

Admission Spring 2022

# MSc Programmes

(Face to Face)

- Microbiology
- Environmental Sciences
- Botany
- Chemistry
- Mathematics
- Statistics
- Statistics Zero Semester
- Physics (for BSc/BSEd)
- Physics (for B Tech)



Allama Iqbal Open University, Islamabad

[www.aiou.edu.pk](http://www.aiou.edu.pk)

Help Line: (051) 111-112-468

**PROSPECTUS**  
**OF**  
**M.Sc Face to Face Programmes**  
**FOR**  
**SEMESTER: SPRING, 2022**



**Allama Iqbal Open University**  
**Islamabad**

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## Vice-Chancellor's Message

Dear Student,

السلام عليكم

Welcome to Allama Iqbal Open University, the first distance education university in South Asia that provides cost effective education to 1.3 million students not only in Pakistan but also in Middle East. This university has the unique privilege of blurring temporal and spatial boundaries by providing education at the thresholds of the students. The university offers a diverse range of educational facilities, starting from basic literacy Programmes to the PhD level. The courses are regularly revised to bring them at par with international standards. The university offers maximum number of specializations at postgraduate level through four faculties, i.e. Faculty of Arabic and Islamic Studies, Faculty of Education, Faculty of Sciences, and Faculty of Social Sciences and Humanities. The university has a huge network of faculty members, tutors, resource persons, specialists and experts who strive hard to ensure that the Programmes offered by the university enable the students to become independent learners and critical thinkers. The university takes special measures to establish and strengthen research culture and prepare those individuals who can play an instrumental role in the process of progress and development of the country.



I welcome you to the postgraduate studies at AIOU and wish you a challenging yet successful journey ahead.

**Prof. Dr. Zia Ul-Qayyum**  
**Vice Chancellor**  
**AIOU**

**MINIMUM AND MAXIMUM TIME DURATION/SEMESTERS  
FOR THE COMPLETION OF FACE TO FACE PROGRAMME  
(From Spring 2021 Semester)**

Sr. #	Degree Level	Minimum Duration	Maximum Duration
1.	PhD	3 Years / 5 Semesters	8 Years*
2.	MS/MPhil/MSc (Hons)/MBA/COL MBA	2 Years / 4 Semesters	4 Years**
3.	MA/MSc (2 Years)	2 Years / 4 Semesters	4 Years
4.	BS (4 Years)	4 Years / 8 Semesters	6 Years
5.	Associate Degree (2 Years)	2 Years / 4 Semesters	4 Years
6.	Postgraduate Diploma (1 Year)	1 Year / 2 Semesters	2 Years
7.	Certificate (6 Months)	6 Months / 1 Semester	1 Year

\*&\*\* As per AIOU rules.

**Revised Policy: Reappear and Again Reappear**

The policy of Re-appear and Again Re-appear is being discontinued and the concerned students will have to re-register/enroll or re-admit in the failed course(s).

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## **ALLAMA IQBAL OPEN UNIVERSITY**

Allama Iqbal Open University, a Mega university was established in 1974 under an Act of Parliament. The main campus of the university is situated in sector H-8, Islamabad. It was the second open university of the world and the first of its kind in Asia and Africa. The aim of establishing AIOU was to provide affordable and accessible education through distance learning at the door-steps to those people who could not continue their education journey through formal system of education. The University (AIOU) operates on semester system and admits students in Autumn and Spring semesters. Under graduate admissions are offered in both the semesters where-as post graduates are offered once a year. The enrolled students are given course books specially prepared by the university on self-instructional principles. However, at post graduate level reprints of foreign books, allied material with university prepared study guides help students to polish their skills.

At present, the AIOU is offering programmes from Matric to PhD level in diverse disciplines comprises of four faculties. The university has established study centres across the country, where distance education students are provided necessary guidance by their respective tutors. Moreover, the university has established full time study centres, wherein the students of MCom, MBA (IT), MBA (Banking and Finance), BS (CS), etc. are being provided instruction, guidance and counselling through face-to-face education. AIOU is offering four year under graduate degrees.

Apart from curricular and extra-curricular activities during the academic year, the AIOU and its regional centres actively participate in the co-curricular activities by arranging educational and literary seminars, workshops and conferences, attended not only by the students and faculties of the university but also by the renowned dignitaries and scholars. For the science students and research scholars, a science complex has been built where they use the latest equipment of international standard for experiments and research. To meet the present day challenges internet facility is also available in the student's hostel and the Central Library where computers have been provided to enable students to access latest information available through open source databases.

## **FACULTY OF SCIENCES**

Faculty of Sciences forms an important and integral part of the university. Since its establishment in 1982 with five teaching departments, it has undergone major developments. It now comprises nine teaching and research departments which are offering courses at the undergraduate and postgraduate levels to more than ten thousand students. The Faculty operates under the basic guidelines of the University Act and on "Education for All as Convenient" basis so that maximum students get benefit from its academic programmes and educational facilities. This principle has necessitated some structural changes in the non- formal mode, particularly at the postgraduate level, in the offering of theory courses and practical lab work. This conceptual adjustment has been quite successful and many of its in-service students are benefiting

from the postgraduate study programmes. Improvement in qualifications for a better life is a right of everyone and the Faculty's programmes meet this challenge by offering opportunities to all. In particular, a significant number of beneficiaries are those who cannot afford education in formal institutions due to a variety of reasons.

Realizing the importance of science education and growing needs of the Faculty of Sciences, the University has completed a building, the Research Complex, at a cost of Rs. 35 million. The Research Complex now accommodates departments of Agricultural Sciences, Biology, Chemistry, Environmental Sciences, Home & Health Sciences, Mathematics, Statistics and Physics. These departments are running a variety of postgraduate technical, scientific and professional programmes successfully. The Research Complex also has a Computer Lab with Internet and On-line Library Facility for literature survey, Seminar Room, Lecture Hall and Library. In addition, there are many labs for practical work, teaching and research, and instrumentation labs for analysis. The University is developing these labs through its own resources. The Faculty of Sciences is fortunate to have Prof. Dr. Zia Ul-Qayyum as the University's Vice-chancellor, who has given personal attention to the development of the Faculty of Sciences by providing generous amount of funds and valuable guidance.

Two Model labs have been developed in the Research Complex with the assistance of the Higher Education Commission to meet the training needs of science teachers. This development is significant for training of teachers since

under the new educational policy four-year BS programme has started in undergraduate educational institutions.

More than fifty highly qualified full-time faculty members are on the roll of the Faculty of Sciences. Their role in the planning, designing and development of courses to meet student's needs is vital. Faculty members also engage in imparting and supervising of instructions so that high standards are maintained. In addition, highly qualified and experienced professors are also engaged on contractual basis or as part time instructors for postgraduate study programmes. The Faculty is also offering academic positions under the tenure-track system to attract the best minds in scientific and technological fields.

Research is an integral part of the postgraduate study programmes leading to MSc, MPhil and PhD degrees in Agricultural Sciences, Chemistry, Computer Sciences, Home and Health Sciences, Physics, Mathematics and Statistics. Rules and regulations governing the postgraduate study programmes are those approved by the Higher Education Commission (HEC).

The Faculty has launched BS programme in Chemistry and Microbiology from semester Spring 2009. The four-year BS programme is structured according to the recent policies of the Higher Education Commission for the improvement of the standard of education so as to bring it at par with the international standards.

## **DEPARTMENT OF BIOLOGY AND ENVIRONMENTAL SCIENCES**

The Department of Biology was established in 1998 with a mission to serve those who could not continue their formal education in various disciplines of Biological Sciences due to economic or job constraints and the production of well-trained manpower to serve various sectors of the country like education and research for the attainment of the goal of self-sufficiency.

According to its vision the Department of Biology and Environmental Sciences is striving hard to uplift the teaching standards and provide a congenial environment for research in the field of Biology and Environment. The Department always seeks to introduce more disciplines at graduate and postgraduate levels as per demand of the society, so as to keep its graduates well informed with the recent advances in Biological Sciences. This will help to produce well-trained manpower meant to serve science both at national and international levels.

Currently the Department is offering graduate programmes in following disciplines:

- MSc Microbiology
- MSc Environmental Sciences
- MSc Botany
- BS Microbiology
- BS Environmental Sciences
- BS Botany
- BS Biochemistry

In addition to that, Department is offering some courses from basic to postgraduate levels for main pool of AIOU's general programmes.

### **MSc Microbiology (2 Years)**

#### **Introduction**

Presently there is a revolution in the scientific knowledge and this can be called as "Scientific Revolution". Among the scientific disciplines of biological sciences, Microbiology is one of the most important fields, particularly in Pakistan where it is contributing in a wide spectrum of areas including Medicine, Dairy, Poultry, Agriculture and Industry.

Although, the subject of Microbiology has been introduced since long, but the demand from on-job personnel has never been fulfilled in the past. Due to rapid increase in the country's population and based on a great demand from the in-service employees working in public and private institutions, a BS programme in the subject of Microbiology has already been introduced. Now, to cater the need of graduates in relevant disciplines, an MSc programme is being proposed. This programme is designed with an aim to

- Fulfill the gap of trained manpower in the discipline of Microbiology.
- Strengthen the on-going research projects being run in the country in microbiology-related disciplines.

Create awareness among the students regarding new research techniques and modern approaches applicable in the field of Microbiology to address the challenges in the fields of Medicine, Dairy, Poultry, Agriculture and Industry.

### **Objectives**

The curriculum designed for the MSc Microbiology will produce the graduates to:

- Cope up with the issues for wide spectrum of areas including Medicine, Dairy, Poultry, Agriculture and Industry.
- Play a vital role in the economic growth and to bring qualitative changes in the above mentioned areas in the country.
- Create awareness about public health and safety and facilitate the establishment of liaison between Microbiologist and industry.

### **Launching Scheme**

Face to face classes will be scheduled only at main campus of Allama Iqbal Open University, H-8, Islamabad.

### **Guideline for Online Application:**

1. The online application form can be accessed from university official website [www.aiou.edu.pk](http://www.aiou.edu.pk)
2. Applicants are required to fill all the desired fields on online application form.
3. Applicants are desired to deposit application fee on the prescribed challan form in specified banks.
4. The challan number after fee submission should be entered in online application form for successful completion.
5. Incomplete forms shall not be entertained.
6. Selection of candidates will be made strictly on merit and as per policy of the AIOU.
7. Only selected candidates will be required to pay their fee/dues by the prescribed dates.

8. The deposited fee will not be refundable or adjustable for future admission.
9. The document showing fee deposit must be provided in the office of Chairperson, Department of Biology, AIOU on or before the last date for the fee submission.
10. In case of non-compliance, it would be assumed that fee has not been deposited and the student is not any more interested in getting admission. The department may invite a candidate in waiting list for admission against the vacant seat.

### **Eligibility and Selection Criteria**

BSc Degree with 2<sup>nd</sup> Division with Botany and Zoology as major; BSc Veterinary Sciences, MBBS, BSc Medical Lab. Technology, B Pharmacy, BSc Microbiology with at least Second Division are eligible to apply. The admission will be strictly on merit, which will be determined by the departmental admission committee.

### **TEACHING METHODS AND MEDIUM OF INSTRUCTION:**

The following teaching methodology will be adopted for this programme:

#### **1. Medium of Instruction:**

The medium of instruction will be English.

#### **2. Study Material:**

The study material will if available. Lecture handouts will be provided to the students by the concerned Resource Person. However, the students are also advised to consult other reference books available in the University Library.

### **3. Teaching Support:**

- a) The university will provide face-to-face teaching to all students registered in this programme.
- b) The schedule of classes and dates of submission of assignments will be conveyed to the students well in time.

### **4. Assessment and Evaluation:**

For each course, the registered students will be assessed and evaluated on the basis of the followings:

- a) Performance in the face to face teaching component.
- b) Continuous assessment through written assignments, midterm examination, or workshops or practical activities in the laboratory.
- c) For final assessment a three hours written examination will be conducted for each course (both in theory and practical) in which face to face classes were held.
- d) A student has to achieve 50% marks to pass the course in every individual component i.e. continuous assessment, Practical Examination and the Final Exam.
- e) Project assessment will be carried out as per prevailing practice in AIOU. The thesis will be evaluated by the committee formulated by the Chairman/Chairperson department.

**Note:** - *The continuous assessment and final examination will contribute 30% and 70% to the student's final course grade, respectively. For successful completion of each course, the student will be required to qualify each of the two above components separately. If a student fails to achieve the*

*required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.*

### ***Class Work***

In this programme, face to face theory classes of one-hour duration per week for each credit hour will be held at the campus. As per AIOU rules, a minimum attendance of 70% is required in class work to appear in the final examination.

### ***Laboratory Work***

For each laboratory course in a semester a workshop of 4 to 7 days duration depending upon the number of practicals will be arranged during the semester at AIOU campus, Islamabad. The practicals will be conducted in the Microbiology laboratory.

### ***Degree Requirement***

In order to become eligible for the award of degree in MSc Microbiology the students must earn a total of 70 credit hours including six credit hours for research project or as specified by the department.

### ***Duration and Structure***

The minimum duration of MSc Microbiology will be two years comprising four semesters. Failing which, a student can be given an extension of 2 years in maximum after the completion of the initial period.

## SEMESTER WISE BREAKUP OF COURSES

### 1<sup>st</sup> Semester

Sr. No.	Course Code	Course	Credit Hours
1	4403	Fundamentals of Microbiology	4(3+1)
2	4481	Introductory Biochemistry	4(3+1)
3	4482	Biostatistics	3(3+0)
4	4407	Microbial Genetics	4(3+1)
5	4408	Virology	4(3+1)
<b>Total credits</b>			<b>19</b>

### 2<sup>nd</sup> Semester

1	4445	Environmental Microbiology	4(3+1)
2	4419	Molecular Biology	4(3+1)
3	7413	Scientific Research	4(3+1)
4	4411	Food and Dairy Microbiology	4(3+1)
5	4405	Microbial Anatomy and Physiology	4(3+1)
<b>Total credits</b>			<b>20</b>

### 3<sup>rd</sup> Semester

1	4415	Immunology	4(3+1)
2	4413	Medical Microbiology	4(3+1)
3	4420	Industrial Microbiology	4(3+1)
4	4410	Soil Microbiology	4(3+1)
<b>Total credits</b>			<b>16</b>

### 4<sup>th</sup> Semester

1	4417	Epidemiology	4(3+1)
2	4418	Research Project	6
3	4414	Genetic Engineering	4(3+1)
4	4400	Seminar	1
<b>Total credits</b>			<b>15</b>

**Total Credit Hours: 19+20+16+15 = 70**

### Fee Tariff: Fee Semester-1 (19 Credit Hours)

Programme Registration fee	Rs.500/-
Admission fee	Rs.1000/-
Technology fee (per semester)	Rs.500/-
Per 4 credit hours course fee: Rs.8000 x 4 = Rs.32000/-	Rs.32,000/-
Per 3 credit hours course fee: Rs.6000	Rs.6000/-
Lab Fee:	Rs.3000/-
<b>1<sup>st</sup> Semester Total Fee:</b>	<b>Rs.43,000/-</b>

## MSc Environmental Science (2 Years)

### Introduction

Environmental conservation, alleviation of poverty and sustainable development are high on the agenda of global concerns (UN conferences: Stockholm 1972, Rio de Janeiro, 1992, New York, 1997 and Johannesburg, 2002). In the context of Pakistan, sustainable development demands justice in the use of resources by the present generation keeping in view the needs

of the future generations. Unsustainable management of natural resources hampers the development of mankind and contributes to the unequal distribution of economic welfare. Pollution, depletion of resources and disintegration of ecological functions are of global, regional and local concerns. To prevent continued environmental degradation and the decline of human society, interactions between the mankind and the environment have to be harmonized. This is achievable through an integrated, collective approach encompassing natural science, socio- economic and political factors with technological, economic and social interventions. Environmental science is systematic study of the world around us and our proper place in it. This emerging science is interdisciplinary in nature, integrating natural sciences, social sciences and humanities in a holistic study of the world around us. In contrast to more theoretical disciplines, environmental science is mission oriented. It seeks new, valid and contextual knowledge, skills and attitudes and their impartial, fair and balanced application to the contemporary world.

In pursuit of the best national interest and to align with the international needs and standards, the Government of Pakistan developed the National Conservation Strategy (NCS) in 1992 for environmental education. It is worth mentioning that while developing the NCS the GoP has emphasized the significant role of AIOU in disseminating environmental awareness and education in Pakistan. Considering the enormous demand in the teaching institutions as well as the governmental and non-governmental sectors, the experts produced in the field of environment are extremely low. The minimum requirement is of about 13,000 environmental experts to fill the void in the county, whereas, the public and private institutions are presently producing annually 300 experts only, keeping in

view the dearth of qualified environmental experts and to produce quality graduates for emerging need in Pakistan in Environmental Science.

### **Scope of the programme**

This program will enable the students to address the challenges of maintaining environmental integrity for sustainable development in relation to human development. It aims at producing dynamic young graduates in the field of Environmental Science by developing strong skill, academic foundation, communication abilities and professionalism enabling them to compete in both the governmental and non-governmental sectors.

### **Aim**

The program aims at developing human resources for sustainable development through appropriate education and training.

### **Objectives**

On accomplishing the course, the students will be able to:

1. Demonstrate comprehensive understanding of Environmental Science as an interdisciplinary and multidisciplinary subject
2. Achieve awareness about the past, current and expected future situation of environmental considerations in pursuit of sustainable development.
3. Understand the relationship between economic growth and environment and its ramifications.
4. Encourage and develop critical thinking among students in dealing with the real world environmental challenges preferably of local origin.

5. Acquire skills, knowledge and competencies to mitigate environmental problems and make pathways to sustainable development.

### **Eligibility for Admission**

Candidates with the following qualification may apply for admission in Master Programme in Environmental Science:

- i. Candidates having BSc Degree with at least second division with any of the two majors (Botany, Zoology, Microbiology, Chemistry, Geography, Geology, Environment, Physics etc.), except for double math and math-stat combinations.
- ii. Candidates having BSc (Hons) with at least second division in Agriculture, Forestry, Wildlife & Range Management, Horticulture, Geology.

### **Guideline for Online Application:**

1. The online application form can be accessed from university official website [www.aiou.edu.pk](http://www.aiou.edu.pk)
2. Applicants are required to fill all the desired fields on online application form.
3. Applicants are desired to deposit application fee on the prescribed challan form in specified banks.
4. The challan number after fee submission should be entered in online application form for successful completion.
5. Incomplete forms shall not be entertained.
6. Selection of candidates will be made strictly on the basis of merit and as per policy of the AIU.
7. Only selected candidates will be required to pay their fee/dues by the prescribed dates.
8. The deposited fee will not be refundable or adjustable for future admission.
9. The document showing fee deposit must be provided in the office of in charge, Department of Biology, AIU, H-8,

10. Islamabad on or before the last date for the fee deposition. In case of non-compliance, it would be assumed that fee has not been deposited and the student is not any more interested in getting admission. The department may invite a candidate in waiting list for admission against the vacant seat.

### **Registration for Courses**

The selected candidates must register for the courses offered in a semester by the prescribed date.

### **Degree Requirement**

In order to become eligible for the award of degree in MSc (Environmental Science) the students must earn a total of 70 credit hours (including six credit hours for research project) or as specified by the department.

### **Duration and Structure**

The minimum duration of Master Programme in Environmental Science will be two years comprising four semesters. Failing which, a student can be given an extension of 2 years in maximum after the completion of the initial period.

### **Medium of Instruction**

The medium of course material, assignments, workshops as well as presentation would be English for all the courses.

### **The Study System**

Mode of instruction for programme will be face to face teaching, including regular classes, continuous assessment (assignments, tests, quizzes, presentations), practical / lab work and the final assessment (final examination).

### **Study Material**

As per AIOU policy, specifically designed / compiled / adopted course material for students will be provided.

### **Class / Lectures**

Face to face theory classes of one-hour duration per week for each credit hour will be held at the campus. As per AIOU rules, a minimum attendance of 70% is required in classwork to appear in the final examination.

### **Lab Work / Practical work**

For each laboratory course in a semester a workshop of 4 -7 days duration depending upon the number of practical will be arranged during the semester at AIOU campus, Islamabad.

### **The Assessment System**

For each course the student's progress will be assessed as follows:

#### **a) Continuous Assessment**

- During the semester, the performance of students will be assessed through two assignments (200 marks) for each three credit hour course.
- During the semester, the performance of students will be assessed through 2 assignments (200 marks) and practical work (100 marks) for each four credit hour course.

#### **b) Final Examination**

A three-hour written examination for each course will take place at the end of the semester.

#### **c) Project / Thesis**

Student will choose topics for research after consultation with the faculty members of the department. Evaluation of the

project will be based on the presentation of the project (30%) and project report (70%). Project report will be evaluated at department level.

#### **d) Final Evaluation**

For working out the final course grade the marks of Assignments and Final Examination will be calculated in the ratio of 30:70 for these programmes as per AIOU policy. Students have to secure at least 50% marks in assignments and at least 50% marks in Final Examination individually as well as 50% marks in aggregate to pass the course as approved for other equivalent programmes.

***Note:** - If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.*

### **SEMESTER-WISE DISTRIBUTION OF COURSES (Total Credit Hours 70)**

All the courses have been designed in accordance with HEC Curriculum of Environmental Science for Bachelors and Masters Programme. Recent advances will be incorporated in the existing courses in subsequent years.

**1<sup>st</sup> Semester**

S. No.	Code	Course Name	Credit Hours
1	4441	I Introduction to Environmental Sciences	4(3+1)
2	4467	Physics of the Environment	4(3+1)
3	4443	Environmental Chemistry	4(3+1)
4	4482	Biostatistics	3
5	4458	Environmental Policies and Regulations	3
<b>Total Credit</b>			<b>18</b>

**2<sup>nd</sup> Semester**

1	7413	Scientific Research	4(3+1)
2	4445	Environmental Microbiology	4(3+1)
3	4444	Introduction to Environmental Economics	3
4	4438	Natural Resource management	3
5	4442	Environmental Pollution	4(3+1)
6	4448	Energy & Environment	3
<b>Total Credit</b>			<b>21</b>

**3<sup>rd</sup> Semester**

1	4452	Biodiversity and Conservation	4(3+1)
2	4455	Health, Safety & Environmental Management Systems	4(3+1)
3	4450	Environmental Impact Assessment	4(3+1)
4	4453	Sustainable Development	3
5	4456	Environmental Toxicology	3
<b>Total Credit</b>			<b>18</b>

**4<sup>th</sup> Semester**

S. No.	Code	Course Name	Credit Hours
1	4418	Research Project	6
2	4460	Project Management	3
3	4483	GIS & Remote sensing	4
<b>Total Credit</b>			<b>13</b>

**Total Credits = 18+21+18+13 = 70**

**Fee Tariff for 1<sup>st</sup> Semester:**

Programme Registration Fee	Rs.500/-
Admission Fee	Rs.1000/-
Technology Fee (per semester)	Rs.500/-
4 credit hour courses Rs. 8000 × 3 =	Rs.24000/-
3 credit hours course Rs. 6000 × 2 =	Rs.12000/-
Lab Fee:	Rs.2500/-
<b>Total Fee for 1<sup>st</sup> Semester:</b>	<b>Rs.40,500/-</b>

All students are required to pay full fee in advance as prescribed at the beginning of each semester. The university reserves the right to revise the fee structure or add any fee considered appropriate at any time during the study period. All such changes will be applicable to all students.

## **MSc Botany (2 Years)**

### **Introduction**

Historically, all living things were classified as either animals or plants and botany covered the study of all organisms not considered to be animals.

The study of plants is vital because they underpin almost all animal life on Earth by generating a large proportion of the oxygen and food that allow humans and other organisms to exist. Plants are one of the major groups of organisms that carry out photosynthesis, a process that absorbs carbon dioxide, a greenhouse gas that is a small but important variable that influences global climate. As a by-product of photosynthesis, they release oxygen into the atmosphere, a gas that is required by nearly all living things to carry out cellular respiration. Additionally, they are influential in the global carbon and water cycles and plant roots bind and stabilize soils, preventing soil erosion. Plants are crucial to the future of human society as they provide food, oxygen, medicine, and products for people, as well as creating and preserving soil.

### **Scope of the Programme**

This programme has interdisciplinary and multidisciplinary scope enabling students to understand the significance and concepts of Botany. It aims at producing dynamic young graduates in the field of Botany by developing strong skill, academic foundation, and professionalism enabling them to complete in governmental and nongovernmental sectors. Botany covers a wide range of scientific disciplines including the study of plant structure, growth, reproduction, metabolism, development, diseases, chemical properties, evolutionary

relationships and plant taxonomy Graduates MSc in Botany can progress to a wide range of careers. They can work in national and international organization Researchers, Environmental Scientists, Nature Reserve Managers, Research Scientists, Wildlife Management Advisors, Project Officers, Ecological Consultants and Conservation Officers, Quality Control Officers, Salesperson etc.

### **Aim**

The programme aims at developing human resources in the field Botany through appropriate education and research.

### **Objectives**

On accomplishing the course, the students will be able to:

1. Demonstrate comprehensive understanding of Botany as an interdisciplinary and multidisciplinary subject
2. Achieve awareness about the evolutionary trends, plant systematic and environmental considerations in pursuit of nature conservation.
3. Understand the relationship between economic growth and importance of indigenous plant resources.
4. Acquire skills, knowledge and competencies to take up research projects for nature conservation and exploration.

### **Criteria for Admission**

- a) Criteria for admission in MSc Botany Programme:
  - i. BSc (majors in Botany with at least 2<sup>nd</sup> division) from the formal education system.
  - ii. Candidates having BS in Agriculture (with at least 2<sup>nd</sup> Div) in either public or private sectors as Teachers.
- b) Foreign degree holders will need to produce equivalence certificate from HEC for admission in MSc.

**Guideline for Online Application:**

1. The online application form can be accessed from university official website [www.aiou.edu.pk](http://www.aiou.edu.pk)
2. Applicants are required to fill all the desired fields on online application form.
3. Applicants are desired to deposit application fee on the prescribed challan form in specified banks.
4. The challan number after fee submission should be entered in online application form for successful completion.
5. Incomplete forms shall not be entertained.

**The Chairperson**

**Department of Biology and Environmental Science  
Research Complex, AIOU,  
Sector H-8, Islamabad**

1. Selection of candidates will be made strictly on the basis of merit and as per policy of the AIOU.
2. Only selected candidates will be required to pay their fee/dues by the prescribed dates.
3. The deposited fee will not be refundable or adjustable for future admission.
4. The document showing fee deposit must be provided in the office of Incharge, Department of Biology, AIOU, H-8, Islamabad on or before the last date for the fee deposition
5. In case of non-compliance, it will be assumed that fee has not been deposited and the student is not any more interested in getting admission. The department may invite a candidate in waiting list for admission against the vacant seat.

**Registration for Courses**

The selected candidates must register for the courses offered in a semester by the prescribed date.

**Degree Requirement**

In order to become eligible for the award of degree in MSc. (Botany) the students must earn a total of 66 credit hours (including six credit hours for research project) or as specified by the department.

**Duration and Structure**

The minimum duration of Master Programme in Botany will be two years comprising four semesters. Failing which, a student can be given an extension of 2 years in maximum after the completion of the initial period.

**Medium of Instruction**

The medium of course material, assignments, workshops as well as presentation would be English for all the courses of this programme.

**The Study System**

Mode of instruction for programme will be face to face teaching, incorporating regular classes, continuous assessment (assignments, tests, quizzes, presentations), practical/lab work and the final assessment (final examination).

**Class / Lectures**

In this programme, face to face theory classes of one-hour duration per week for each credit hour will be held at the campus. As per AIOU rules, a minimum attendance of 70% is required in class to appear in final examination.

### Lab Work / Practical Work

For each laboratory course in a semester a workshop of 4-7 days duration depending upon the number of practical will be arranged during the semester at AIOU campus, Islamabad.

### The Assessment System

For each course the student's progress will be assessed as follows:

#### a) Continuous Assessment

- During the semester, the performance of students will be assessed through two assignments (200 marks) for Non-Practical Courses.
- During the semester, the performance of students will be assessed through two assignments (200 marks) and practical work (100 marks) **for courses with Lab Work.**

#### b) Final Examination

A three-hour written examination for each course will take place at the end of the semester.

#### c) Project / Thesis

Student will choose topics for research after consultation with the faculty members of the department. Evaluation of the project will be based on the presentation of the project (30%) and project report (70%). Project report will be evaluated at department level.

#### d) Final Evaluation

For working out the final course grade the marks of Assignments and Final Examination will be calculated in the ratio of 30:70 for these programmes as per AIOU policy. Students have to secure at least 50% marks in assignments and at least 50% marks in Final Examination individually as well as 50% marks in aggregate to pass the course as approved for other equivalent programmes.

*Note: - If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.*

### SEMESTER WISE DISTRIBUTION OF COURSES (Total Credit Hours 66)

#### 1<sup>st</sup> Semester

S. #	Code	Course	Cr. Hrs.
1	7401	Diversity of Vascular Plants	3(2+1)
2	7402	Plant Anatomy	3(2+1)
3	7403	Phycology and Bryology	3
4	7404	Bacteriology and Virology	3(2+1)
5	4481	Introductory Biochemistry	4(3+1)
<b>Total Credit</b>			<b>16</b>

#### 2<sup>nd</sup> Semester

1	7405	Plant Ecology -I	3 (2+1)
2	7406	Plant Physiology - I	3 (2+1)
3	7408	Mycology and Plant Pathology	3 (2+1)
4	7410	Plant Systematic	3(2+1)
5	7407	Plant Biochemistry	3
<b>Total Credit</b>			<b>15</b>

#### 3<sup>rd</sup> Semester

1	7409	Plant Ecology -II	3 (2+1)
2	4419	Molecular Biology	4 (3+1)
3	7411	Plant Physiology - II	3 (2+1)
4	7412	Genetics - I	3
5	4482	Biostatistics	3
6	7413	Scientific Research	3
<b>Total Credit</b>			<b>19</b>

#### 4<sup>th</sup> Semester

S. #	Code	Course	Cr. Hrs.
1	4418	Research Project	6
2	7414	Genetics - II	3
3	4439	Ethonobotany	3
4	4446	Environmental Biology	4 (3+1)
<b>Total Credit</b>			<b>16</b>

#### Fee for 1<sup>st</sup> Semester

Programme Registration fee	<b>Rs.500/-</b>
Admission fee	<b>Rs.1000/-</b>
Technology fee (per semester)	<b>Rs.500/-</b>
Per 3 credit hours course fee: $\text{Rs.6000} \times 4 =$	<b>Rs.24000/-</b>
Per 4 credit hours course fee: $\text{Rs.8000} \times 1 =$	<b>Rs.8000/-</b>
Lab Fee:	<b>Rs.3000/-</b>
<b>Total</b>	<b>Rs.37,000/-</b>

All students are required to pay full fee in advance as prescribed at the beginning of each semester. The university reserves the right to revise the fee structure or add any fee considered appropriate at any time during the study period. All such changes will be applicable to all students.

#### FACULTY MEMBERS

##### 1. Dr. Hina Fatimah

In Charge

Department of Biology and Environmental Science,  
Ph. 051-9057279

##### 2. Dr. Muhammad Waseem

Assistant Professor  
Ph. 051-9057267

##### 3. Dr. Zahid Ullah

Assistant Professor  
Ph. 051-9057735

##### 4. Dr. Rizwana Kausar

Assistant Professor  
Ph. 051-9057293

##### 5. Dr. Sobia Kanwal

Assistant Professor

##### 6. Dr. Samia Qadeer

Assistant Professor

##### 7. Ms. Saba Farooq

Lecturer  
Ph. 051-9057730

##### 8. Ms. Samar Naseer

Lecturer  
Ph. 051-9057185

##### 9. Ms. Sadia Latif

Research Associate  
Ph: 051-9057185

## DEPARTMENT OF CHEMISTRY

### **Introduction:**

Department of Chemistry is a major department of the Faculty of Science. It was established in 1998 to offer postgraduate programmes in Chemistry. In the beginning only MSc programme was started, which was later extended to include BS, MPhil and PhD programmes. The faculty of the department comprises of four Associate Professors, three Assistant Professor and three Lecturers.

The department is situated in Research Complex on the main campus where it occupies the ground floor and a portion of the lower floor. With the expansion of lab facilities, the department has extended its academic activities by launching the BS programme from Spring, 2009. BS programme is visualized in the new scheme of higher education as a fundamental step in improving the standard of graduate and postgraduate studies.

The study programmes in chemistry have been developed by the Faculty according to the guidelines provided by the Higher Education Commission (HEC). Necessary changes have been effected to suit our students, but without deviating fundamentally from the principles set by the HEC. The Committee of Courses of the department comprising distinguished professors and scientists of the country thoroughly screened the proposed syllabi.

Chemistry is an experimental science. Students learn basic techniques in the labs. Therefore, it is essential to provide best lab facilities to students of various levels. The chemistry

department takes pride in offering the most modern lab facilities in the country to its students in all branches of chemistry. Its research labs are equipped with CHNS Analyzer, Thermal Analyzer,

UV-Visible, Fluorescence and FTIR Spectrophotometer, GC-MS, Flash Column Chromatography and HPLC units, Atomic Absorption Spectrometer, and Electrochemical System. Teaching labs are well equipped with routine apparatus and basic instruments. These lab facilities make us one of the leading teaching and research departments of the country.

The department believes in the “Opportunity of Education to All”. Therefore, it has modeled its academic programmes to suit in-service teachers, employees of research organizations, industry and students who could not afford formal education for some reason. The department firmly believes in the promotion of chemistry as a science and in maintaining the highest standards.

### **Objectives:**

- To promote chemistry as a science and to provide opportunity to those who could not educate themselves in formal system of education for one reason or another.
- To provide opportunities of professional growth to all those chemistry graduates who are working as technical staff in research organizations.
- To update the knowledge of in-service chemistry teachers.

## **MSc Chemistry**

### **a) Introduction:**

The M.Sc. programme in chemistry was launched in spring 2003 by the department.

The duration of the MSc programme is of two years. An academic year consists of two semesters termed as spring and autumn semesters. Admissions are offered in both semesters. Each year the department admits 25 students through a process based on previous academic record and interview. Courses are covered in workshops. The department follows chemistry curricula as recommended by the HEC.

To date sixteen batches of MSc students have passed out. Successful students are serving in research organizations, colleges, universities and industry. Some students have also been selected by the HEC for scholarship to pursue higher studies leading to PhD.

### **b) Objectives:**

The MSc programme in chemistry is designed for those who cannot benefit from formal education. It fulfils and meets several objectives:

The objectives of this programme are;

- i) To provide a nurturing environment that facilitates and stimulate the active and explorative learning of Chemistry for the students.
- ii) To provide chemical knowledge and laboratory skills required for a professional chemist.

- iii) to contribute to national effort in human resource development.

### **c) Eligibility:**

A person holding BSc or BS Ed degree (at least 2nd division with 45% marks) with Chemistry as one of the major subject is eligible to apply for admission, however as seats are limited, admission will be on merit. For online admission visit University website **[www.aiou.edu.pk](http://www.aiou.edu.pk)**

### **d) Scheme of Studies:**

At present this programme is being offered in Islamabad region only.

The MSc programme is of two years duration, split into four semesters. In the first two semesters, the core courses will be taught. The specialized courses will be dealt in the third and fourth semesters. Now, the Department is offering specialization in Organic, Inorganic/Analytical and Physical Chemistry.

### **SEMESTER WISE COURSE OFFERING**

The programme consists of 64 credits which can be completed within a minimum period of two years.

**1<sup>st</sup> Semester**

Code	Course Title	Credit Hours
2573	Analytical Chemistry-I	3 (3+0)
2575	Physical Chemistry-I	3 (3+0)
2576	Organic Chemistry-I	3 (3+0)
2577	Inorganic Chemistry-I	3 (3+0)
2594	Mathematics for Chemists	2 (2+0)
2595	Chemistry Lab-I	4 (0+4)

**2<sup>nd</sup> Semester**

2574	Analytical Chemistry-II	3 (3+0)
2580	Physical Chemistry-II	3 (3+0)
2581	Organic Chemistry-II	3 (3+0)
2582	Inorganic Chemistry-II	3 (3+0)
2596	Chemistry Lab-II	4 (0+4)

**SPECIALIZATION IN ORGANIC CHEMISTRY****3<sup>rd</sup> Semester**

2585	Heterocyclic Chemistry	3 (3+0)
2586	Stereochemistry of Organic Compounds	3 (3+0)
2589	Spectroscopic Methods in Organic Chemistry	3 (3+0)
2597	Advanced Organic Chemistry Lab-I	3 (0+3)
2598	Advanced Organic Chemistry Lab-II	3 (0+3)

**4<sup>th</sup> Semester**

Code	Course Title	Credit Hours
2587	Chemistry of Natural Products	3 (3+0)
2590	Special Organic Reactions	3 (3+0)
2591	Organic Synthesis	3 (3+0)
2537	Advanced Organic Chemistry Lab-III	3 (0+3)
2538	Advanced Organic Chemistry Lab-IV	3(0+3)

**SPECIALIAZATION IN INORGANIC / ANALYTICAL CHEMISTRY****3<sup>rd</sup> Semester**

2539	Coordination Chemistry	3(3+0)
2540	Non-Spectroscopic Instrumental Methods of Analysis	3(3+0)
2541	Basic Instrumental Methods of Analysis	3(3+0)
2542	Advanced Inorganic Chemistry Lab-I	3(0+3)
2543	Advanced Inorganic Chemistry Lab-II	3(0+3)

**4<sup>th</sup> Semester**

2544	Organometallic Chemistry	3(3+0)
2545	Group Theory for Chemist & its Applications	3(3+0)
2547	Advanced Environmental Chemistry	3(3+0)
3561	Advanced Inorganic Chemistry Lab-III	3(0+3)
3562	Advanced Inorganic Chemistry Lab-IV	3(0+3)

SPECIALIAZATION IN PHYSICAL CHEMISTRY		
<b>3<sup>rd</sup> Semester</b>		
2548	Chemical Kinetics	3 (3+0)
2549	Quantum Chemistry	3 (3+0)
2550	Electrochemistry	3 (3+0)
2568	Advanced Physical Chemistry Lab-I	3 (0+3)
2569	Advanced Physical Chemistry Lab-II	3 (0+3)
<b>4<sup>th</sup> Semester</b>		
2570	Molecular Spectroscopy	3 (3+0)
2571	Chemical Thermodynamics	3 (3+0)
2599	Surface Chemistry	3 (3+0)
3563	Advanced Physical Chemistry Lab-III	3 (0+3)
3564	Advanced Physical Chemistry Lab-IV	3 (0+3)

**Note:** Only selected candidates will be informed to deposit the prescribed fee. **(Please do not send any fee with the application form)**

For online admission procedure kindly visit website:

[www.aiou.edu.pk](http://www.aiou.edu.pk)

**OR**

**Contact at Phone No. 051-9057754, 051-9057818**

**Department of Chemistry  
University Research Complex  
AIOU H-8 Islamabad.**

In case your university issues marks sheet on yearly or semester basis, please attach attested copies of all the mark sheets.

You will be required to **bring original degree/detailed marks certificate(s)** for verification at the time of interview. If you fail to do so, your application for admission will be rejected.

**e) Fee Tariff:**

Course Fee	Rs. 6000/- (for each 3 credit theory course)
	Rs. 4000/- (for each 2 credit theory course)
Practical Fee	Rs. 6000/- (for each 3 credit laboratory course)
	Rs. 8000/- (for each 4 credit laboratory course)
LabFee:	

**1<sup>st</sup> Semester**

**Fee for 1<sup>st</sup> Semester**

Programme Registration fee	<b>Rs.500/-</b>
Admission fee	<b>Rs.1000/-</b>
Technology fee (per semester)	<b>Rs.500/-</b>
Per 4 credit hours course fee: Rs.8000 × 1	<b>Rs.8000/-</b>
Per 3 credit hours course fee: Rs.6000 × 4	<b>Rs.24000/-</b>
Per 2 credit hours course fee: Rs.4000 × 1	<b>Rs.4000/-</b>
Lab fee (per semester)	<b>Rs.6000/-</b>
<b>Total</b>	<b>Rs.44,000/-</b>

**f) Instructional Methodology:**

**Mode of Teaching:**

In this programme theory courses will be taught by face-to-face teaching. For each laboratory course, workshops will be conducted during each semester A tutorial of three hours duration per week for each 3 credit theory course will be offered. Tutorial sessions would be compulsory and to appear in the final examination minimum attendance of 70% is required as per AIUO rules.

For each laboratory course in semester, I & II, a workshop of 20 working days and for laboratory course in semester-III and IV, a workshop of 30 working days will be arranged during the semester at AIOU campus, Islamabad.

### **Assessment System**

#### **Method of Assessment for Theory Courses**

##### **Continuous Assessment:**

Continuous assessment will be based on assignment(s)/ class tests. The pass percentage in assignment/test will be 50%. The weightage of assignment/test in the final result will be 30%.

##### **Final Examination:**

Final examination of 100 marks for theory course will be conducted at the end of the semester. The pass percentage in final examination will be 50% and its weightage in the final result will be 70%.

***Note:** If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.*

#### **Method of Assessment for Laboratory Courses:**

Assessment for all laboratory courses will be totally based on continuous assessment. As already mentioned, the laboratory courses will be offered in the form of workshops. A specific number of experiments will be conducted in each workshop. Each experiment will be assessed separately, and attendance in these workshops will be compulsory for every student. Minimum required marks to pass each laboratory course will be 50%.

### **Degree Requirements:**

In order to become eligible for the award of degree of MSc Chemistry, student will have to successfully complete all the courses as per AIOU description, within a minimum period of two years (four semesters). Maximum duration for completion of MSc degree is four years (08 semesters).

### **FACULTY MEMBERS**

1. **Dr. Uzma Yunus**  
Associate Professor  
Tel: 051-9250081, 051-9057818, 051-9057754
2. **Dr. Moazzam H. Bhatti**  
Associate Professor  
Tel: 051-9057262
3. **Dr. Nasima Arshad**  
Associate Professor  
Tel: 051-9057756
4. **Dr. Muhammad Sher**  
Associate Professor  
Tel: 051-9057755
5. **Dr. Muhammad Zaman Ashraf**  
Assistant Professor,  
Tel: 051-9057225
6. **Dr. Iqbal Ahmed**  
Assistant Professor  
Ph: 051-9057874
7. **Dr. Farzana Shaheen**  
Lecturer, Ph: 051-9057198
8. **Dr. Eram Jabeen**  
Lecturer, Ph: 051-9057414
9. **Dr. Mehwash Zia**  
Lecturer,  
Lecturer, Tel: 051-9057252

## DEPARTMENT OF MATHEMATICS

### **Introduction:**

The Department of Mathematics was established in June 2014. The department is offering undergraduate and graduate level programs alongwith several courses at secondary and higher secondary levels. The Department is offering the following programmes:

- MSc Mathematics
- MPhil Mathematics
- BS Mathematics

In future the Department intends to start PhD Mathematics programme. M.Sc Mathematics has been designed after consulting syllabi of national and international universities. M.Sc Mathematics programmes will strengthen the mathematical concepts of the candidates and will enhance their logical thinking. These programmes cater the needs of information Technology and other disciplines of sciences

### **MSc Mathematics Programme**

#### **a) Introduction:**

MSc Mathematics program has been designed after consulting syllabus of National and International Universities. This program is mainly designed to encourage professionals and fresh graduates to enhance their mathematical backgrounds and skills.

#### **b) Objectives:**

The objectives of the MSc Mathematics program are:

1. To enhance the qualification of those who could not continue their education after BSc through formal universities.
2. To provide opportunity to in-service persons to improve their qualification.
3. To produce quality teachers of Mathematics at all levels.

#### **c) Eligibility:**

Candidates having BA/BSc degree with at least second division and a minimum of 45% marks in major Mathematics.

#### **Merit Criteria:**

The preference order is given as follows:

- (i) Candidates having BSc degree with at least second division from any HEC recognized institute with Maths A and Maths B with at least 45% marks in Mathematics A or B.
- (ii) Candidates having BSc/BA degree with second division from any HEC recognized institute with General Maths with at least 45% marks.
- (iii) Candidates having professional degrees who have studied Mathematics Courses.

All the admissions will be on merit basis.

#### **Degree Requirements:**

For the award of MSc Mathematics degree, the student will have to complete/qualify the 20 courses equivalent to 60 credit hours within a minimum period of four semesters.

**Hostel Facility:**

The hostel facility is available for both, male and female students of AIOU. Separate fee has to be paid for availing the hostel facility and this facility is subject to availability.

**d) Scheme of Studies (Semester-wise Course Offering):**

The MSc Mathematics program is of two-years duration. It comprises of four semesters; 60 credit hours. The courses are as follows: In the last semester, the Department will offer 5 optional courses from the given list as per availability of experts.

**1st Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	1520	Computer & Scientific Applications C++	3(3+0)
2	1521	Topology	3(3+0)
3	1522	Linear Algebra	3(3+0)
4	1523	Real Analysis-I	3(3+0)
5	1525	Ordinary Differential Equations	3(3+0)

**2nd Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	1524	Differential Geometry	3(3+0)
2	1527	Complex Analysis	3(3+0)
3	1528	Group Theory	3(3+0)
4	1529	Analytical Mechanics	3(3+0)
5	1530	Real Analysis-II	3(3+0)

**3rd Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	1531	Numerical Methods (Matlab & Mathematics)	3(3+0)
2	1532	Partial Differential Equations	3(3+0)
3	1533	Functional Analysis	3(3+0)
4	1534	Theory of Rings	3(3+0)
5	1538	Mathematical Statistics-I	3(3+0)

**4th Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1		Optional-I	3(3+0)
2		Optional-II	3(3+0)
3		Optional-III	3(3+0)
4		Optional-IV	3(3+0)
5		Optional-V	3(3+0)

**Total Credit Hours of full program = 60**

**Optional Courses**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	4478	Mathematical Finance-I	3(3+0)
2	4479	Theory of Racks and Quandles	3(3+0)
3	4480	Research Project	3(0+3)
4	1535	Fluid Mechanics	3(3+0)
5	1540	Applied Number Theory	3(3+0)
6	1542	Mathematical Statistics-II	3(3+0)
7	1544	Optimization	3(3+0)

8	1545	Analytical Dynamics	3(3+0)
9	1546	Mathematical Modeling	3(3+0)
10	1547	Graph Theory	3(3+0)
11	1550	Research Report	3(3+0)
12	1537	Operations Research	3(3+0)
13	1539	Combinatorics	3(3+0)
14	1541	Galois Theory	3(3+0)
15	1548	Algebraic Topology	3(3+0)
16	1536	Relativistic Mechanics	3(3+0)
17	1549	Discrete Math	3(3+0)

**e) Fee Structure:**

Registration Fee:	Rs.500/-
Admission Fee:	Rs.1000/-
Technology Fee (per semester)	Rs.500/-
Per 3 Credit Hours course fee: Rs.6000/- Rs. 6000 × 5 =	Rs.30000/-
Lab Fee	Rs.750/-
<b>1st Semester Total Fee:</b>	<b>Rs.32,750/-</b>

After applying online, the student must submit the printed online admission form along with the AIOU copy of the receipt of (Prospectus Fee Rs.500/-) and all attested copies of documents in the Department of Mathematics Block No 07, Room No. 01, Main Campus, AIOU Islamabad.

**f) Instructional Methodology:**

***Mode of Teaching:***

For each course, 45 hours face to face teaching at Main Campus Islamabad will be required. The classes will be arranged by the Department at AIOU main campus, Islamabad.

The final schedule of the lectures will be provided to the students at the start of the classes/ workshop during each semester at AIOU, Islamabad. At least 70% attendance in face to face teachings mandatory.

***Assignments/Test: (continuous assessment):***

Two assignments for each course will be given in a semester for practice only, having no weightage. 50% weightage of the aggregate marks will be given to the sessional tests.

***Final Examination:***

Final examination will be held at Main Campus, AIOU, Islamabad at the end of each semester, 50% weightage of the aggregate marks will be given to the final exam.

***Minimum Passing Marks:***

Assignments/Class test (s)	50%
Final Examination	50%
Aggregate	50%

**The student has to qualify each component of a course separately.**

***Note:*** - If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.

## **FACULTY MEMBERS:**

1. **Dr. Nasir Rehman**  
Associate Professor / Chairman  
Ph: 051-9057191, 9250056
2. **Dr. Irfan Mustafa**  
Assistant Professor  
Ph: 051-9057155
3. **Dr. Naqeeb-ur-Rehman**  
Assistant Professor  
Ph: 051-9057339
4. **Mr. M. Faisal Iqbal**  
Lecturer  
Ph: 051-9057380
5. **Ms. Fouzia Rehman**  
Research Associate  
Ph: 051-9057393
6. **Dr. M Nazam**  
Lecturer  
Ph: 051-9057734
7. **Dr. Bismah Jamil**  
Lecturer  
051-9057197
8. **Dr. Irfan Younas**  
Research Associate  
051-9057734
9. **Staff:**  
Department of Mathematics  
Ph: 051-9057734

## **DEPARTMENT OF STATISTICS**

### **Introduction:**

The Department of Statistics was established in 1988 in the faculty of Sciences, Allama Iqbal Open University. Since then, the faculty and students have shared a common goal of maturing the Department with sheer hard work and constant struggle. Statistical sciences have significant impact on our lives and are a key to discoveries and innovation. Over the time, with concerted efforts, the Department has grown to its full potential and is vigorously involved in participating towards global efforts of driving a new era of growth, development and productivity. Since, our world is becoming more quantitative and data- focused, job opportunities in statistics are plentiful and projected to increase worldwide. Therefore, the alumni of the department of statistics have been working in various government departments and private sector.

The vision of Department is to impart quality education that focuses on collaborative learning through innovative teaching and research methodologies. It aims to create an environment that enables students to effectively engage in making lasting contributions in diverse fields according to rapidly changing demands of not only the home country but the entire globe. The Department is determined to further develop a state of the art model of learning and research, which will benefit the masses across the board.

### **Academic Programmes**

The following degree programmes are being offered in the Department of Statistics. All these programmes are approved by Higher Education Commission, Islamabad.

1. PhD Statistics
2. MPhil Statistics
3. MSc Statistics
4. BS (4 Year) Statistics

All the courses and contents of these programmes are designed to meet the challenging statistical needs in life sciences, information technology, social sciences and other allied disciplines. The course outlines of all level courses have been designed and updated recently after consulting syllabi of national and international universities. It helps to strengthen the statistical concepts and logical thinking among our students.

Presently, these degree programmes are offered at main campus only. However, in near future, the Department also intends to offer these degree programmes at main regional headquarters.

### **MSc Statistics Programme**

#### **Introduction:**

MSc Statistics programme has been designed and updated after consulting syllabus of National and International Universities. This programme is particularly designed for the persons on job as well as for fresh graduates. Our aim is to provide them an

opportunity to enhance their statistical thinking which may help in their respective professions or for new jobs seekers.

#### **Aims and Objectives:**

The main objectives of MSc Statistics programme are:

1. To enhance the qualification of those who could not continue their education after BA/BSc due to formal system of education.
2. To provide an opportunity to in service persons to improve their qualification and get promotion in their respective departments/institutions.
3. To produce quality teachers of Statistics from school level to university levels.

#### **Eligibility:**

Candidates having BA/BSc degree with at least 2<sup>nd</sup> division/45% marks from any HEC recognized institute/university along with statistics as a major subject. However, the student having graduate degree without statistics may apply in zero semester of MSc Statistics detail given on Page 108.

#### **Merit Criteria:**

MSc Statistics is a merit based program. Documents will be scrutinized for eligibility of each candidate. After scrutinize of documents, the department will call the eligible applicants for interview. The Departmental Admission Committee will recommend the suitable candidates for MSc Statistics admission on merit basis.

**Degree Requirements:**

For the award of MSc Statistics degree, the student will have to qualify the 20 courses within a minimum period of four semesters. However, zero semester students will complete his/her MSc Statistics Degree within a minimum period of five semesters with qualifying total 26 courses each of 3 credit hours.

**Hostel and Cafeteria Facilities:**

These facilities are available for the students of AIOU only. Separate fee has to be paid subject to the availability of food and space in Hostel.

**Library and Internet Facilities:**

The Library and internet facilities are also available at main Campus AIOU Islamabad and Regional Campuses, AIOU. The Main Library is enriched with latest text & recommended books, e-books & free internet facilities.

The library also has a separate section for blind student. Department of Statistics also has its own computer laboratory equipped with latest software's of Statistics & internet facilities.

**Scheme of Studies:**

The MSc Statistics programme comprises four semesters. The all courses are compulsory to qualify for the award of MSc Statistics degree. Whereas, the MSc Statistics programme comprises five semesters for zero semester students. The semester wise course offering is as under.

**Zero Semester — Spring 2020**

Sr. No.	Code	Course Title	Credit Hours
1	9472	Business Communication	3(3+0)
2	1417	Statistics-I	3(3+0)
3	1418	Statistics-II	3(3+0)
4	1419	Statistics-III	3(3+0)
5	1420	General Mathematics	3(3+0)
6	5468	Basics of Information Communication Technology	3(3+0)

**SEMESTER WISE COURSE OFFERING****1<sup>st</sup> Semester**

Sr. No.	Code	Course Title	Credit Hours
1	1551	Statistical Methods	3(3+0)
2	1552	Sampling Techniques-I	3(3+0)
3	1553	Design & Analysis of Experiments-I	3(3+0)
4	1554	Probability & Probability Distributions-I	3(3+0)
5	1555	Advanced Calculus	3(3+0)

**2<sup>nd</sup> Semester**

1	1513	Non-Parametric Statistics	3(3+0)
2	1556	Probability & Probability Distributions-II	3(3+0)
3	1557	Regression Analysis	3(3+0)
4	1558	Sampling Techniques-II	3(3+0)
5	1559	Design & Analysis of Experiments-II	3(3+0)

### 3<sup>rd</sup> Semester

1	1514	Mathematical Methods for Statistics	3(3+0)
2	1561	Statistical Inference-Estimation	3(3+0)
3	1562	Econometrics	3(3+0)
4	1563	Total Quality Management	3(3+0)
5	1564	Computer Programming (C & C++)	3(3+0)

### 4<sup>th</sup> Semester

1	1566	Statistical Inference-Testing of Hypotheses	3(3+0)
2	1567	Applied Multivariate Analysis	3(3+0)
3	1568	Operation Research	3(3+0)
4	1569	Data Analysis & Statistical Packages	3(3+0)
5	1570	Research Report	3(3+0)

**Total Credit hours for MSc Statistics Programme: 60**

### Fee Structure

Programme Registration Fee:	<b>Rs.500/-</b>
Admission Fee:	<b>Rs.1000/-</b>
Technology Fee: (per semester)	<b>Rs.500/-</b>
Per 3 credit hours course fee: Rs.6000/- (Rs.6000 × 6)	<b>Rs.36000/-</b>
Lab Fee (per semester Rs.750/-)	<b>Rs.750/-</b>
<b>Total fee for 1<sup>st</sup> Semester</b>	<b>Rs.38,750/-</b>

**Note:** Fee cannot be refunded or adjusted after the start of the classes.

Only selected/recommended candidates would be required to deposit the fee.

### Instructional Methodology:

#### Face to Face teaching (Tutorials):

For each course, 48 hours face to face teaching support will be provided to the students. The final schedule of the lectures will be distributed to the students in consultation with the teachers (resource persons). The classes will be supplemented by the computers where required. 70% attendance in face to face teaching would be compulsory.

#### Weekend Classes/Workshops:

The classes will be arranged on weekends at Main Campus, AIOU, Islamabad only. The introductory workshop and end semester workshop may be arranged at the beginning and at the end of each semester (if necessary).

#### Continuous Assessment:

- Two home-assignments for each course will be given to the students.
- Two sessional exams as a continuous assessment for each course will be conducted and 50% qualifying marks in sessional exam are mandatory to appear in final examination.
- If a student has less than 50% marks in sessional tests, He/She will have to enroll in this course freshly with new course fee.
- 30% weightage of sessional tests marks (100) will be included in conflated marks.

**Final Examination:**

Final Examination will be held at the end of each semester. 70% weightage will be given to the final examination marks.

**Passing percentage:**

Assignments/Sessional tests	Final Examination	Aggregate
50%	50%	50%

**Note:** The student will have to pass each component separately to pass a course in true spirit and sequence. *If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.*

**SPECIAL OFFERING OF ZERO SEMESTER FOR  
ADMISSION IN MSc STATISTICS PROGRAMME**

The Department is offering a zero semester for those **graduates** who did not study the statistics subject as a major course at graduation level and are not eligible for admission in MSc Statistics directly.

Initially, such graduates will be enrolled in zero semester to study the following six courses each of 3 credit hours and then these students will be capable to comprehend MSc Statistics level courses at AIOU.

**Zero Semester courses, codes and fee are as under:**

Code	Course Title	Fee Rs.)
1431	Basics of Information & Communication Technology (ODL)	6000/-
457	Business Communications (ODL)	6000/-
1420	General Mathematics	6000/-
1417	Statistics-I	6000/-
1418	Statistics-II	6000/-
1419	Statistics-III	6000/-
Programme Registration Fee:		500/-
Admission Fee:		1000/-
Technology Fee (per semester)		500/-
Lab Fee (per semester Rs.750/-)		750/-
<b>Total zero semester Fee</b>		<b>38750/-</b>

The 48 hours teaching of each course at serial # 3, 4, 5 & 6 will be held in the department of statistics, Main Campus AIOU, Islamabad on weekend basis. However, the workshop of 10-15 days may be arranged to facilitate the students. The courses at serial # 1, 2 will be offered on open distance learning (ODL) mode as per AIOU rule.

### **Applying Procedure for admission in MSc Statistics/**

#### **Zero Semester:**

- ❖ **Step–1:** First of all register yourself on AIOU website and remember user name and password for future contact to AIOU.
- ❖ **Step–2:** Select your programme, semester and generate a dully filled admission form and challan form to deposit required processing fee in designated banks only.
- ❖ **Step–3:** Post/Submit by hand the stamped Bank Fee receipt and admission form on the following address.

**Chairman,**

**Department of Statistics,**

*Lower Ground Floor, Science Block Sector H-8,*

*AIOU, Islamabad*

*Ph. No. 051-9057266, 9250062*

*Email: statistics@aiou.edu.pk*

### **FACULTY MEMBERS**

- 1. Prof. Dr. Irshad Ahmad Arshad**  
Chairman  
Ph: 051-9057163, 9250062  
Email: irshad.ahmad@aiou.edu.pk
- 2. Dr. Muhammad Zakria**  
Associate Professor Ph: 051-9057372  
Email: zakria@aiou.edu.pk
- 3. Dr. Zahid Iqbal**  
Associate Professor Ph: 051-9057446  
Email: zahid.iqbal@aiou.edu.pk
- 4. Dr. Tauqir Ahmed Mughal**  
Assistant Professor Ph: 051-9057209  
Email: tauqirahmed1@outlook.com
- 5. Dr. Muhammad Yameen Danish**  
Lecturer  
Ph: 051-9057266  
Email: yameen.danish@aiou.edu.pk
- 6. Mr. Sajid Amir Shah**  
Research Associate  
Email: sajid.shah@aiou.edu.pk
- 7. Ms. Lubna Naz**  
Statistical Assistant  
Ph: 051-9057287  
Email: lubna.naz@aiou.edu.pk
- 8. Staff Phone:**  
Ph: 051-9057266

## DEPARTMENT OF PHYSICS

### **Introduction:**

Realizing the need of technology and scientific education in Pakistan Department of Physics at AIOU began in 1998 with technological needs in areas like Energy, Energy Efficiency, Climate, Energy for Sustainable Development, Renewable Energy, Hydrogen Energy, Environment, Astronomy, Nanotechnology, Materials Science, Plasma Physics, Medical Physics, Cosmology, Geo Physics, Density Functional Theory (DFT), and Nuclear fields. A major emphasis of current research activities is on promotion in renewable energy and related areas in which the Department has led to innovations.

The Department is presently running BS, MSc, MPhil and PhD degree programme with specialization in various disciplines. New fields of specialization and programme of studies are approved and be operational from the next academic year. Apart from capacity development, activities Department of Physics has been involved in several international, national and regional research projects. Physics Department has developed research linkage with other National and International Universities and research organizations of repute to ensure two-way flow of knowledge.

### **Vision:**

The Department of Physics carries out wide range of teaching and research programmes that will contribute significantly to the development of human capacity, science and technology in Pakistan. Our vision is to see our graduates and postgraduates to be equipped with the fundamental knowledge of Physics, problem solving and communication skills. This will be

achieved by reviewing and developing relevant academic programmes and research projects to address Pakistan technological needs in areas like Energy, Renewable Energy, Hydrogen Energy, Environment, Astronomy, Nanotechnology, Materials Science, Plasma, Medical Physics, Cosmology, Geo Physics, Density Functional Theory (DFT), and Nuclear Physics. Our vision is to be a locally and internationally recognized Physics Department that exposes its successes in public awareness campaign and through established knowledge dissemination channels.

### **Mission:**

The Department of Physics at AIOU becomes a nationally and internationally recognized research and educational unit. Our faculty strives to push the boundaries of our understanding in a wide variety of fundamental and applied Physics areas while providing the best research opportunities for our majors. The blending of classroom learning with training in XXI Century front-edge research facilities allows our graduates and postgraduates to become successful researchers, teachers and applied scientists in nowadays-competitive marketplace. At the same time, we are fully committed, as the physics department of the major research university in our border region, to contribute to the general public appreciation and respect for the scientific work and knowledge.

### **Core Values:**

To perform to the highest levels of competence and professionalism in research and training, acting with utmost honesty and integrity while instituting measures that meet the need of all stake holders advance knowledge and technologies, Generate, preserve and disseminate knowledge and be involved in the development of innovative products, Cherish

academic freedom, nurture and reward talent. The Department aspires to be an effective agent of change and a model for the other Department in the field of research so as to meet the grooming demands of the new millennium.

### **Excellence in Research Undergraduate, Postgraduate Education Training**

The department of Physics was established in March 1998. We are proud to be one of the largest and most prestigious physics departments in the Pakistan with an outstanding reputation for excellence in research, undergraduate and post graduate education. The department offers undergraduate degree programmes, Master level programmes and Doctoral programmes. We have a vibrant research programmes that a broad-based coverage of fundamental and applied Physics. The department of Physics is offering these programmes in collaborations with other institutions actively foster development of new research fields. We have recently established the training programmes for engineers, researchers, scientists and faculty members of public and private universities of industrial partners. We are committed to providing a positive environment that encourages everyone to explore this potential.

Due to the flexibility and advantage of the distance learning system, AIOU has retained the best of the professionals already teaching at post graduate level in different teaching institutions in the country. There is a minimum of 45 hours of face-to-face teaching for each three credit hour course. The students spend 70 to 75 hours in the laboratories for each two credit hour laboratory course.

The courses are designed and developed by well-known experts in the field of physics. The latest available teaching material is written/ compiled in the form of textbooks/ CDs to facilitate the students. Every effort has been made to make these programmes skill oriented and thus job oriented. The degree awarded by AIOU in this discipline is accredited and at par with the other universities.

#### **Aims and Objectives:**

1. To promote Physics and to provide opportunity to those who could not educate themselves in formal system of education for one reason or another.
2. To meet the acute shortage of highly qualified manpower in the field of physics by producing skilled teachers and research scientists.
3. To introduce new research areas in Physics.

### **MSc Physics (BSc/BSEd)**

#### **a) Introduction:**

After the establishment of the department, the first programme launched by this department, in spring 1999 semester, was MSc Physics. This is a two years programme comprising four semesters. The programme was launched keeping in view the fact that many science graduates are forced to start a job after doing BSc due to financial constraints. In fact, not a single university in Pakistan offers MSc in Physics in the evening. For such graduates this programme provides a second opportunity to study. It is for those who could not continue education in formal system along with their jobs. At present the MSc

programme is being offered at the AIOU main campus Islamabad. The teaching faculty is highly qualified and experienced. Laboratories are an essential component for teaching of Physics. For this purpose, two well equipped laboratories for General Physics and digital and Computer Hardware Electronics with latest equipment have been set up.

**b) Objectives:**

The aim of this programme is to provide highly competent scientists and academicians with critical approach, up-to-date knowledge, and skills to carry out research, capable of imparting knowledge and research skills to the next generation.

*MSc Physics programme has been particularly designed for the following:*

1. Science graduates who are unable to pursue their students in Physics in the conventional system of education.
2. Graduate teachers who want to improve their qualification.
3. Science graduates working in different laboratories, decisions of improving their qualification.

**c) Eligibility (for BSc/BSEd Students only):**

i) A candidate possessing 2nd division BSc/BSEd degree with Physics & Mathematics combination is eligible to apply for admission. Admissions will be made strictly on merit.

ii) *Eligibility (for B.Tech Students only)*

Candidates holding B Tech / equivalent with at least second division are eligible to apply for admission in zero semester. The admission will be made strictly on merit.

**Qualifying the Departmental Interview is mandatory for admission.** Students are requested to bring all their credentials with them.

**d) Scheme of Studies (for BSc/BSEd students only):**

**Semester-wise Course Offering:**

The MSc programme is of two-year duration. It comprises four semesters of 65 credit hours.

**1<sup>ST</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	751	Mathematical Methods in Physics-I	3(3+0)
2	752	Classical Mechanics and Relativity	3(3+0)
3	2564	Electronics	3(3+0)
4	2551	Atomic & Molecular Physics	3(3+0)
5	766	Laboratory for General Physics	2(2+0)

**2<sup>nd</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	755	Mathematical Methods in Physics-II	3(3+0)
2	756	Quantum Mechanics-I	3(3+0)
3	765	Electromagnetic Theory-I	3(3+0)
4	2566	Thermal and Statistical Physics	3(3+0)
5	769	Computational Physics	3(3+0)
6	762	Laboratory for Electronics	2(2+0)

**3<sup>rd</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	2565	Electromagnetic Theory-II	3(3+0)
2	759	Quantum Mechanics-II	3(3+0)
3	761	Solid State Physics-I	3(3+0)
4	758	Lasers and Optics	3(3+0)
5	2553	Digital & Computer Hardware Electronics	3(3+0)
6	2556	Laboratory for Digital & Computer Hardware Electronics	3(3+0)

**4<sup>th</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	5464	Research Techniques	3(3+0)
2	760	Nuclear Physics	3(3+0)
3	2560	Advanced Digital & Computer Hardware Electronics	3(3+0)
4	2559	Electronic Communication System	3(3+0)
5	2561	Laboratory for Advanced Digital & Computer Hardware Electronics	4(4+0)

**MSc PHYSICS (B.Tech)****e) Scheme of Studies (for B Tech Students only)****Zero Semester for Admission in MSc Physics Programme**

The department has developed a special offering of Zero Semester for getting admission in MSc Physics programme for the students of B Technical Education (B Tech).

The purpose of this semester will be to accommodate those graduates who did not study Mathematics and Physics at Graduation / BSc level and are not eligible to get admission in MSc Physics. Further they do not get any good opportunities in getting postgraduate studies. The student will get registered in M.Sc. Physics programme and then he/she will be promoted to the next semester (1<sup>st</sup> Semester) as continue student, after attending the zero semester.

There would be three theory courses (03 credit hours) and two laboratory course (02 credit hours) in the Zero Semester.

The **Zero Semester** courses along with course codes & fee are as under:

Sr. #	Course Code	Course Title	Fee (Rs.)	Credit Hours
1.	1685	Mathematics for B-Tech	6000/-	03
2.	1686	Physics- I for B-Tech	6000/-	03
3.	1687	Physics-II for B-Tech	6000/-	03
4.	1688	Laboratory-I for Physics	4000/-	02
5.	1689	Laboratory-II for Physics	4000/-	02
6.	Programme Registration Fee		500/-	
7.	Admission Fee		1000/-	
8.	Technology Fee (per semester)		500/-	
	<b>Total Fee</b>		<b>28,000/-</b>	

**Final Examination/Continuous Assessment:**

At the end of zero semester, the University will arrange final three hours written examination in each course. It is imperative to obtain 50% marks in the final examination to pass in each course. The roll number slips and other relevant information related to examination centre will be provided to the students before the examination.

**Assessment:**

The distribution of continuous assessment and final examination will be as follows:

Assignments (20% test/ quiz/Assignment +10% Attendance)	30 %
Final Examination	70%
Aggregate	50%

**Note:** - If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.

**Semester-wise Course Offering for B.Tech Students****1<sup>st</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	751	Mathematical Methods in Physics-I	3(3+0)
2	752	Classical Mechanics and Relativity	3(3+0)
3	2564	Electronics	3(3+0)
4	2551	Atomic & Molecular Physics	3(3+0)
5	766	Laboratory for General Physics	2(2+0)

**2<sup>nd</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	755	Mathematical Methods in Physics-II	3(3+0)
2	756	Quantum Mechanics-I	3(3+0)
3	765	Electromagnetic Theory-I	3(3+0)
4	2566	Thermal and Statistical Physics	3(3+0)
5	769	Computational Physics	3(3+0)
6	762	Laboratory for Electronics	2(2+0)

**3<sup>rd</sup> Semester**

Sr. No.	Course Code	Title of the Course	Credit Hours
1	2565	Electromagnetic Theory-II	3(3+0)
2	759	Quantum Mechanics-II	3(3+0)
3	761	Solid State Physics-I	3(3+0)
4	758	Lasers & Optics	3(3+0)
5	2553	Digital & Computer Hardware Electronics	3(3+0)
6	2556	Laboratory for Digital & Computer Hardware Electronics	3(3+0)

**4<sup>th</sup> Semester**

1	760	Nuclear Physics	3(3+0)
2	2560	Advanced Digital & Computer Hardware Electronics	3(3+0)
3	2559	Electronic Communication System	3(3+0)
4	2561	Laboratory for Advanced Digital & Computer Hardware Electronics	4(4+0)
5	5464	Research Techniques	3(3+0)

**Degree Requirement:**

For the award of MSc (Physics) degree, the students will have to complete the courses offered equivalent to 65 credit hours (22 courses) within a minimum period of four semesters.

**f) Fee Tariff: MSc Physics**

Programme Registration fee	Rs.500/-
Admission fee	Rs.1000/-
Technology fee (per semester)	Rs. 500/-
Course fee: (Per 3 credit hours) Rs.6000/- Rs.6000 × 4 = Rs.24000/-	Rs.24000 /-
Lab course: per each 2 credit hours course	Rs.4000/-
<b>Total Fee for 1<sup>st</sup> Semester:</b>	<b>Rs.30000/-</b>

**Note:** Only selected candidates will be informed individually to deposit the prescribed fee in the AIOU main campus branches on same date of admission.

**g) Instructional Methodology:**

Allama Iqbal Open University employs media mix as methodology of instruction in which printed material, CDs, face-to-face tutorial support are mixed in accordance with the requirement of the discipline and the level of course. In view of special requirements of post-graduate studies in physics the following methodology of instruction will be followed:

**Tutorial Support and Workshops:**

Tutorial support for this programme will be in the form of lectures by resource persons in the workshops. A minimum, 45 hours of face to face teaching/guidance for each three credit

hour course, will be provided in these tutorials/workshops. Attendance in these sessions is compulsory. Students failing to attain 70% attendance will not be eligible to appear in the final examination. Each laboratory course comprises a minimum of 75 hours of laboratory courses. Practical work will be supervised and assessed by the practical supervisors/tutor. 80% attendance is compulsory for all the students in the laboratory course. AIOU will not bear any cost regarding TA/DA or boarding/lodging facilities during these workshops.

**Assessment:**

Student performance is evaluated / assessed as under:

Assignment Weightage	
(Quiz / Sessional Test / Presentations / Assignments)	20%
Course Workshop with 70% compulsory attendance	10%
Final Paper	70%
Aggregate	50%

**Note:** - If a student fails to achieve the required aggregate in any of the assessment component of a particular course he/she will have to re-enroll in that course.

At the end of each semester, the university will arrange final examination. The Roll number slips and other relevant information related to examination centers will be provided to the students before the examination. The students who fail in the final examination will be allowed two more chances to reappear in immediate subsequent semester examinations on payment of examination fee.

**Admission Procedure:**

Only the prescribed admission forms will be entertained. Admission forms (duly filled in) along with the required documents/ testimonials/ marks sheets should be sent to:

**Programme Coordinator**

MSc Physics Programme, Department of Physics New  
Building Ground Floor, Research Complex  
AIOU, H-8, Islamabad.

**Note: Admissions will be finalized after the test and interview.**

**FACULTY MEMBERS: (Department of Physics)**

1. Prof. Dr. Syed Zafar Ilyas Chairman  
Phone # 051-9057728
2. Mr. Ather Hassan  
Assistant Professor  
Phone # 051-9057214
3. Dr. Surayya Mukhtar  
Assistant Professor  
Phone # 051-9057184
4. Dr. Tariq Jan  
Assistant Professor  
Phone # 051-9057214
5. Dr. Zulfiqar Ali Shah  
Assistant Professor  
Phone # 051-9057728
6. Ms. Hareem Mufti  
Lecturer  
Phone # 051-9057727
7. Dr. Abdul Jalil  
Lecturer  
Phone # 051-9057214
8. Ms. Uzma Nosheen  
Lecturer  
Phone # 051-9057727
9. Dr. Tayaba Aftab  
Lecturer  
Phone # 051-9057228
10. Mr. Hussain Ahmed  
Research Associate  
Phone # 051-9057214
11. Mr. Zohaib  
LDC  
Phone # 051-9057728
12. Mr. Muhammad Usman  
Assistant  
Phone # 051-9057728
13. Mr. Muhammad Aman  
Laboratory Assistant  
Phone # 051-9057728
14. Mr. Saeed Murtaza  
Lab. Assistant  
Phone # 051-9057728

## GENERAL INFORMATION

- i. The certificates/degrees of AIOU are equivalent to any other recognized Board/University.
- ii. A candidate is required to submit complete admission form and upload scan documents through online system before or on the closing date.
- iii. If an applicant of post-graduate/research level programme does not receive any information regarding admission within three months from submission of application, he/she should presume non-selected.
- iv. A course taken by any student cannot be changed during the semester.
- v. The address of a student will not be changed during the semester.
- vi. **Admission to courses for both the Spring and Autumn semesters are generally offered in the months of January and July, respectively, whereas, examinations commenced in November and May respectively. The continuing students will enroll online on AIOU website and deposit fee within due date.**
- vii. Fee cannot be refunded once paid for admission nor can it be adjusted for any other programme
- viii. On payment of the registration fee, each student will be issued a registration number. This number must be quoted in all the future correspondence along with the roll number, course(s), code numbers and semester.
- ix. Study material shall be available on university website.
- x. Rules and regulations framed, enhanced and changed from time to time by the authorities, bodies of the university will be effective as deemed necessary. The

student will have to abide by all such rules and regulations from the date of their implementation.

- xi.
- xii. It is the responsibility of the student to remain in touch with the department regarding the selected programme.
- xiii. A student already admitted to a programme or a specialization of a programme shall not be allowed to transfer or to get admission to another programme unless he/she formally postpones it till the completion of the new programme or withdraws from the previous programme.
- xiv. After completion of a programme successfully, a student has to apply to Controller of Examinations for issuance of certificate/degree.
- xv. The university reserves the right to change contents of this prospectus without any prior notice as per university policy.
- xvi. In case of discrepancies in the name of student/ Father's name of the student or difference in name mentioned in his/her other educational certificates, the name on the Matric certificate of the student will be considered as correct name. The Examination Department shall also issue certificate/ degree on the said name.
- xvii. In case provision of forged documents for admission, not only the admission will be refused to the applicant but the fee deposited by him/her will also be forfeited. The university may proceed further in the matter.

## PROCEDURE FOR DEPOSITING FEE

- Eligible candidates for (**Merit Based Programmes**) are required to deposit admission fee in any branch of the following banks:
  1. First Women Bank Limited (FWBL)
  2. Allied Bank Limited (ABL)
  3. Muslim Commercial Bank (MCB)
  4. United Bank Limited (UBL)
- Fee can also be Deposited through Jazz Cash, Easy Paisa and Upaisa Mobile App/USSD String \*786#, Retailer Agent, Franchise and Branches of Mobilink, Telenor and Ubank. For more detail please visit university website.
- The Banks/Mobile App/Retailer Agents/Franchise/Branches will provide Transaction ID of deposited fee.

**Note:** Beware that University has not authorized any person or private institute to collect payment/forms. All the students are instructed to deposit fee by themselves in designated bank branches. In case of any discrepancy in admission fee/admission form the University will not be responsible and the student will have to face the consequences.

## IMPORTANT TELEPHONE NUMBERS

Sr.#	Name	Telephone Nos.
1.	Director Admissions	051-9250043 051-9250162 (Fax)
2.	Controller of Examinations	051-9250012
3.	Director Students Affairs	051-9250174
4.	Superintendent (Postgraduate)	051-9057422
<b>Helpline: (051) 111 112 468</b> <b>Help Desk: <a href="mailto:support.aiou.edu.pk/">support.aiou.edu.pk/</a></b>		

**FEDERAL AREA, ISLAMABAD**

ARD, Regional Campus, AIOU, Block No. 27, (Services Block) **ISLAMABAD**. Ph: (051)9250171(051)9057178 Email: reg\_isb@aiou.edu.pk

**PUNJAB**

DRD, Regional Centre, AIOU, Street No.5, Major Tahir Sadiq Road, Dar-ul-Salam Colony, **ATTOCK**. Ph: (057)2610610, Fax:057- 9316418 Email: rd\_attock@aiou.edu.pk

ARD, Regional Campus, AIOU, Chak No. 12-A/BC, Near Airport Hasilpur Bypass Road, **BAHAWALPUR**. Ph: 0304-9983138-9 Email: rd\_bahawalpun@aiou.edu.pk

ARD, Regional Centre, AIOU, Opposite Allied Park, Near Food Godam Railway, Bypass Road, **CHAKWAL**. Ph: (0543)553566-77 E mail: rd\_chakwal@aiou.edu.pk

ARD, Regional Campus, AIOU, Railway Road, Near Veterinary Hospital, **DERA GHAZI KHAN**. Ph: (064) 9260386 Fax: 064-9260387 Email: rd\_dgkhan@aiou.edu.pk

RD, Regional Campus, AIOU, F-Block, Near STN Tower, Millat Town, **FAISALABAD**. Ph: (041) 9330790, 041-9330791-3 Email: rd\_faisalabad@aiou.edu.pk

RD, Regional Campus, AIOU, 10-X Block, Peoples Colony, **GUJRANWALA**. Ph: (055)9230251-2 Email: rd\_gujranwala@aiou.edu.pk

ARD, Regional Campus, AIOU, Toba Road, Opposite Officers Colony, **JHANG**. Ph: (047) 7630953,7631186 Email: rd\_jhang@aiou.edu.pk

ARD, Regional Centre, AIOU, Ghaffar Chwok (Bhatta Corianwal), Main Road, **KASUR CITY**. 0492-2723723 Email: rd\_kasur@aiou.edu.pk

ARD, Regional Campus, AIOU, 346 -Raza Block, Allama Iqbal Town, **LAHORE**. Ph: (042)99260023-9 Email: rd\_lahore@aiou.edu.pk

Superintendent, Incharge, Model Study Centre, AIOU, Near Sat Sira Chowk, Marala Road, **MANDI BAHAUDDIN**. Ph: (0546)571171 Email: msc\_mbdin@aiou.edu.pk

ARD Regional Campus, AIOU, Near Under Pass, **MIANWALI**. Ph: (0459) 920024 - 0459-920025 Fax: 0459-920026 Email: rd\_mianwali@aiou.edu.pk

ARD, Regional Campus, AIOU, CF-7, Shah Rukn-e-Alam Colony, Near Thana Stop, **MULTAN**. Ph: (061)9220202-03 Fax: 061-6772499 rd\_multan@aiou.edu.pk

ARD Regional Centre, AIOU, Al Huda Street, Amin Colony, Near Govt. High School, **NAROWAL**. Ph:(0542)413122, 412122. rd\_narowal@aiou.edu.pk

DRD, Regional Campus, AIOU, Hidayat Campus, Near Sheikh Zaid Airport, **RAHIM YAR KHAN** Ph: (068)9239046, 9239166 Email: rd\_rykhan@aiou.edu.pk

ARD, Regional Campus, AIOU, H. No. CB/190-A, Lane No.4, St. No.1, Near Maryam Memorial Hospital, Peshawar Road, **RAWALPINDI**. Ph: 051-9334264-5 E-mail: rd\_rawalpindi@aiou.edu.pk

DRD, Regional Centre, AIOU, House No.88, Main Road Bilal Colony, **SAHWAL**. Ph: (040) 9330456-7 Email: rd\_sahwal@aiou.edu.pk

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