.Sc. ADP/B.A/B.Sc/ BS/M.A/M.Sc.MS/M. Phil).
2. Four passport size photographs.
3. Attested copy of National Identity Card.
4. NOC required from serving institution (In case an applicant is employed).
5. Affidavit on stamp paper with two witness CNIC copies attested.
6. Only those students who submit the affidavit whose admission will be confirmed in the merit list.

DOCUMENTS REQUIRED FOR ENROLLMENT

Email ID For Enrollment Section (enrollmentsection@fuuastisb.edu.pk)

Documents Required for Enrollment Card

1- Associate Degree Programs

1-   Enrollment Form
2-   Attested Copy of Matric & Intermediate Certificates
3-   Attested Four Passport Size photographs
4-   Attested Copy of CNIC
5-   Copy of Fee Deposit Slip

2- BS Programs Including 3rd-Year Intake

1-   Enrollment Form
2-   Attested Copy of Matric & Intermediate Certificates
3-   Attested Copy of Bachelor's Mark Sheet & Degree
4-   Attested Four Passport Size photographs
5-   Attested Copy of CNIC
6-   Copy of Fee Deposit Slip

3- MS/M.Phil. /Ph.D. Programs

1-   Enrollment Form
2-   Attested Copy of Matric & Intermediate Certificates
3-   Attested Copy of Bachelor's & Master's Mark Sheet & Degree
4-   Attested Four Passport Size photographs
5-   Attested Copy of CNIC
6-   Copy of Fee Deposit Slip
7-   GRMC Approval for Admission

GENERAL RULES

Procedure for Course Registration

1.   Before starting the semester, every student will register his/her courses online through MIS.
2.   Students can add/drop/change their courses up to 2nd week of commencement of classes.

Cancellation   of   Course Registration

S t u d e n t s Course Registration can be cancelled due to following reasons:
1.   Non-deposit of fee within the due date.
2.   Non-submission of registration form within the due date.
3.   Discipline case duly considered/recommended by discipline committee of the University
4.   .

Policy to Freeze the semester

1.   Students can freeze their semester before mid-term exams. After the deposit, the semester fee is paid.
2.   Students will submit his/her application to the concerned HOD office.
3.   After the approval of competent authority, a semester freeze letter will be issued.
4.   In a whole degree program, a student can freeze his/her two semesters only, separately or combined

De-Freeze Policy

1. Students will submit his/her application to the concerned HOD office.
2. After the approval of competent authority, a letter of semester De-freeze will be issued.

Examinations General Rules for Semester System

1.   There are two semesters in one calendar year, i.e., Spring and Autumn (Fall).
2.   The duration of each semester is 18 weeks.
3.   Mid-term exams will be conducted in the 9th week of each semester, and final exams will be held in the 18th week.
4.   The CGPA required to qualify for Associate degree, BS, and BS (3rd Year Intake) programs is 2.50, and for Ph.D. programs, it is 3.00.
5.   A student who gets an 'F' grade will be required to repeat the course as and when offered by the department.
6.   Students of Associate degree, BS and BS ,(3rd Year Intake) programs who got D or C

grades in any subject will be allowed to improve the same, in which a maximum B grade will be awarded.

7. Only those students will be allowed to sit in Final Exams who fulfill the attendance criteria i.e. 75%.

8. Promotional Criteria

    (a)   BS programs: (other than Electrical Engineering Department)
- (i) There is no criterion for promotion from 1st semester to 2nd semester.
- (ii) From 2nd to 3rd semester, 80% of courses must be passed along with minimum 1.50 CGPA.
- (iii) From 3rd semester to 4th semester, a minimum 1.80 CGPA is required.
- (iv) or promotion from the 4th semester to the 5th semester, 100% of courses of the 1st and 2nd and 80% of the 3rd and 4th-semester courses must be passed along with a 2.00 CGPA required.
- (v) For promotion from the 5th semester to the 6th semester, a minimum of 2.20 CGPA is required.
- (vi) For promotion from 6th to 7th semester, 100% courses of 1st to 4th and 80% courses of 5th and 6th semester must be passed along with minimum 2.20 CGPA.
- (vii) For promotion from the 7th semester to the 8th semester, a minimum 2.20 CGPA is required.
- (viii) To qualify for a degree, a 2.50 CGPA is required.

    (b)   Programs: B.Sc. Electrical Engineering (Electronics)

A student who fails to obtain a minimum GPA of 1.5 at the end of 1st semester of a degree program shall be placed on academic probation for the 2nd semester for being academically deficient. If he/she fails to improve his/her CGPA to 2.00 at the end of the 2nd semester, his/her name shall be removed from the Rolls of the University. However, students dismissed on academic grounds shall be furnished with an official transcript indicating the courses completed along with grades earned in registered courses. Dy. Controller of Examination shall notify the Academic Dismissal notification and issue a letter to the student. (No special approval from the competent authority should be entertained to cancel out the academic dismissal).

Grading Criteria for BS

% Marks	Grade	Numerical Value
80-100	A	4.0
75-79	B+	3.5
70-74	B	3.0
65-69	C+	2.5
55-64	C	2.0
50-54	D	1.5
Below 50	F	0.0

Grading Criteria for M.Phil. and Ph.D.. (Economics and Applied Physics)

% Marks	Grade	Numerical Value
90-100	A+	4.0 Distinction
80-89	A	4.0
70-79	B+	3.5
60-69	B	3.0
55-59	C+	2.5
50-54	C	2.0
Below 50	F	0.0

Grading Criteria for MS/M.Phil. and Ph.D.. (Computer Science, Business Administration, Urdu and Islamiat)

% Marks	Grade	Numerical Value
80-100	A	4.0
70-79	B	3.5
60-69	C	2.5
Below 60	F	0.0

Grading Criteria for B.Sc. Electrical Engineering

Marks (%age)	Letter Grade	Grade Points
90-100	A+	4.00
89		3.95
88	A	3.90
87		3.85

86		3.80
85		3.75
84	A-	3.70
83		3.65
82		3.60
81		3.55
80		3.50
79		3.45
78		3.40
77	B+	3.35
76		3.30
75		3.25
74		3.20
73		3.15
72	B	3.10
71		3.05
70		3.00
69		2.95
68		2.90
67	B-	2.85
66		2.80
65		2.75
64		2.70
63		2.65
62	C	2.60
61		2.55
60		2.50
59		2.45
58		2.40
57	C-	2.35
56		2.30
55		2.25
54		2.20
53		2.15
52	D	2.10
51		2.05
50		2.00
0-49	F	0.00

Grading Criteria for MS and Ph.D.. Electrical Engineering

Marks (%age)	Letter Grade	Grade Points
90-100	A+	4.00
89	A	3.95
88		3.90
87		3.85
86		3.80
85		3.75
84	A-	3.70
83		3.65
82		3.60
81		3.55
80		3.50
79	B+	3.45
78		3.40
77		3.35
76		3.30
75		3.25
74	B	3.20
73		3.15
72		3.10
71		3.05
70		3.00
69	B-	2.95
68		2.90
67		2.85
66		2.80
65		2.75
64	C	2.70
63		2.65
62		2.60
61		2.55
60		2.50
below-60	F	0.00

IMPORTANT INSTRUCTIONS

1. University ID cards will be handed to the students on Orientation Day, and they must be displayed at all times when entering the Campus.
2. In case of any queries or problems, students will submit their application to the student affairs office.
3. Needy students who want to avail themselves of the Pakistan-Bait-Ul Mall scholarship must submit their application forms in the Q.E.C office before a specific date, which will be mentioned on all departments' notice boards. No application will be entertained after the due date. Forms are available in the photocopier shop.
4. For admission to MS/M. Phil /Ph.D.., submission of the departmental test, if required, along with the admission form is compulsory.
5. GRMC approval is compulsory for confirmation of enrolment.
6. Enrolment is compulsory for all students. Non-submission of enrolment forms up to the midterm exam will result in a fine of Rs. 1000/-. Subsequently, if the student fails to enrol himself, a fine of Rs. 1000/- per semester will be imposed on him/her, excluding the Rs. 2000/—fine on completion of the degree. Moreover, without enrolment, marks sheets and degrees will not be issued.
7. Strict disciplinary action (as per university rules) will be taken against students found involved in unethical activities, disturbing academic activities, breach of university discipline, or any other violation of rules/instructions, etc.
8. Students will arrange a hostel on their own in consultation with senior students.
9. Admission will be granted on merit, test /interview (if any may be arranged by respective department and information is to be passed on to the students accordingly.

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وفاقی اُردو یونیورسٹی کے طلباء و طالبات کے لیے نظم و ضبط

Discipline نظم و ضبط

یونیورسٹی کے جملہ طلباء و طالبات یونیورسٹی کی مکمل انضباطی نگرانی میں ہوں گے کسی طالب علم کو عملی سیاست میں حصہ لینے کی اجازت نہ ہوگی۔ من جملہ و دیگر امور ذیل کے افعال کو بد نظمی سمجھا جائے گا اس سلسلے میں طلباء کے خلاف کارروائی کی جاسکتی ہے۔

اخلاقِ عامہ کے کسی ضابطے کی خلاف ورزی مثلاً۔

1 غیر شریفانہ یا گندی زبان کا استعمال

2 غیر مذہب لباس کا استعمال

3 ناپسندیدہ رائے زنی یا اشاروں کا استعمال

4 امنِ عامہ میں خلل ڈالنے والا طرزِ عمل مثلاً چیخنا چلانا، گالیاں بکنا، جھگڑا، دنگا فساد کرنا اور گستاخی۔

5 اتھارٹی کی حکم عدلی

6 جھوٹی اطلاع دینا، جان بوجھ کر اطلاع کو دبانا، دھوکہ دہی یا فریب کاری۔

7 بغیر پاس ان مقامات پر جانا جہاں بلا پاس جانا ممنوع ہو۔

8 ان مقامات پر جانا جو طلباء و طالبات کے لیے ممنوع قرار دیئے گئے ہوں۔

9 ناراضگی کے اظہار کے لیے کلاسوں سے نکلنے یا ہڑتال کرنے، یا کسی غیر قانونی جلوس میں شرکت کرنا یا ان امور کے لیے اکسانا۔

10 یونیورسٹی کی شان یا اس کے افسران اور اساتذہ کی شہرت کے منافی توہین امیز نعرہ بازی کرنا۔

11 کسی نشے کے زیر اثر پایا جانا۔

12 بدکاری

13 اسلام کے خلاف تحقیر امیز یا اہانت آمیز کوئی فعل۔

14 یونیورسٹی کارڈ کے بغیر طلباء و طالبات کا جامعہ ہذا میں داخلہ ممنوع ہوگا

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FEE STRUCTURE

S.No	Programs	1st Semester Fee	2nd Semester To Onward
Fee Structure for Undergraduate 4 years program		

S.No	Programs	1st Semester Fee	2nd Semester To Onward
1	BS Physics (4 Year)	75,000	75,000
2	BBA Business Administration (4 Year)	75,000	75,000
3	BS Commerce (4 Year)	50,000	50,000
4	BS Computer Science (4 Year)	75,000	75,000
5	BS Economics (4 Year)	50,000	50,000
6	BS Economics with Data science (4 Year)	55,000	55,000
7	BS Economics & Finance (4 Year)	50,000	50,000
8	BS Electrical Engineering (4 Year)	93,000	93,000
9	BS Computer Engineering (4 Year)	75,000	75,000
10	BS English (4 Year)	50,000	50,000
11	BS International Relation (4 Year)	50,000	50,000
12	BS Islamic Studies (4 Year)	50,000	50,000
13	BS Mass Communication (4 Year)	50,000	50,000
14	BS Mathematical Science (4 Year)	70,000	70,000
15	BS Software Engineering (4 Year)	75,000	75,000
16	BS Artificial Intelligence (4 Year)	75,000	75,000
17	BS Statistics (4 Year)	50,000	50,000
18	BS Urdu (4 Year)	50,000	50,000
Undergraduate 3rd Year (2 Year) Programs (From 5th Semester)		
S.No	Programs	5th Semester Fee	6th Semester To Onward

1	BS Physics (2 Year)	75,000	75,000
2	BS Commerce (2 Year)	50,000	50,000
3	BS Computer Science (2 Year)	75,000	75,000
4	BS Economics (2 Year)	50,000	50,000
5	BS Economics & Finance (2 Year)	50,000	50,000
6	BS English (2 Year)	50,000	50,000
7	BS International Relations (2 Year)	50,000	50,000
8	BS Islamic Studies (2 Year)	50,000	50,000
9	BS Mass Communication (2 Year)	50,000	50,000
10	BS Mathematical Science (2 Year)	70,000	70,000
11	BS Urdu (2 Year)	50,000	50,000

Undergraduate ADP (2 Year) Programs

S.No	Programs	1st Semester Fee	2nd Semester To Onward
1	BS Physics (2 Year)	75,000	75,000
2	BBA Business Administration (2 Year)	75,000	75,000
3	BS Commerce (2 Year)	50,000	50,000
4	BS Computer Science (2 Year)	75,000	75,000
5	BS Economics (2 Year)	50,000	50,000
6	BS Economics & Finance (2 Year)	50,000	50,000
7	BS English (2 Year)	50,000	50,000
8	BS International Relation (2 Year)	50,000	50,000
9	BS Islamic Studies (2 Year)	50,000	50,000
10	BS Mass Communication (2 Year)		

		50,000	50,000
11	BS Mathematical Science (2 Year)	70,000	70,000
12	Software Engineering (2 Year)	75,000	75,000
13	BS Urdu (2 Year)	50,000	50,000

Postgraduate Programs			
S.No	Programs	1st Semester Fee	2nd Semester To Onward
1	M.Phil Physics (2 Year)	80,000	80,000
2	MBA Business Administration (2 Year)	80,000	80,000
3	MS Business Administration (2 Year)	80,000	80,000
4	Ph.D Business Administration (3 Year)	98,000	98,000
5	MS Computer Science (2 Year)	80,000	80,000
6	Ph.D Computer Science (3 Year)	80,000	80,000
7	M.Phil Economics (2 Year)	80,000	80,000
8	Ph.D Economics (3 Year)	80,000	80,000
9	MS Electrical Engineering (2 Year)	80,000	80,000
10	Ph.D Electrical Engineering (3 Year)	80,000	80,000
11	M.Phil Islamic Studies (2 Year)	80,000	80,000

Federal Urdu University of Arts, Science & Technology, Islamabad.

(Student Guidelines)

Fee Refund Policy

A student of BS, MS, M.Phil. or PhD program admitted in the Federal Urdu University, Islamabad Campus and he deposited his/her fee/dues and submit a request for cancellation of admission and refund of fee/dues through the concerned Chairperson/HoD respective department, then the request of student will be considered, if the same is covered as per following timelines/conditions according to under mentioned HEC fee refund policy:-

The refund amount of Tuition Fee is subject to the following schedule:

Timeline	Percentage of Fee
Upto 10th day of commencement of classes	100 % fee refund
Upto 15th day of commencement of classes	80 % fee refund
Upto 20th day of commencement of classes	60 % fee refund
Upto 30th day of commencement of classes	50 % fee refund
31st day onwards of commencement of classes	No Refund

   a. % age of fee shall be applicable on all components of fee, except Admission fee.
   b. The timelines for refund of tuition fee are inclusive of the weekends.

CONTACTS LIST OF UNIVERSITY MANAGEMENT

S.No.	Name	Position	Telephone No.	Location
1	Prof.Dr.Zabta Khan Shinwari	Vice Chancellor	Office:051-9252870	Islamabad.
2	Dr Sadia Khalil	Registrar	Office: 021-99243945 Fax: 021-99244272	Karachi.
3	Dr. Saba Bashir	In charge Campus Islamabad	051:9252865 Ext. 102	Islamabad.
4	Muhammad Aleem Raza	Additional Registrar	051:9252866 Ext. 106	Islamabad.
5	Dr.Rahat Ullah	Incharge/Dean Electrical Engineering	051:9252860-4 Ext. 192	Islamabad.
6	Ghayas-Uddin	Controller Examinations	Office:021-99243978	Karachi
7	Danish Ahsan	Treasurer	Offce:021-99243951	Karachi
8	Muhammad Rasheed Bangash	PS to Vice Chancellor	Office:051-9252856 Ext.103	Islamabad.
9	Hammad Haider Kiani	Director Accounts	Office:051-9252848 Ext.113	Islamabad.
10	Dr.Ahmad Raza	Director Admission	Office:051-9252860-4 Ext.108	Islamabad.
11	Muhammad Tanveer Ud Din	Deputy Registrar	Office:051-9252869 Ext.119	Islamabad.
12	Abid Mehmood	Assistant Controller Exams	Office:051-9252860-4 Ext.112	Islamabad.
13	Aqsa Nazir	Assistant Registrar	Office:051-9252860-4 Ext.123	Islamabad.
14	Nasim Irshad	Assistant Librarian	Office:051-9252860-4 Ext.129	Islamabad.
15	Exchange Islamabad	---------	Office:051-9252860-64	Islamabad.
16	Exchange Karachi Campus	----------	021-99244141-4	Karachi.

CONTACT LIST OF HEAD OF DEPARTMENTS

S.No.	Name	Head of Department	Telephone No.	Location
1	Dr.Ithsham Ul Haq Padda	Economics	051-9252860-4 Ext.209	Islamabad.
2	Muhammad Yousaf	Computer Science	051-9252860-4 Ext.155	Islamabad.
3	Dr. Ijaz Ahmed	Physics	051-9252860-4 Ext.162	Islamabad.
4	Dr.Saba Bashir	Software Engineering	051-9252860-4 Ext.144	Islamabad.
5	Dr.Rahat Ullah	Electrical Engineering	051-9252860-4 Ext.192	Islamabad.
6	Dr. Mumtaz Ali	Business Administration	051-9252860-4 Ext.137	Islamabad.
7	Dr.Malik Adil Pasha	Commerce	051-9252860-4 Ext.226	Islamabad.
8	Dr. Muhammad Irfan	Islamiat	051-9252860-4 Ext.196	Islamabad.
9	Dr. Fehmida Tabassum	Urdu	051-9252860-4 Ext.200	Islamabad.
10	Dr.Amer Bilal Mann	Mathematical Sciences	051-9252860-4 Ext.195	Islamabad.
11	Dr.Atia Anwar Zoon	English	051-9252860-4 Ext.243	Islamabad.
12	Dr. Faisal Javid	Mass Communication / International Relations	051-9252860-4	Islamabad.

سمسٹر دوم

کریڈٹ آورز	نوعیت	کورس کوڈ	مضامین/کورسز	نمبر شمارہ
03	لازمی کورس	ISS-721	علوم الحدیث Hadithic Sceinces	1
03	لازمی کورس	ISS-722	تاریخ،اصول اور قواعد فقہ History, Principles & Maxims of Fiqh	2
			درج ذیل اختیاری کورسز میں سے دو کا انتخاب کریں	
03	اختیاری کورس	ISS-723	علوم اسلامیہ کے بنیادی مصادر Basic Sources of Islamic Sciences	3
03	اختیاری کورس	ISS-724	اسلام میں اختلاف کے آداب Ethics of Disagreement in Islam	4
03	اختیاری کورس	ISS-725	مطالعہ استشراق Study of Orientalism	5
03	اختیاری کورس	ISS-726	فکر اسلامی: تاریخ اور تمدن-اصول و مناہج Islamic Thought: History and Civilization - Principles and Methods	6
03	اختیاری کورس	ISS-727	مطالعہ مذاہب عالم Study of World Religions	7
12			کل کریڈٹ آورز	

سمسٹر سوم + چہارم

کریڈٹ آورز	نوعیت	کورس کوڈ	مضامین/کورسز	نمبر شمارہ
06	لازمی کورس	ISS-741	تحقیقی مقالہ Research Thesis	1
06			کل کریڈٹ آورز	

سمسٹر اوّل تا چہارم کل کریڈٹ آورز=30

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کورسز کی تفصیل

سمسٹر اول

کریڈٹ آورز	نوعیت	کورس کوڈ	مضامین / کورسز	نمبر شمارہ
03	لازمی کورس	ISS-711	علوم القرآن Quranic Sciences	1
03	لازمی کورس	ISS-712	اسالیب تحقیق Reseach Methodologies	2
	درج ذیل اختیاری کورسز میں سے دو کا انتخاب کریں			
03	اختیاری کورس	ISS-713	فقہ السیرہ Fiqh al-Seerah	3
03	اختیاری کورس	ISS-714	اسلام میں احترام انسانیت اور حقوق انسانی کا تصور Islamic Concept about the Respect for Humanity and Human Rights	4
03	اختیاری کورس	ISS-715	مہارت عربی Arabic Skills	5
03	اختیاری کورس	ISS-716	اسلامی اقتصادیات کے عصری مسائل Contemporay Problems of Islamic Economics	6
03	اختیاری کورس	ISS-717	بین الاقوامی انسانی قانون اور اسلامی قانون سیر کا تقابلی مطالعہ A Comparative Study of International Humanitarian Law (IHL) and Islamic Law of Siyyar	7
12			**کل کریڈٹ آورز**	

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کل کریڈٹ آورز(عبوری سمسٹر سمیت)=81

کل کریڈٹ آورز(عبوری سمسٹر کے علاوہ)=66

<u>ایم فل اسلامیات(دوسالہ)</u>

M. Phil Islamic Studies (2 Years)

داخلہ کی بنیادی اہلیت: گورنمنٹ کے منظور شدہ کسی بھی تعلیمی ادارے سے بی ایس اسلامیات (4سالہ) یا ایم ایم اے اسلامیات یا مساوی تعلیمی قابلیت۔ شہادۃ العالمیہ ہونے کی صورت میں ہائیر ایجوکیشن کمیشن پاکستان کی طرف سے مساوی سرٹیفیکیٹ۔ سالانہ امتحان کی صورت میں متعلقہ ڈگری میں 50%نمبرز اور سمسٹر سسٹم کی صورت میں CGPA 2.50/4.00 کے ساتھ۔

اہل امیدوران کو شعبہ جاتی ٹیسٹ /انٹرویو کم از کم 60%نمبروں سے پاس کرنا ہو گا۔جن امیدوران نے GAT GENERAL ٹیسٹ NTS یا HAT ETC ٹیسٹ HEC سے 50%کے ساتھ پاس کیا ہو اور اس کی میعاد بھی باقی ہو، وہ شعبہ جاتی ٹیسٹ سے مستثنٰی ہوں گے۔

ڈگری کا دورانیہ: 02سالہ ایم فل پروگرام (04سمسٹرز)۔ ٹوٹل کریڈٹ آورز (30)۔ پروگرام کا کم از کم دورانیہ دوسال ہو گا جبکہ زیادہ سے زیادہ دورانیہ چار سال تک ہو سکتا ہے۔

ڈگری کی تکمیل کے تقاضے: 8کورسز + تحقیقی مقالہ۔ کل 30کریڈٹ آورز CGPA 2.50/4.0 کے ساتھ۔

دوران سمسٹر قواعد و ضوابط:

1. ہر کورس 100نمبر پر مشتمل ہو گا جس میں 20نمبر اسائنمنٹس، 30نمبر مڈ ٹرم امتحان اور 50نمبر فائنل ٹرم امتحان کے ہوں گے۔
2. ہر کورس کے وسطی اور فائنل امتحان میں مجموعی لحاظ سے 60%نمبر حاصل کرنے والا طالب علم پاس ہو گا۔
3. تمام طلباء کی کم از کم 75%حاضری ضروری ہے۔ مطلوبہ حاضریاں پوری نہ ہونے کی صورت میں مذکورہ طالب علم فائنل امتحان نہیں دے سکے گا۔

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	
	خصوصی	ISS-476	(Social System of Islam)	
	خصوصی	ISS-476	مقاصدِ شریعہ (Objective of Shariah)	
03	بین العلومی	IND-477	اقبالیات (Iqbaliat)	5
03	فیلڈ ورک	INT-478	انٹرن شپ (Internship)	6
18			کل کریڈٹ آورز	

سمسٹر ہشتم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-481	مسلم فیملی لاء کے متون کا مطالعہ Texual Studies of Muslim Family Laws	1
03	خصوصی	ISS-482	اسلامی معاشیات (Islamic Economics)	2
03 + 03			درج ذیل خصوصی مضامین میں سے دو کا انتخاب کریں	3+4
	خصوصی	ISS-483	فلسفہ و علم الکلام (Philosophy and Ilm-ul-Kalam)	
	خصوصی	ISS-484	تاریخ تہذیب اسلامی (History of Islamic Culture and Civilization)	
	خصوصی	ISS-485	اسلام کا سیاسی نظام (Political System of Islam)	
	خصوصی	ISS-486	بین الاقوامی انسانی قانون اور اسلامی قانون سیر کا تقابلی مطالعہ IHL in Islamic and International Law (A Comparative Study)	
03	بین العلومی	IND-487	اختلاف کے آداب (Ethics of Disagreement)	5
03	تحقیقی مقالہ	CAP-488	تحقیقی مقالہ (Capstone Project)	6
18			کل کریڈٹ آورز	

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سمسٹر ششم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-361	مطالعہ متن قرآن(اول) Textual Study of Al-Quran-I	1
03	خصوصی	ISS-362	مطالعہ متن حدیث(اول) (Textual Study of Al-Hadith-I)	2
03	خصوصی	ISS-363	اصول فقہ(Principles of Islamic Jurisprudence)	3
03	خصوصی	ISS-364	مطالعہ مذاہب عالم(Study of the World Religions)	4
03	بین العلومی	IND-365	عربی زبان وادب(Arabic Language and Literature)	5
15			کل کریڈٹ آورز	

سمسٹر ہفتم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-471	مطالعہ متن قرآن(دوم) Textual Study of Al-Quran-II	1
03	خصوصی	ISS-472	مسلم فیملی لاء کے متون کا مطالعہ (Textual Study of Muslim Family Laws)	2
03 + 03			درج ذیل خصوصی مضامین میں سے دو کا انتخاب کریں	3 + 4
	خصوصی	ISS-473	اسلام اور سائنس(Islam and Science)	
	خصوصی	ISS-474	تاریخ اسلام(History of Islam)	
	خصوصی	ISS-475	اسلام کا معاشرتی نظام	

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سمسٹر وار کورسز کی تفصیل

عبوری سمسٹر

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-119	عربی-اول (Arabic-I)	1
03	خصوصی	ISS-120	علوم القرآن (Uloom-ul-Quran)	2
03	خصوصی	ISS-235	تاریخ فقہ اسلامی (History of Islamic Fiqh)	3
03	خصوصی	ISS-247	مطالعہ متن فقہ اسلامی (عبادات) Textual Study of Islamic Fiqh (Worships)	4
03	خصوصی	ISS-248	تاریخ و تدوین حدیث (History and Complication of Hadith)	5
15	کل کریڈٹ آورز			

سمسٹر پنجم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-351	تفسیر و تاریخ تفسیر (Tafsir and Its Hisory)	1
03	خصوصی	ISS-352	اُصولِ حدیث (Principles of Hadīth)	2
03	خصوصی	ISS-353	مطالعہ سیرت النبی صلی اللہ علیہ وسلم (Study of Sirah of Holy Prophet PBUH)	3
03	خصوصی	ISS-354	دعوت وارشاد (Preaching and Guidance)	4
03	بین العلومی	IND-355	فوجداری قانون (Criminal Law)	5
15	کل کریڈٹ آورز			

بی ایس اسلامیات-پانچویں سمسٹر سے (دوسالہ)

BS Islamic Studies - 5th Semester Intake (2 Years)

داخلہ کی بنیادی اہلیت: گورنمنٹ کے منظور شدہ کسی بھی تعلیمی ادارے سے بی اے، بی ایس سی یا مساوی تعلیمی قابلیت (14 سالہ تعلیم) کم از کم 45 فیصد نمبروں کے ساتھ۔

ڈگری کا دورانیہ: 02 سالہ بیچلر پروگرام (04 سمسٹرز)۔ کل کریڈٹ آورز (عبوری سمسٹر سمیت): 81، یا کل کریڈٹ آورز (عبوری سمسٹر کے علاوہ): 66

عبوری سمسٹر (Bridge Semester): بی ایس اسلامیات کے پانچویں سمسٹر میں دو قسم کے طلبہ داخلہ لیں گے:

1- بی ایس اسلامیات کی دوسالہ ایسوسی ایٹ ڈگری پروگرام (ADP) کے حامل طلبہ

2- بی اے/ بی ایس سی یا اسلامیات کے علاوہ کسی بھی مضمون میں ایسوسی ایٹ ڈگری پروگرام (ADP) کے حامل طلبہ

ایسے طلبہ جو بی ایس اسلامیات کی دوسالہ ایسوسی ایٹ ڈگری پروگرام کے علاوہ کسی بھی مضمون میں دو سالہ ایسوسی ایٹ ڈگری کے بعد بی ایس اسلامیات چار سالہ پروگرام کے پانچویں سمسٹر میں داخلہ لیں گے، اُن کے لیے پانچویں سمسٹر سے پہلے ایک عبوری سمسٹر (Bridge Semester) پڑھنا لازمی ہو گا۔ جبکہ بی ایس اسلامیات کی دوسالہ ایسوسی ایٹ ڈگری پروگرام کے حامل طلبہ کے لیے عبوری سمسٹر لازم نہیں ہو گا۔

ڈگری کی تکمیل کے تقاضے: ڈگری کی تکمیل کے لیے CGPA 2.50/4.00 ضروری ہے۔

دوران سمسٹر قواعد و ضوابط:

1. ہر کورس 100 نمبر پر مشتمل ہو گا جس میں 20 نمبر اسائنمنٹس، 30 نمبر مڈٹرم امتحان اور 50 نمبر فائنل ٹرم امتحان کے ہوں گے۔

2. ہر کورس کے وسطی اور فائنل امتحان میں مجموعی لحاظ سے 50٪ نمبر حاصل کرنے والا طالب علم پاس ہو گا۔

3. تمام طلباء کی کم از کم 75٪ حاضری ضروری ہے۔ مطلوبہ حاضریاں پوری نہ ہونے کی صورت میں مذکورہ طالب علم فائنل امتحان نہیں دے سکے گا۔

			Textual Study of Islamic Fiqh (Worships)	
03	خصوصی	ISS-248	تاریخ و تدوینِ حدیث (History and Complication of Hadith)	4
03	خصوصی	ISS-249	(Research Methodology) اصولِ تحقیق	5
14			کل کریڈٹ آورز	

سمسٹر اوّل تا چہارم کل کریڈٹ آورز=**61**

			(The Holy Quran	
16			کل کریڈٹ آورز	

سمسٹر سوم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	جزل	GEN-231	شماریات(Statistics)	1
03	جزل	GEN-232	آرٹس اینڈ ہیومنیٹیز-اردو (Arts and Humanities-Urdu)	2
03	خصوصی	ISS-233	تجوید و قرأت (Pronunciation and Recitation)	3
03	خصوصی	ISS-234	مطالعہ تصوف(Study of Tasawwuf)	4
03	خصوصی	ISS-235	تاریخ فقہ اسلامی(History of Islamic Fiqh)	5
15			کل کریڈٹ آورز	

سمسٹر چہارم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
02	جزل	GEN-241	فروغِ کاروبار(Entrepreneurship)	1
3=1+2	جزل		نیچرل سائنسز (درج ذیل کورسز میں سے ایک کا انتخاب کریں)	2
		GEN-242	طبیعیات کا تعارف(Introduction to Physics)	
		GEN-243	کیمیاء کا تعارف(Introduction to Chemistry)	
		GEN-244	حیاتیات کا تعارف(Introduction to Biology)	
		GEN-245	ماحولیات کا تعارف(Introduction to Ecology)	
		GEN-246	روز مرہ سائنس(Every Day Science)	
03	خصوصی	ISS-247	مطالعہ متن فقہ اسلامی(عبادات)	3

			Communication Technologies	
02	جنرل		سوشل سائنسز (درج ذیل کورسز میں سے ایک کورس کا انتخاب کریں)	4
		GEN-114	سیاسیات کا تعارف(Introduction to Political Science)	
		GEN-115	بین الاقوامی تعلقات کا تعارف (Introduction to International Relations)	
		GEN-116	معاشیات کا تعارف(Introduction to Economics)	
		GEN-117	ابلاغِ عامہ کا تعارف)Introduction to Mass (Communication	
		GEN-118	نفسیات کا تعارف(Introduction to Psychology)	
03	خصوصی	ISS-119	عربی-اول(Arabic-I)	5
03	خصوصی	ISS-120	علوم القرآن(Uloom-ul-Quran)	6
16			کل کریڈٹ آورز	

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سمسٹر دوم

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کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
02	جنرل	GEN-121	نظریہ اور آئین پاکستان (Ideology and Constitution of Pakistan)	1
03	جنرل	GEN-122	Expository Writing	2
03	جنرل	GEN-123	ریاضی(Mathematics)	3
02	جنرل	GEN-124	شہریت اور معاشرتی نظم (Civics and Community Engagement)	4
03	خصوصی	ISS-125	عربی-دوم(Arabic-II)	5
03	خصوصی	ISS-126	منتخب مضامین قرآن کا تعارف (Introduction to the Selected Topics of	6

بی ایس اسلامیات ایسوسی ایٹ ڈگری پروگرام-ADP (دوسالہ)

BS Islamic Studies Associate Degree Program-ADP (2-Years)

داخلہ کی بنیادی اہلیت: گورنمنٹ کے منظور شدہ کسی بھی تعلیمی ادارے / بورڈ سے انٹر میڈیٹ، اے لیول یا مساوی تعلیمی قابلیت کم از کم 45

فیصد نمبروں کے ساتھ۔ یا گورنمنٹ کے منظور شدہ کسی بھی مدرسہ بورڈ سے "شہادۃ الثانویۃ خاصہ "ہونے کی صورت میں

IBCC سے مساوی سرٹیفیکیٹ۔

ڈگری کادورانیہ: 02 سالہ بیچلر پروگرام(04 سمسٹرز)۔ ٹوٹل کریڈٹ آورز(61)

ڈگری کی تکمیل کے تقاضے: ڈگری کی تکمیل کے لیے CGPA 2.50/4.00 ضروری ہے۔

دوران سمسٹر قواعد وضوابط:

1. ہر کورس 100 نمبر پر مشتمل ہوگا جس میں 20 نمبر اسائنمنٹس، 30 نمبر مڈ ٹرم امتحان اور 50 نمبر فائنل ٹرم امتحان کے ہوں گے۔

2. ہر کورس کے وسطی اور فائنل امتحان میں مجموعی لحاظ سے 50٪ نمبر حاصل کرنے والا طالب علم پاس ہوگا۔

3. تمام طلباء کی کم از کم 75٪ حاضری ضروری ہے۔ مطلوبہ حاضریاں پوری نہ ہونے کی صورت میں مذکورہ طالب علم فائنل امتحان نہیں

دے سکے گا۔

سمسٹروار کورسز کی تفصیل

بی ایس اسلامیات (2 سالہ) میں وہی کورسز پڑھائے جائیں گے جو بی ایس اسلامیات (4 سالہ) کے سمسٹر اول تاچہارم میں پڑھائے جاتے

ہیں۔

سمسٹر اول

نمبرشمار	کورس کانام	کورس کوڈ	نوعیت	کریڈٹ آورز
1	اسلامیات (Islamic Studies)	GEN-111	جنرل	02
2	Functional English	GEN-112	جنرل	03
3	انفارمیشن اور کمیونیکیشن ٹیکنالوجیز کی اپپلی کیشنز Applications of Information and	GEN-113	جنرل	3=1+2

سمسٹر ہشتم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-481	مسلم فیملی لاء کے متون کا مطالعہ Texual Studies of Muslim Family Laws	1
03	خصوصی	ISS-482	اسلامی معاشیات (Islamic Economics)	2
03 + 03			درج ذیل خصوصی مضامین میں سے دو کا انتخاب کریں	3+4
	خصوصی	ISS-483	فلسفہ و علم الکلام (Philosophy and Ilm-ul-Kalam)	
	خصوصی	ISS-484	تاریخ تہذیب اسلامی (History of Islamic Culture and Civilization)	
	خصوصی	ISS-485	اسلام کا سیاسی نظام (Political System of Islam)	
	خصوصی	ISS-486	بین الاقوامی انسانی قانون اور اسلامی قانون سیر کا تقابلی مطالعہ IHL in Islamic and International Law (A Comparative Study)	
03	بین العلومی	IND-487	اختلاف کے آداب (Ethics of Disagreement)	5
03	تحقیقی مقالہ	CAP-488	تحقیقی مقالہ (Capstone Project)	6
18			کل کریڈٹ آورز	

سمسٹر اوّل تا ہشتم کل کریڈٹ آورز=127

سمسٹر ششم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-361	مطالعہ متن قرآن (اول) Textual Study of Al-Quran-I	1
03	خصوصی	ISS-362	مطالعہ متن حدیث (اول) (Textual Study of Al-Hadith-I)	2
03	خصوصی	ISS-363	اصول فقہ (Principles of Islamic Jurisprudence)	3
03	خصوصی	ISS-364	مطالعہ مذاہب عالم (Study of the World Religions)	4
03	بین العلومی	IND-365	عربی زبان و ادب (Arabic Language and Literature)	5
15			کل کریڈٹ آورز	

سمسٹر ہفتم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-471	مطالعہ متن قرآن (دوم) Textual Study of Al-Quran-II	1
03	خصوصی	ISS-472	مسلم فیملی لاء کے متون کا مطالعہ (Textual Study of Muslim Family Laws)	2
03 + 03			درج ذیل خصوصی مضامین میں سے دو کا انتخاب کریں	3 + 4
	خصوصی	ISS-473	اسلام اور سائنس (Islam and Science)	
	خصوصی	ISS-474	تاریخ اسلام (History of Islam)	
	خصوصی	ISS-475	اسلام کا معاشرتی نظام (Social System of Islam	
	خصوصی	ISS-476	مقاصدِ شریعہ (Objective of Shariah)	
03	بین العلومی	IND-477	اقبالیات (Iqbaliat)	5
03	فیلڈ ورک	INT-478	انٹرن شپ (Internship)	6
18			کل کریڈٹ آورز	

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-235	تاریخ فقہ اسلامی (History of Islamic Fiqh)	5
15			کل کریڈٹ آورز	

سمسٹر چہارم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
02	جنرل	GEN-241	فروغِ کاروبار (Entrepreneurship)	1
3=1+2	جنرل		نیچرل سائنسز (درج ذیل کورسز میں سے ایک کا انتخاب کریں)	2
		GEN-242	طبیعیات کا تعارف (Introduction to Physics)	
		GEN-243	کیمیاء کا تعارف (Introduction to Chemistry)	
		GEN-244	حیاتیات کا تعارف (Introduction to Biology)	
		GEN-245	ماحولیات کا تعارف (Introduction to Ecology)	
		GEN-246	روزمرہ سائنس (Every Day Science)	
03	خصوصی	ISS-247	مطالعہ متن فقہ اسلامی (عبادات) Textual Study of Islamic Fiqh (Worships)	3
03	خصوصی	ISS-248	تاریخ و تدوینِ حدیث (History and Complication of Hadith)	4
03	خصوصی	ISS-249	اصولِ تحقیق (Research Methodology)	5
14			کل کریڈٹ آورز	

سمسٹر پنجم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	خصوصی	ISS-351	تفسیر و تاریخ تفسیر (Tafsir and Its Hisory)	1
03	خصوصی	ISS-352	اُصولِ حدیث (Principles of Hadīth)	2
03	خصوصی	ISS-353	مطالعہ سیرت النبی ﷺ (Study of Sirah of Holy Prophet PBUH)	3
03	خصوصی	ISS-354	دعوت و ارشاد (Preaching and Guidance)	4
03	بین العلومی	IND-355	فوجداری قانون (Criminal Law)	5
15			کل کریڈٹ آورز	

		GEN-116	معاشیات کا تعارف(Introduction to Economics)	
		GEN-117	ابلاغِ عامہ کا تعارف(Introduction to Mass Communication)	
		GEN-118	نفسیات کا تعارف(Introduction to Psychology)	
03	خصوصی	ISS-119	عربی-اول(Arabic-I)	5
03	خصوصی	ISS-120	علوم القرآن(Uloom-ul-Quran)	6
16			کل کریڈٹ آورز	

سمسٹر دوم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
02	جنرل	GEN-121	نظریہ اور آئین پاکستان (Ideology and Constitution of Pakistan)	1
03	جنرل	GEN-122	Expository Writing	2
03	جنرل	GEN-123	ریاضی(Mathematics)	3
02	جنرل	GEN-124	شہریت اور معاشرتی نظم (Civics and Community Engagement)	4
03	خصوصی	ISS-125	عربی-دوم(Arabic-II)	5
03	خصوصی	ISS-126	منتخب مضامین قرآن کا تعارف (Introduction to the Selected Topics of The Holy Quran)	6
16			کل کریڈٹ آورز	

سمسٹر سوم

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
03	جنرل	GEN-231	شماریات(Statistics)	1
03	جنرل	GEN-232	آرٹس اینڈ ہیومینیٹیز-اردو(Arts and Humanities-Urdu)	2
03	خصوصی	ISS-233	تجوید و قرأت(Pronunciation and Recitation)	3
03	خصوصی	ISS-234	مطالعہ تصوف(Study of Tasawwuf)	4

4. ایم فل اسلامیات (دوسالہ)

M. Phil Islamic Studies (2 Years)

<u>بی ایس اسلامیات (چار سالہ)</u>

BS Islamic Studies-4 Years

داخلہ کی بنیادی اہلیت: گورنمنٹ کے منظور شدہ کسی بھی تعلیمی ادارے/بورڈ سے انٹر میڈیٹ، اے لیول یا مساوی تعلیمی قابلیت کم از کم 45 فیصد نمبروں کے ساتھ۔ یا گورنمنٹ کے منظور شدہ کسی بھی مدرسہ بورڈ سے "شہادۃ الثانویۃ خاصہ "ہونے کی صورت میں IBCC سے مساوی سرٹیفیکیٹ۔

ڈگری کا دورانیہ: 04-سالہ بیچلر پروگرام (08 سمسٹرز)۔ ٹوٹل کریڈٹ آورز (127)

ڈگری کی تکمیل کے تقاضے: ڈگری کی تکمیل کے لیے CGPA 2.50/4.00 ضروری ہے۔

دوران سمسٹر قواعد و ضوابط:

1. ہر کورس 100 نمبر پر مشتمل ہو گا جس میں 20 نمبر اسائنمنٹس، 30 نمبر مڈ ٹرم امتحان اور 50 نمبر فائنل ٹرم امتحان کے ہوں گے۔

2. ہر کورس کے وسطی اور فائنل امتحان میں مجموعی لحاظ سے 50 نمبر حاصل کرنے والا طالب علم پاس ہو گا۔

3. تمام طلباء کی کم از کم 75% حاضری ضروری ہے۔ مطلوبہ حاضریاں پوری نہ ہونے کی صورت میں مذکورہ طالب علم فائنل امتحان نہیں دے سکے گا۔

سمسٹر وار کورسز کی تفصیل

سمسٹر اول

کریڈٹ آورز	نوعیت	کورس کوڈ	کورس کا نام	نمبر شمار
02	جنرل	GEN-111	اسلامیات (Islamic Studies)	1
03	جنرل	GEN-112	Functional English	2
3=1+2	جنرل	GEN-113	انفارمیشن اور کمیونیکیشن ٹیکنالوجیز کی ایپلی کیشنز Applications of Information and Communication Technologies	3
02	جنرل		سوشل سائنسز (درج ذیل کورسز میں سے ایک کورس کا انتخاب کریں)	4
		GEN-114	سیاسیات کا تعارف (Introduction to Political Science)	
		GEN-115	بین الاقوامی تعلقات کا تعارف (Introduction to International Relations)	

شعبہ اسلامیات

تعارف

اسلامی جمہوریہ پاکستان ایک اسلامی فلاحی ریاست ہے۔ اسی لیے ہمیشہ سے اس کی بنیادی تعلیمی پالیسی میں "اسلامیات" کو با قاعدہ ایک لازمی مضمون اور تعلیمی اداروں میں "شعبہ اسلامیات" کو با قاعدہ ایک اہم شعبہ کی حیثیت سے نمایاں درجہ دیا جاتا رہا ہے۔ نومبر 2003 ء سے وفاقی اردو یونیورسٹی برائے فنون، سائنس و ٹیکنالوجی، اسلام آباد کیمپس کے آغاز کے ساتھ ہی یہاں "بیچلرز" کی سطح پر "اسلامیات لازمی" کی تعلیم دی جا رہی تھی مگر "شعبہ اسلامیات" کے با قاعدہ اجراء کی کمی کو شدت سے محسوس کیا جا رہا تھا۔ بالآخر ستمبر 2013 ء میں اس کمی کو محسوس کرتے ہوئے وفاقی اردو یونیورسٹی اسلام آباد کیمپس میں "شعبہ اسلامیات" کے با قاعدہ اعلان کے ساتھ ہی ایم اے اسلامیات کی کلاسز کا آغاز کر دیا گیا۔ "شعبہ اسلامیات" کے با قاعدہ آغاز کے ساتھ ہی بالآخر شعبہ کے اساتذہ کرام کا ایک دیرینہ خواب شرمندہ تعبیر ہوا۔

بعد ازاں مارچ 2016 ء میں ایم فل اسلامیات کی کلاسز کا آغاز بھی ہو گیا۔ شعبہ ہذا کی تعلیمی ضروریات، طلباء کے بہتر مستقبل اور عصری تقاضوں کے پیشِ نظر پی ایس اسلامیات کا با قاعدہ آغاز بھی اکتوبر 2019 ء سے کر دیا گیا۔

اس وقت شعبہ ہذا میں درج ذیل پروگرامز جاری ہیں۔

1. بی ایس اسلامیات (چار سالہ)

BS Islamic Studies-4 Years

2. بی ایس اسلامیات ایسوسی ایٹ ڈگری پروگرام-ADP (دو سالہ)

BS Islamic Studies Associate Degree Program-ADP (2-Years)

3. بی ایس اسلامیات-پانچویں سمسٹر سے (دو سالہ)

BS Islamic Studies - 5th Semester Intake (2 Years)

DEPARTMENT OF ISLAMIYAT

دوسرا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
3	تخصیصی (Major)	اُردو ادب کا مابعد نوآبادیاتی مطالعہ	URD-121	1-
3	تخصیصی (Major)	معاصر نثری ادب	URD-122	2-
3	تخصیصی انتخابی (Elective)	تحقیق و تنقید کے جدید رجحانات	URD-123	3-
09		کل کریڈٹ آر		

کورسز میں پاسنگ مارکس 60 ہیں، طالب علم دو سمیسٹرز کے کورس ورک میں کامیابی کے بعد شعبہ کی ڈی آر سی کی جانب سے مقرر شدہ نگران استاد کی نگرانی میں سندی تحقیقی مقالہ لکھے گا۔ اس مقالے کے کامیاب دفاع کے بعد پی ایچ ڈی کی ڈگری کا حق دار ہو گا

24	تخصیصی (Major)	سندی تحقیقی مقالہ	URD-127

پی ایچ ڈی اردو (بہ تخصیص اقبالیات)

پہلا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	اقبال کا فکر و فن	IQD-111	1
03	تخصیصی (Major)	اقبال شناس (معروف اقبال شناس محققین)	IQD-112	2
03	انتخابی (Elective)	فارسی زبان و ادب	IQD-113	3
09		کل کریڈٹ آورز		

03	انتخابی (Elective)	مکاتیب اقبال کا تجزیاتی مطالعہ	IQM-124	4
12		**کل کریڈٹ آورز**		

کورسز میں پاسنگ مارکس 60 ہیں، طالب علم دو سمسٹرز کے کورس ورک میں کامیابی کے بعد شعبہ کی ڈی آر سی کی جانب سے مقرر شدہ نگران استاد کی نگرانی میں سندی تحقیقی مقالہ لکھے گا۔ سندی مقالے کی مدت دو سمسٹر ہے، جو ایک سمسٹر تک قابل توسیع ہے۔ اس مقالے کے کامیاب دفاع کے بعد ایم فل کی ڈگری کا حق دار ہو گا

06	تخصیصی (Major)	سندی تحقیقی مقالہ	IQM-126

پی ایچ ڈی کورسز

مدت	:	3 سال (6 سمیسٹرز)

کل کورسز	:	6
تخصیصی کورسز	:	4 کورسز، 12 کریڈٹ آور
انتخابی کورسز	:	2 کورسز، 6 کریڈٹ آور
سندی مقالہ	:	24 کریڈٹ آور
کل کریڈٹ آورز	:	30 کریڈٹ آورز

(پی ایچ ڈی اردو)

پہلا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
3	تخصیصی (Major)	برصغیر کی تہذیب و ثقافت اور اُردو ادب	URD-111	1۔
3	تخصیصی (Major)	جدید شعری روایت	URD-112	2۔
3	تخصیصی انتخابی (Elective)	اقبال کا خصوصی مطالعہ	URD-113	3۔
09		کل کریڈٹ آر		

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دوسرا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
3	تخصیصی (Major)	اصول تحقیق و تدوین	URM-121	1
3	تخصیصی (Major)	اُردو کے ادبی جرائد اور فنِ ادارت	URM-122	2
3	انتخابی (Elective)	ترجمہ نگاری و عالمی کلاسیک	URM-123	3
3	انتخابی (Elective)	نثری ادب کا فنی و اسلوبیاتی مطالعہ	URM-125	4
12		کل کریڈٹ آرز		

کورسز میں پاسنگ مارکس 60 ہیں، طالب علم دو سمسٹرز کے کورس ورک میں کامیابی کے بعد شعبہ کی ڈی آر سی کی جانب سے مقرر شدہ نگران استاد کی نگرانی میں سندی تحقیقی مقالہ لکھے گا۔ سندی مقالے کی مدت دو سمسٹر ہے، جو ایک سمیسٹر تک قابلِ توسیع ہے۔ اس مقالے کے کامیاب دفاع کے بعد ایم فل کی ڈگری کا حق دار ہوگا

06	تخصیصی (Major)	سندی تحقیقی مقالہ	URM-127	

ایم فل اردو (بہ تخصیص اقبالیات)
پہلا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	مقدماتِ اقبال شناسی (منتخب بنیادی مباحث و اصطلاحات)	IQM-111	1
03	تخصیصی (Major)	حیات و آثارِ اقبال و فکری ارتقا	IQM-112	2
03	تخصیصی (Major)	اقبال کے بنیادی افکار و نظریات	IQM-113	3
03	انتخابی (Elective)	تصوف و صوفیانہ روایت	IQM-114	4
12		کل کریڈٹ آورز		

دوسرا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	اقبال اور پاکستان	IQM-121	1
03	تخصیصی (Major)	اصول تحقیق	IQM-122	2
03	تخصیصی (Major)	شعرِ اقبال کا فنی و فکری جائزہ	IQM-123	3

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نوٹ :- آٹھویں سمسٹر میں بین العلومی انتخابی کورسز میں سے ایک اور دو تخصیصی انتخابی کورسز میں سے ایک کورس کا اجرا ہوگا   ، تھر ڈایئر کے سٹوڈنٹس چھ کورسز پڑھیں گے۔

ایم فل کورسز

مدت :	2 سال (4 سمسٹر)
کل کورسز :	8
تخصیصی کورسز :	5 کورسز، 15 کریڈٹ آور
انتخابی کورسز :	3 کورسز، 9 کریڈٹ آور
سندی مقالہ :	6 کریڈٹ آور
کل کریڈٹ آورز :	30 کریڈٹ آورز

ایم فل اردو

پہلا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
3	تخصیصی (Major)	اردو کی ادبی تحریکیں اور مغربی اثرات	URM-111	1-
3	تخصیصی (Major)	تنقیدی مباحث و نظریات	URM-112	2-
3	تخصیصی (Major)	اردو شاعری کا فنی و فکری مطالعہ	URM-113	3-
3	انتخابی (Elective)	لسانیات	URM-114	4-
12		کل کریڈٹ آر		

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	تاریخ ادب اُردو (عہد سر سید سے قیام پاکستان تک)	URB-363	3
03	تخصیصی (Major)	معاصر شعری ادب	URB-364	4
03	بین العلومی (Interdisciplinary)	سماجی علوم اور ادب	IUR-361	5
03	بین العلومی (Interdisciplinary)	عربی زبان وادب	IUR-362	
03	تخصیصی (Major) برائے تھر ڈائیر	لسانیات	URB-231	6
15	کُل کریڈٹ آورز			

نوٹ :۔ اس سمسٹر میں دو بین العلومی انتخابی کورسز میں سے ایک کا اجرا ہوگا ، تھر ڈائیر کے سٹوڈنٹس چھ کورسز پڑھیں گے۔

ساتواں سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	اصول تحقیق	URB-471	1
03	تخصیصی (Major)	اصول تنقید	URB-472	2
03	تخصیصی (Major)	تاریخ ادب اُردو (قیام پاکستان سے دور حاضر تک)	URB-473	3
03	تخصیصی Field experience/Internship	عملی تربیت (انٹرن شپ)	URINT-471	4
03	بین العلومی (Interdisciplinary)	ثقافت اور فنون لطیفہ	IUR-471	5
03	بین العلومی (Interdisciplinary)	فارسی زبان وادب	IUR-472	
03	تخصیصی (Major) برائے تھر ڈائیر	مولوی عبدالحق کی علمی وادبی خدمات	URB-242	6
15	کُل کریڈٹ آورز			

نوٹ :۔ اس سمسٹر میں دو بین العلومی انتخابی کورسز میں سے ایک کا اجرا ہوگا، تھر ڈائیر کے سٹوڈنٹس چھ کورسز پڑھیں گے۔

آٹھواں سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	معاصر نثری ادب	URB-481	1
03	تخصیصی (Major)	اقبالیات	URB-482	2
03	تخصیصی انتخابی (major elective)	معاصر تنقید	URB-483	3
03	تخصیصی انتخابی (major elective)	اردو ابلاغیات	URB-484	
03	بین العلومی (Interdisciplinary)	علم التعلیم	IUR-481	4
03	بین العلومی (Interdisciplinary)	تعارف قانون	IUR-482	
03	تخصیصی Capstone project	سندی مقالہ	URCAP-481	5
03	تخصیصی (Major) برائے تھر ڈائیر	دفتری اردو/لسانی وادبی اصطلاحات	URB-243 URB-244/	6
15	کُل کریڈٹ آورز			

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
02	عمومی (General)	مبادیاتِ کاروبار (Entrepreneurship)	GEN-241	1
1+2 (03)	عمومی (General)	روزمرہ سائنس	GEN-246	2
03	تخصیصی (Major)	اردو مزاح نگاری کا مطالعہ	URB-241	3
03	تخصیصی (Major)	مولوی عبدالحق کی علمی وادبی خدمات	URB-242	4
03	تخصیصی انتخابی (major elective)	دفتری اردو	URB-243	5
03	تخصیصی انتخابی (major elective)	لسانی وادبی اصطلاحات	URB-244	
14		کُل کریڈٹ آورز		
		نوٹ:۔ 1: پانچویں کورس کے لیے دو تخصیصی انتخابی کورسز میں سے ایک کورس کا اجرا ہو گا۔		
		2: اس سمسٹر کی تکمیل کے بعد ایسوسی ایٹ ڈگری (ADP) جاری ہو سکتی ہے۔		

اے ڈی پی (اردو) ڈگری کے حامل پانچویں سمسٹر میں براہِ راست داخلہ لے کر مزید دو سال میں بی ایس چار سالہ ڈگری مکمل کر سکتے ہیں۔ البتہ دو سالہ روایتی بی اے اور اردو کے علاوہ کسی دیگر ڈسپلن میں اے ڈی پی ڈگری یافتہ یا حکومت کے منظور شدہ ادارے سے 14 سالہ تعلیم کے ڈگری یافتہ بھی پانچویں سمسٹر میں داخلہ لے سکتے ہیں البتہ وہ اگلے چار سمسٹر میں دیگر کورسز کے ساتھ چار اضافی کورسز بطور تکمیلی کورسز (deficiency courses) کے پڑھیں گے۔

پانچواں سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	تاریخِ ادبِ اردو (آغاز سے عہدِ سرسید تک)	URB-351	1
03	تخصیصی (Major)	اردو غزل کا فکری و فنی مطالعہ	URB-352	2
03	تخصیصی (Major)	اردو داستان اور ناول : فکری و فنی مطالعہ	URB-353	3
03	تخصیصی (Major)	غیر افسانوی ادب (سیرت، تذکرہ، سوانح، سفر نامہ)	URB-354	4
03	بین العلومی (Interdisciplinary)	برصغیر کی تاریخ	IUR-351	5
03	بین العلومی (Interdisciplinary)	اسلامی تہذیب و ثقافت	IUR-352	
03	تخصیصی (Major) برائے تھر ڈائر	مبادیاتِ اردو	URB-111	6
03	تخصیصی (Major) برائے تھر ڈائر	اردو قواعد، املا و انشاء	URB-112	7
15		کُل کریڈٹ آورز		

نوٹ :۔ اس سمسٹر میں دو بین العلومی انتخابی کورسز میں سے ایک کا اجرا ہو گا ، تھر ڈائر کے سٹوڈنٹس سات کورسز پڑھیں گے۔

چھٹا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	تخصیصی (Major)	اردو نظم کا فکری و فنی مطالعہ	URB-361	1
03	تخصیصی (Major)	اردو افسانہ اور ڈرامہ : فکری اور فنی مطالعہ	URB-362	2

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پہلا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
02	عمومی (General)	اسلامیات	GEN-111	1
03	عمومی (General)	Functional English	GEN-112	2
1+2 (03)	عمومی (General)	مبادیات کمپیوٹر (ICT)	GEN-113	3
02	عمومی (General)	بین الاقوامی تعلقات	GEN-115	4
03	تخصیصی (Major)	مبادیات اردو	URB-111	5
03	تخصیصی (Major)	اردو قواعد، املا و انشاء	URB-112	6
16	کل کریڈٹ آورز			

دوسرا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
02	عمومی (General)	نظریہ و آئین پاکستان	GEN-121	1
03	عمومی (General)	English Expository writing	GEN-122	2
03	عمومی (General)	ریاضی (Mathematics)	GEN-123	3
02	عمومی (General)	شہریت (Civics)	GEN-124	4
03	تخصیصی (Major)	اصناف ادب کا تعارف	URB-121	5
03	تخصیصی (Major)	فروغ اُردو کے اہم ادارے	URB-122	6
16	کل کریڈٹ آورز			

تیسرا سمسٹر

کریڈٹ آورز	نوعیت	مضمون	کورس کوڈ	نمبر شمار
03	عمومی (General)	شماریات (Statistics)	GEN-231	1
03	عمومی (General)	اُردو (لازمی)	GEN-232	2
03	تخصیصی (Major)	لسانیات	URB-231	3
03	تخصیصی (Major)	پاکستانی زبانوں کا ادب	URB-232	4
03	تخصیصی انتخابی (major elective)	مشاہیر ادب	URB-233	5
03	تخصیصی انتخابی (major elective)	علوم بلاغت و عروض	URB-234	
15	کل کریڈٹ آورز			

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نوٹ:۔ پانچویں کورس کے لیے دو تخصیصی انتخابی کورسز میں سے ایک کورس کا اجرا ہو گا۔

URCAP: Capstone project (Research Article for BS Urdu)

URM: Major or Major elective Course for M.PHILL Urdu

URD: Major or Major elective Course for PhD

IQM: Major or Major elective Course for M.PHILL Urdu (Iqbaliyat)

IQD: Major or Major elective Course for PhD Urdu (Iqbaliyat)

Digits : 1st Digits of Code: Year

2nd Digits of Code: Semester Number

3rd Digits of Code: Course Number

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بی ایس اُردو

(چار سالہ مع ایسوسی ایٹ ڈگری وتھرڈ ایئر پروگرامز)

مدت :	4 سال (8 سمسٹر)
کل کورسز :	46
کل کریڈٹ آورز :	121
عمومی کورسز :	12 کورسز، 31 کریڈٹ آور
بین العلومی کورسز :	04 کورسز، 12 کریڈٹ آور
تخصیصی کورسز :	24 کورسز، 72 کریڈٹ آور
انٹرن شپ :	3 کریڈٹ آور
کیپ سٹون :	3 کریڈٹ آور

بی ایس ایسوسی ایٹ ڈگری : مدت : 2 سال (4 سمسٹر)

کل کریڈٹ آور : 61

بی ایس تھرڈ ڈایئر پروگرام : مدت : 2 سال (4 سمسٹر)

کل کریڈٹ آور : 75

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ڈیپارٹمنٹ کا ٹیسٹ / انٹرویو کم از کم 70٪ نمبروں سے پاس کرنا ہوگا۔ جن امیدواران نے GAT SUBJECT ٹیسٹ NTS سے یا HAT ETC ٹیسٹ HEC سے 60٪ کے ساتھ پاس کیا ہو اور اس کی میعاد بھی باقی ہو، وہ شعبہ جاتی ٹیسٹ سے مستثنیٰ ہوں گے۔

داخلے کے لیے ضروری ہدایات :

1۔ داخلہ کے خواہشمند امیدوار اسلام آباد کیمپس کی ویب سائٹ <u>www.fuuastisb.edu.pk</u> پر آن لائن داخلہ فارم پر کریں۔ امیدوار پروسیسنگ فیس واؤچر کی اصل رسید، تعلیمی دستاویزات کی مصدقہ نقل ، چار عدد تصاویر (پاسپورٹ سائز) بمعہ شناختی کارڈ یا فارم ب کی مصدقہ نقل داخلہ فارم کے ساتھ منسلک کر کے اشتہار میں درج پتہ پر ارسال کریں۔

2۔ داخلہ فارم پر کرنے کے بعد (Processing Fee) فیس واؤچر پرنٹ کر کے HBL کی کسی بھی شاخ میں جمع کروا سکتے ہیں یا بینک ڈرافٹ، پے آرڈر بنام FUUAST اسلام آباد فارم کے ساتھ لگانا ہوگا۔

3۔ کیمپس ہذا میں داخلہ کے لئے اہلیت کا معیار (Eligibility Criteria) اوپر بیان کر دیا ہے۔

4۔ رزلٹ کے منتظر امیدواران Hope certificate کی بنیاد پر اپلائی کر سکتے ہیں۔

5۔ ایم فل و پی ایچ ڈی میں داخلہ کے لئے امیدواران کو شعبہ جاتی ٹیسٹ پاس کرنا ہوگا ۔ جس کی تفصیلات کا اعلان ویب سائٹ اور اشتہارات پر کر دیا جائے گا۔

6۔ داخلہ پانے والوں کے لیے درج ذیل سکالرشپس موجود ہیں ۔ مطلوبہ شرائط پر پورا اترنے والے ان سے استفادہ کر سکتے ہیں۔ پاکستان بیت المال، احساس پروگرام، بینیویلیٹ فنڈ

7۔ جڑواں شہروں (اسلام آباد، راولپنڈی) اور مضافات کے لئے ٹرانسپورٹ کی سہولت موجود ہے۔

8۔ فیس اور دیگر تفصیلات کا اعلان ہر سیشن میں داخلے کے وقت اخبارات اور ویب سائٹ پر کر دیا جائے گا۔

کورس کوڈز کی توضیح

GEN: Genral course

UR: URDU

B : BS (Name of Program)

M: M. PHILL

D: PhD

URB: Major or Major elective Course for BS

IUR: Interdisciplinary course for BS URDU

URINT: Internship (Field experience for BS Urdu)

علاوہ ازیں شعبہ میں مستقبل قریب میں درج ذیل طویل و مختصر دورانیہ کے کورسز کا اجرا متوقع ہے اور مزید کورسز بھی تشکیل دیے جا رہے ہیں۔

☆ ایم فل و پی ایچ ڈی ایوننگ پروگرام   ☆ ایم فل و پی ایچ ڈی ویک اینڈ پروگرام

☆ تدریس اردو (ڈپلوما)

مستقبل میں ایوان اردو، اقبال چیئر وغیرہ جیسے منصوبے بھی زیر غور ہیں۔ شعبہ اردو اپنا سفر خوش اسلوبی سے جاری رکھے ہوئے ہے اور اس کی ترقی کے روشن امکانات ہیں۔

معیار اہلیت

بی ایس اُردو 4 سالہ

کسی منظور شُدہ تعلیمی ادارے / بورڈ سے انٹر میڈیٹ، اے لیول یا مساوی تعلیم کم از کم 45٪ نمبروں کے ساتھ۔

ADP اُردو 2 سالہ

کسی منظور شُدہ تعلیمی ادارے / بورڈ سے انٹر میڈیٹ، اے لیول یا مساوی تعلیم کم از کم 45٪ نمبروں کے ساتھ۔

بی ایس اُردو (پانچویں سمسٹر سے) 2 سالہ

کسی منظور شُدہ تعلیمی ادارے سے بی اے، بی ایس سی یا مساوی تعلیمی قابلیت (14 سالہ تعلیم) کم از کم 45٪ نمبروں کے ساتھ۔

اہل امیدواروں کو یونیورسٹی کے اصول و قواعد کے مطابق بی ایس کے تیسرے سال (پانچویں سمسٹر) میں داخلہ دیا جائے گا۔ ایسے طلبا پر کچھ اضافی کورسز پڑھنا بھی لازم ہو گا۔

ایم فل اُردو

کسی بھی منظور شُدہ تعلیمی ادارے سے بی ایس اردو (4 سالہ) یا ایم اے اُردو اور ایم فل/ایم ایس اردو (بہ تخصیص اقبالیات) کے لیے اردو، فارسی، اور فلسفہ میں ایم اے ۔ سالانہ امتحان کی صورت میں متعلقہ ڈگری میں 50٪ نمبروں اور سمسٹر سسٹم کی صورت میں 2.50/ 4.00 CGPA کے ساتھ HEC کے منظور شُدہ ادارے سے ڈگری حاصل کی گئی ہو۔ داخلے کے بعد طالب علم کو ہائر ایجوکیشن کمیشن کے مروجہ قوانین کے مطابق کورس ورک اور تحقیقی مقالہ کی تکمیل کرنی ہو گی۔ نیز جو امیدوار کسی ادارے میں ملازم ہے اسے اپنے ادارے کا NOC داخلہ فارم کے ساتھ لازمأ جمع کروانا ہو گا۔ اہل امیدوار کو ڈیپارٹمنٹ کا ٹیسٹ / انٹرویو کم از کم 60٪ نمبروں سے پاس کرنا ہو گا۔ جن امیدواران نے GENERAL GAT ٹیسٹ یا NTS HAT ETC ٹیسٹ HEC سے 50٪ کے ساتھ پاس کیا ہو اور اس کی میعاد بھی باقی ہو، وہ شعبہ جاتی ٹیسٹ سے مستثنیٰ ہوں گے۔

پی ایچ ڈی اُردو

ایم فل اردو اور پی ایچ ڈی اردو (بہ تخصیص اقبالیات) میں داخلے کے لیے ایم فل اقبالیات/ اردو/ فارسی میں کم از کم 3.00/4.00 CGPA کے ساتھ یا فرسٹ ڈویژن کے ساتھ سالانہ امتحان کے تحت HEC کے منظور شُدہ تعلیمی ادارے سے ڈگری حاصل کی ہو۔ نیز جو امیدوار کسی ادارے میں ملازم ہو تو اسے اپنے ادارے سے NOC داخلہ فارم کے ساتھ لازمی جمع کروانا ہو گا۔ اہل امیدوار کو

کی وجہ سے ان سب اداروں میں بھی ملازمت و روزگار کے وسیع مواقع ہیں۔

❖ یہ ایک کھلی حقیقت ہے کہ جدید علوم مقامی زبان میں ترجمے کے بعد ہی معاشرے کے ہر طبقے تک پہنچتے ہیں اور ترقی کا باعث بنتے ہیں۔ دیگر زبانیں انہیں خاص طبقے تک محدود رکھتی ہیں۔ ہمارے ہاں عام آدمی کے لیے جدید علوم سے واقفیت اور دلچسپی کا وسیلہ اردو زبان ہی بنی ہے۔اس لیے معاشرتی ارتقا کے لیے اردو زبان و ادب کی تدریس و تحقیق وقت کی ضرورت ہے۔

❖ ہمارے معاشرے میں بڑھتی ہوئی بے راہ روی اور اخلاقی گراوٹ کے لیے اردو ادب، اعلی معاشرتی اقدار سے منسلک رہنے کا ذریعہ اور وقار و شائستگی کی تربیت کا باعث ہے۔

❖ وفاقی اردو یونیورسٹی وہ واحد اعلی تدریسی ادارہ ہے جو آئین پاکستان کے مطابق اس زبان کے نام پر قائم کیا گیا ہے۔ لہذا دنیا بھر میں اس کی بی ایس، ایم فل اور پی ایچ ڈی اردو و اقبالیات کی ڈگری ناصرف تسلیم شدہ ہے بلکہ دیگر جامعات کی نسبت زیادہ معتبر ہے۔

کراچی کیمپس کے شعبہ اردو میں دو اور اسلام آباد کیمپس میں پانچ پی ایچ ڈی مستقل اساتذہ۔ جو اپنے اپنے مضمون کے ماہرین میں سے ہیں۔ خدمات سرانجام دے رہے ہیں۔ علاوہ ازیں وقتاً فوقتاً صاحب علم و محنتی ، معاہداتی اور وزٹنگ اساتذہ بھی شعبے میں تدریسی فرائض انجام دیتے رہتے ہیں۔

شعبہ اردو اسلام آباد کے مستقل اساتذہ کرام :

1۔ ڈاکٹر فہمیدہ تبسم   ایسوسی ایٹ پروفیسر   **(صدر شعبہ)**

2۔ ڈاکٹر ناہید قمر   ایسوسی ایٹ پروفیسر

3۔ ڈاکٹر سید عون ساجد   اسسٹنٹ پروفیسر

4۔ ڈاکٹر زینت افشاں   اسسٹنٹ پروفیسر

5۔ ڈاکٹر سعدیہ طاہر   اسسٹنٹ پروفیسر

شعبہ اُردو کے تحت درج ذیل منظور شدہ ڈگری پروگرامز صبح کے اوقات میں جاری ہیں۔

1۔ بی ایس اُردو (چار سالہ، 8 سمسٹر)   2۔ بی ایس ایسوسی ایٹ ڈگری (دوسالہ 4 سمسٹر)

3۔ بی ایس تھرڈ ایئر (دوسالہ ، 4 سمسٹر)   4۔ ایم فل اُردو(دوسالہ،4 سمسٹر)

5۔ پی ایچ ڈی اُردو (3 سالہ۔6 سمسٹرز)   6۔ ایم فل اُردو (بہ تخصیص اقبالیات) دوسالہ

7۔ پی ایچ ڈی اُردو (بہ تخصیص اقبالیات) 3 سالہ

درج ذیل مضامین و مہارتوں کے، سرٹیفیکیٹ ، ڈپلوما اور ایڈوانس ڈپلوما کورسز بھی وقتاً فوقتاً آفر کیے جا رہے ہیں

1 اردو زبان (برائے غیر ملکی طلباء)   2۔ صحافتی و دفتری اردو 3۔ فارسی زبان و ادب

شعبہ اُردو

وفاقی اُردو یونیورسٹی برائے فنون، سائنس و ٹیکنالوجی اسلام آباد کا قیام نومبر 2003میں عمل میں آیا۔ اس کیمپس میں شعبہ اُردو کا آغاز خزاں 2006ء میں ایک اعزازی، دو جزوقتی اور دو مستقل اساتذہ کے ساتھ ہوا اور آغاز سے ہی شعبہ اُردو میں ایم اے /ایم فل اور پی ایچ۔ڈی پروگرامز کا اجرا کردیا گیا۔ اب یہ شعبہ اپنے ارتقائی مراحل خوش اسلوبی سے طے کر رہا ہے۔شعبہ اُردو کے بی ایس، ایم فل اور پی ایچ ڈی پروگرام سے سینکڑوں طلبا و طالبات فارغ التحصیل ہو کر قومی و نجی اداروں میں خدمات انجام دے رہے ہیں۔ اور ایک بڑی تعداد مختلف تعلیمی و تحقیق مراحل سے گزر رہی ہے۔ شعبہ اُردو میں پڑھائے جانے والے تمام کورسز جامعہ کی اکیڈمک کونسل سے منظور شدہ اور ہائر ایجوکیشن کمیشن کے معیار کے مطابق ہیں۔ شعبے کا تحقیقی مجلہ ترتیب کے مراحل میں ہے۔نیز شعبے میں تصنیف و تالیف کا سیکشن بھی قائم کیا جائے گا۔

وفاقی جامعہ اردو کا قیام اردو زبان کی ترویج و اشاعت کے لیے اہم ترین سنگ میل کی حیثیت رکھتا ہے جامعہ اردو کی اس قومی اہمیت کے پیشِ نظر شعبہ اردو نے بی ایس تا پی ایچ ڈی نصاب سازی کے عمل پر خصوصی توجہ مبذول کی ہے ۔اور جدید نصاب تمام ادبی، لسانی اور تحقیقی ضروریات کو پیشِ نظر رکھ کر مرتب کیا گیا ہے۔ اردو زبان و ادب کے دیگر علوم سے روابط اور ان کا مبادیاتی مطالعہ بہ طور خاص شامل نصاب ہے تا کہ طلبہ وسعت فکر کے حامل اور جدید زمانے سے ہم آہنگ ہوسکیں۔ الغرض:

◈ آئین پاکستان کے مطابق اردو ہماری قومی زبان ہے۔اسی لیے تمام سکولوں ، کالجوں اور اعلی تعلیمی اداروں میں یہ مضمون لازمی پڑھایا جاتا ہے جس کی وجہ سے اس مضمون میں سب سے زیادہ سرکاری وغیر سرکاری ملازمت کے مواقع ہیں

◈ قومی و نجی ٹی وی چینلز ، اخبارات اور سوشل میڈیا پر ہر جگہ سمجھی جانے والی اس قومی زبان کا ہی غلبہ ہے۔ حتی کئی انگلش چینل اردو میں بدل دیے گئے ہیں، مائیکرو سافٹ جیسی بین الاقوامی کمپنی نے بھی اس زبان کے لیے خصوصی اقدامات کیے ہیں۔ جس

جامعہ ہذا کے انجینئرنگ پروگرام کو پاکستان انجینئرنگ کونسل سے درجہ استناد حاصل ہے جو جامعہ کی ترقی کی شاہراہ پر ایک اہم سنگ میل ہے۔ نیز وفاقی اُردو یونیورسٹی دنیا کی معروف جامعات کے ساتھ علمی و تحقیقی شراکت کار کے معاہدوں پر دستخط کر چکی ہے۔

اپنے گونا گوں مسائل، نا مساعد حالات اور نسبتاً ایک کم عمر ادارہ ہونے کے باوجود الحمد اللہ، وفاقی اُردو یونیورسٹی اپنے اعلیٰ تعلیمی اور تحقیقی معیارات کے باعث ملک کی بیشتر معروف جامعات کے مقابلے میں نمایاں شناخت کی حامل ہے۔وفاقی اردو یونیورسٹی اپنے لائق رئیس الجامعہ کی قیادت میں روز افزوں ترقی کے مراحل طے کر رہی ہے اور وہ دن دور نہیں جب یہ قومی ادارہ بین الاقوامی سطح پر بھی اپنی شناخت پیدا کرلے گا۔

وفاقی اُردو یونیورسٹی

(مختصر تاریخی خاکہ)

دنیا میں کوئی قوم اپنی زبان کو فروغ دیۓ بغیر ترقی نہیں کر سکتی اور 1973 کے منظورشدہ آئین کے مطابق اُردو پاکستان کی قومی زبان ہے۔ قائداعظم محمد علی جناح اپنی سیاسی بصیرت کے باوصف یہ اندازہ کر چکے تھے کہ برصغیر کے طول و عرض میں موجود مسلمان اسلام کے رشتے کے بعد اردو زبان ہی کی وجہ سے ایک دوسرے سے منسلک ہیں اور یہی زبان عوام میں رابطے کی ضروریات کو پورا کرتی ہے۔ اردو زبان کی اسی اہمیت کے پیشِ نظر بانی پاکستان قائداعظم محمد علی جناح نے اپنی اکثر تقاریر میں اردو کے نفاذ کا اعادہ کیا۔بابائے اردو مولوی عبدالحق بھی اردو زبان کی ترویج و ترقی کے لیے کوشاں رہے انہوں نے انجمن ترقی اردو کا دفتر اور نگ آباد سے دہلی منتقل ہونے پر 1938 میں کل ہند انجمن ترقی اردو کانفرنس منعقد کی جس میں اتفاق رائے سے یہ تجویز منظور ہوئی کہ کم از کم دہلی، پنجاب، لکھنؤ، علی گڑھ، الہ آباد اور پٹنہ کے کسی مقام پر اُردو یونیورسٹی قائم کی جاۓ۔ چنانچہ 20 جنوری 1904 کی تیسری کل ہند انجمن ترقی اردم کانفرنس علی گڑھ جوخیر کےبعدقائداحیا گیا ناگپور کانفرنسی کے قیام پی کی تجویزٰ قائق بدرالحق نے اپنے رہن دانی قائداعظم علی جناح کو جلاحل کو کھرچِن میک کھانے کی دعوت دی جس میں قومی تعمیر کے مختلف موضوعات پر گفتگو ہوئی اور مجوزہ اردو یونیورسٹی کا بھی ذکر ہوا جس میں قائداعظم نے دلچسپی ظاہر کی۔ مولوی صاحب کو یقین تھا کہ وہ قائداعظم کی امداد و اعانت سے اردو یونیورسٹی قائم کرنے میں ضرور کامیاب ہو جائیں گے۔ لیکن قائداعظم جلد ہی رحلت فرما گئے۔ تاہم مولوی عبدالحق نے کراچی میں انجمن ترقی اردو کے زیر انتظام اردو کالج قائم کیا جس میں 25 جون 1949ء سے باقاعدہ کام کا آغاز ہوا۔اس کالج میں ابتداء میں ادیب عالم اور ادیب فاضل کی تعلیم دی جاتی تھی لیکن 1951 میں ایم اے کی سطح تک بھی تدریس کا آغاز ہو گیا اور ذریعہ تعلیم اردو ہی رہا۔اردو کالج کراچی میں آرٹس، سائنس کامرس اور سب شعبوں میں تمام مضامین اردو میں پڑھاۓ جاتے ہیں۔ مولوی عبدالحق کی وفات کے بعد 1964 میں گلشن اقبال کراچی میں اردو سائنس کالج کی بنیاد رکھی گئی اور جمیل الدین عالی اس کے ناظم مقرر ہوۓ،کیم ستمبر 1976 کی وفاقی حکومت نے دونوں کالجوں کا انتظام سنبھال کر علیحدہ علیحدہ بورڈ آف گورنر مقرر کر دیۓ۔اسی کی دہائی میں کالج کی عمارت تعمیر ہوئی پھر13 نومبر2002 میں اسے وفاقی اردو یونیورسٹی کا درجہ دے کر بابائے اردو کے خواب کو تعبیر بخشی گئی اور اس کا مرکزی کیمپس اسلام آباد میں ایک کراۓ کی عمارت میں قائم ہو گیا۔ 2020 میں اپنی نئی دیدہ زیب عمارت کی تعمیر کے بعد یونیورسٹی اسلام آباد کے مضافات میں نہایت خوبصورت مقام پر منتقل ہوگئی ۔ یونیورسٹی تاحال تیزی سے ترقیاتی مراحل سے گزری ہے ۔ اس کے مرکزی کیمپس اسلام آباد میں متعدد تدریسی شعبہ جات کے مختلف پروگرامز میں تقریباً تین ہزار سے زیادہ طلباء وطالبات حصولِ علم میں مصروف ہیں۔
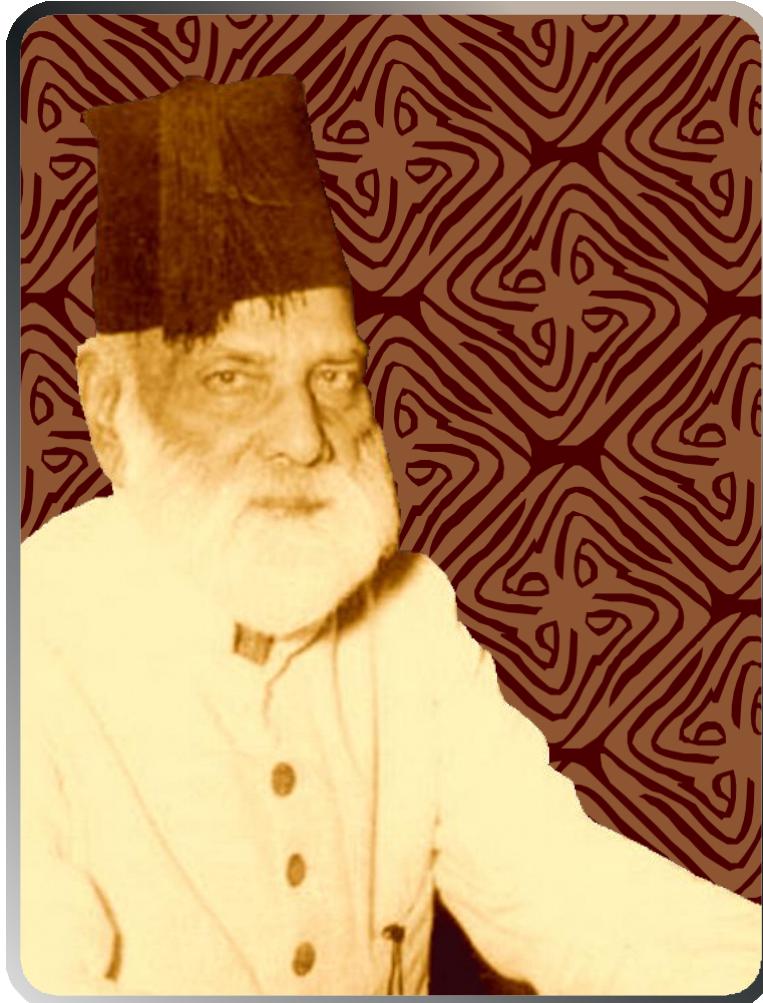
اُردو یونیورسٹی اُردو زبان کا بہت بڑا قلعہ ہوگی ۔ اُردو یونیورسٹی کے ذریعے اُردو کو وسعت دے کر اور اس کا وقار بڑھا کر اسے بین الاقوامی زبان بنایا جا سکے گا۔

بابائے اردو مولوی عبدالحق
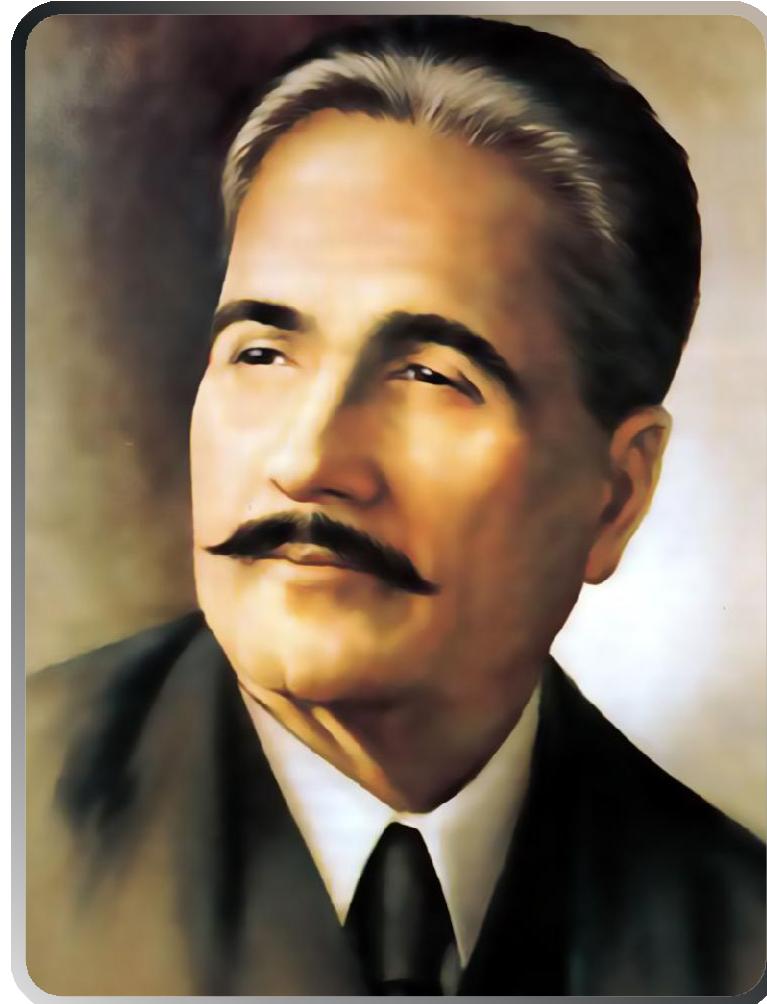
کاش میں اپنی زندگی کے باقی دن آپ کے ساتھ رہ کر اردو کی خدمت کر سکتا۔

(مکتوب بنام بابائے اردو ۲۸ اپریل ۱۹۳۷ء)

مفکر پاکستان علامہ اقبالؒ
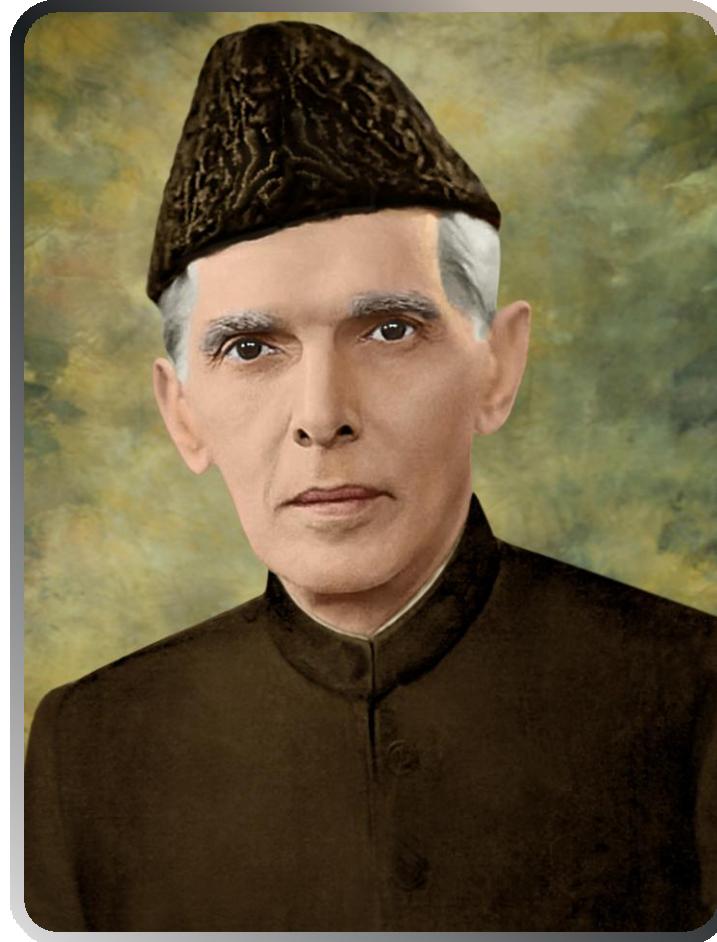
میں واضح طور پر بتا دینا چاہتا ہوں کہ مملکت پاکستان کی سرکاری زبان اُردو ہوگی اور اس کے سوا کوئی اور زبان نہیں اس سلسلہ میں جو شخص آپ کو گمراہ کرنے کی کوشش کرتا ہے وہ یقیناً پاکستان کا دشمن ہے۔

بابائے قوم حضرت قائد اعظمؒ

وفاقی اُردو یونیورسٹی

برائے فنون، سائنس و ٹیکنالوجی، اسلام آباد

تعارف نامہ