

# **Pakistan Institute of Engineering and Applied Sciences (PIEAS)**

## **Information Leaflet for Postgraduate Admissions**

### **1. Introduction to PIEAS**

Pakistan Institute of Engineering and Applied Sciences (PIEAS) is a multifaceted educational institution with academic and training programs being conducted at the highest level in a broad spectrum of disciplines. The breadth of its course offerings is a reflection of the complexity and diversity of the programs of Pakistan Atomic Energy Commission (PAEC), for which PIEAS has been the major human resource development centre since 1967.

PIEAS has been conducting postgraduate degree and certificate programs for scientists, engineers, medical doctors and technicians over the last 50 years. The educational infrastructure that has been created for this purpose is now so extensive that, besides nuclear technology, the institution can pass on to the youth of the nation, the experience in a wide range of specialized fields such as information technology, nuclear medicine, medical physics, materials engineering, process engineering, systems engineering and laser technology.

Postgraduate academic programs at PIEAS also involve R&D works, which frequently are published in international and national journals, conference proceedings and technical reports.

***PIEAS got adjudged as the best engineering institution in Pakistan by HEC in 2006, 2012 and 2013.***

***In QS Asian Universities Ranking, PIEAS was ranked No. 1 in Pakistan for the years 2014 and 2015.***

PIEAS has four affiliated institutes, namely Karachi Institute of Power Engineering (KINPOE) at Karachi, National Institute of Biotechnology and Genetic Engineering (NIBGE) and Nuclear Institute of Agriculture and Bio Sciences (NIAB) at Faisalabad and National Institute of Laser & Optronics (NILOP) at Nilore, Islamabad.

### **2. Introduction to PAEC**

Pakistan Atomic Energy Commission (PAEC) is a multi-disciplinary national organization engaged in: (i) development of nuclear power and fuel cycle facilities, (ii) research and development related to nuclear power and applications of radioisotopes in agriculture, medicine and industry, (iii) production of special materials and chemicals, (iv) design and fabrication of sophisticated components and complete units, (v) provision of highly specialized technical services, and (vi) education and training of scientists, engineers, medical doctors and technical staff in specific technical areas of interest.

To fulfil the manpower requirements of the wide variety of institutes, centres, projects and plants under PAEC, it requires outstanding engineers, scientists and medical doctors who are keen to enhance their technical knowledge even further by pursuing MS programs in their relevant fields at Pakistan Institute of Engineering and Applied Sciences, (PIEAS) Nilore, Islamabad and achieve a level of excellence in their subsequent professional careers.

### **3. Postgraduate Programs at PIEAS**

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|--|---|
| 1. PhD / MS Systems Engineering                    | 2. PhD / MS Mechanical Engineering            |
| 3. PhD / MS Nuclear Engineering                    | 4. PhD / MS Materials Engineering             |
| 5. PhD / MSc Nuclear Medicine                      | 6. PhD / MS Physics                           |
| 7. PhD / MS Medical Physics                        | 8. PhD / MS Computer Science                  |
| 9. PhD / MS Process Engineering                    | 10. MSc Radiation and Medical Oncology        |
| 11. PhD / MS Radiation Physics                     | 12. PhD / MS Electrical Engineering           |
| 13. MS Mineral Resource Engineering                | 14. PhD/MS Chemistry                          |
| 15. PhD / MPhil Bio-Technology (at NIBGE)          | 16. PhD / MPhil Biological Sciences (at NIAB) |
| 17. PhD Laser and Semiconductor Physics (at NILOP) | 18. MS Nuclear Power Engineering (at KINPOE)  |

Information about admission to the above mentioned postgraduate degree programs is given below. For information about other programs of PIEAS, interested students may visit the PIEAS website [red.pieas.edu.pk](http://red.pieas.edu.pk).

There are four types of students registered at PIEAS.

1. Regular Students
2. Fellows sponsored by PAEC or other strategic organizations
3. Fellows sponsored by IT & TELECOM ENDOWMENT FUND
4. HEC Scholarship holders for PhD

#### **4. The Eligibility Criteria for Postgraduate Programs**

##### **i. Regular Students**

In order to be eligible for admission in any of the aforesaid MS degree programs as regular students, first division is preferably required throughout the academic career provided they meet the pre-requisite course requirements of the degree program to which they are seeking admission. *However, one-second division ( $\geq 50\%$  marks) is allowed at any stage in the academic career from Matriculation to final degree.* Applicants having third division in academic career are not eligible. However, the Rector, PIEAS only in case of nominees from foreign government/agencies, may relax this condition. There is no age limit for regular students.

##### **ii. PAEC Fellowship Scheme**

For fellowship in the aforesaid MS degree programs, first division is preferably required throughout the academic career. However, one-second division ( $\geq 50\%$  marks) is allowed in academic career at any stage except the final degree. Maximum age limit for MBBS doctors is 32 years and 27 years for all other disciplines as on the reference date mentioned in the advertisement. ***The candidates having BS (4 years)/Master degree in Chemistry, Computer, Geo Physics or Geology must have studied Physics and Mathematics at undergraduate level.***

Field-wise eligibility in various MS programs for induction is shown in the table given below for **REGULAR STUDENTS and FELLOWS SPONSORED BY THE PAEC FELLOWSHIP SCHEME.**

- **All of the degrees must have been approved by the HIGHER EDUCATION COMMISSION.**
- **Engineering degrees must also have accreditation by the PAKISTAN ENGINEERING COUNCIL.**
- **Medical degrees must also have accreditation by the PAKISTAN MEDICAL AND DENTAL COUNCIL.**

#### **5. Selection Procedure for the MS Programs**

1. The selection of the applicants as fellows of PAEC is strictly on merit on all Pakistan basis.
2. Eligible candidates according to the above mentioned criteria will be called for a written test in major cities throughout Pakistan.
3. Those who qualify the test will be called for interview.
4. Admission will be given on merit based on the results of the written test and interview.

#### **6. Structure of Postgraduate Degree Programs**

The duration of all the MS programs is two years. This includes 4 regular semesters of 16 weeks teaching followed by two weeks for terminal examinations, one summer session of 10 weeks and an initial orientation period of about 10 weeks, called the "Zeroeth Semester" in which fundamental concepts are reviewed. The regular semesters are primarily devoted to theory and laboratory courses. Terminal examinations are conducted at the end of each semester while tests; quizzes and assignments are regular part of the sessional assessment during a semester. The overall grades are based upon the sessional assessment as well as the terminal examinations. In the question papers, no choice is allowed and students are expected to attempt all the questions. The last semester is devoted to full time work on a research and/or development project which starts during an earlier semester.

## **Zeroeth Semester**

The fellows are required to qualify a ten-week semester called the "Zeroeth Semester". The regular fee paying / departmental students are strongly advised to attend the zeroeth semester; however it is not mandatory for them. It serves to fill some of the gaps in their knowledge of Computing, Mathematics and other areas. It also provides a transition period during which the students become familiar with the teaching methodology and academic environment at PIEAS. **FELLOWS ARE REQUIRED TO ATTEND THESE CLASSES REGULARLY. SUCCESSFUL COMPLETION OF ZEROETH SEMESTER IS MANDATORY FOR FELLOWS FOR THEIR REGISTRATION IN THE FIRST SEMESTER.**

## **7. Terms and Conditions of PAEC Fellowship**

The continuation of the fellowship is contingent upon satisfactory performance, which is adjudged at the end of each semester.

Students winning the fellowship programs are currently paid a fellowship of **Rs. 25,000** per month with the following benefits:

1. Full Fee-waiver
2. Free hostel / transport facility
3. Free indoor medical facility for self

Fellows have to pledge a surety bond to serve PAEC for 5 years after graduation.

## **8. Prospects after Graduation**

PAEC may offer graduates appointments in the Institutes, Centres and Projects of PAEC after the successful completion of their studies. It is to be noted that the graduates may be posted anywhere in Pakistan. In this regard the final decision rests with the Pakistan Atomic Energy Commission.

On successful completion of MS / MSc studies, the fellows who are selected for appointment in PAEC will be given additional benefit of advance increments and relaxation in promotion as admissible under rules.

## **9. Terms and Conditions of IT Endowment Fund Scholarship**

Admission to only MS Computer Science program is available under this scholarship. The eligibility criterion for this program is given in the table below.

The continuation of the scholarship is contingent upon satisfactory performance, which is adjudged at the end of each semester.

The selected students will be paid a monthly stipend of Rs. 25, 000 during MS studies with the following benefits:

1. Full Fee-waiver
2. Free hostel / transport facility

Fellows have to pledge a bond to serve the country for 5 years after graduation otherwise they will have to pay the bond money as mentioned in the bond agreement.

## **10. Terms and Conditions of Other Fellowships**

A small number of fellowships from other strategic organizations are also available in various MS programs at PIEAS with same benefits as for PAEC's fellowships.

## **11. Additional Admission Requirements and Procedures**

The fellows are selected purely on merit. The candidates, who expect to complete all the degree requirements such as, final exams and thesis/project by the date of joining PIEAS may also apply. The date of joining PIEAS is mentioned in the advertisement published in leading daily newspapers. **It should be noted that without final results, the**

**selection is only provisional and would be cancelled for those who do not get first division in final degree examinations.** The candidates of MSc (Nuclear Medicine and Radiation & Medical Oncology) whose one year house job training is expected to be completed by the time of joining PIEAS may also apply. Applications for admission are invited through newspapers. All columns of the application form must be carefully completed. **If any column is left blank or not filled correctly, the application may not be entertained. Since application processing fee once deposited will not be refunded in any case, therefore before submitting the application, the candidates must make sure that they are eligible for the program for which they are going to apply and also that the program is included in the advertisement.**

The application processing fee must be deposited in the PIEAS university on-line bank account no. 00427991660803 (Title of Account: PIEAS-APF) All HBL Branches in Pakistan. Application form along with the bank receipt of processing fee must reach the Registrar Office not later than the advertised deadline. However, **there will be no bank service charges for submission of processing fee through any branch of HBL.**

#### **Application Processing Fee**

- Application processing fee within due date Rs 2500 for on-line submission
- Application processing fee within due date Rs 3000 for off-line submission
- Application processing fee within two weeks after due date Rs 3000 for on-line submission
- Application processing fee within two weeks after due date Rs 3500 for off-line submission

\*- Additional Rs. 500/- shall be charged if a candidate is applying for both PIEAS and KINPOE.

## Field-wise Eligibility in various MS Programs at PIEAS for Fellowships

Postgraduate Programs		Pre-requisite Degree														
		Engineering Disciplines										Medicine		Physical Sciences		
		Mechanical	Chemical	Metallurgy / Materials	Electrical	Electronics	Mechatronics	Comp	Mining	Civil	Geology	MBBS	Phy	Chem	Comp	Maths
at PIEAS	MS Nuclear Engineering	√	√	√	√					√		√			√	
	MS Systems Engineering				√	√	√									
	MS Electrical Engineering				√											
	MS Process Engineering		√													
	MS Materials Engineering			√												
	MS Mechanical Engineering	√														
	MS Mineral Resource Engineering							√		√			√			√
	MS Medical Physics											√				
	MS Radiation Physics											√				
	MS Physics											√				
	MS Chemistry												√			
	MS Computer Science (for Regular Students & IT Endowment Fund Scholarships)							√							√	
	MSc Nuclear Medicine											√				
at KINPOE	MS Nuclear Power Eng.	√	√		√	√				√						

## Field-wise Eligibility in various MS Programs at PIEAS on Regular Fee Basis

Students can apply for admission on **Regular Fee basis** in all MS programs offered at PIEAS. In addition to above mentioned pre-requisite fields for Fellowships, the students having following background are also eligible to apply for admission on **Regular Fee basis** in the following MS programs at PIEAS.

Postgraduate Programs		Pre-requisite Degree							
		Engineering Disciplines		Medicine	Physical Sciences				
		Mechanical	Comp	MBBS	Phy	Chem	Comp	Maths	Geo Physics
At PIEAS	MS Process Engineering	√						√	
	MS Materials Engineering	√			√	√			
	MS Mineral Resource Engineering								√
	MS Medical Physics					√			
	MSc Radiation & Medical Oncology			√					

## 11. Regular Students – Fee Structure for MS Programs

Fee Type	(Rs.)	Category
Admission Charges	12000/-	Once
Re-admission Charges	12000/-	Per re-admission
Library Security	10000/-	Once, Refundable
Hostel/Transport Conservation Charges	6000/-	Once
Tuition Fee	1800/-	Per credit hour per semester
Thesis and clinical work Fee	30000/- 60000/-	Per semester Per annum for Nuclear Medicine or equivalent thesis/clinical work
Thesis and clinical work Fee	20000/-	Per semester, for Medical Physics, RMO or equivalent thesis/clinical work
Registration Fee	2000/-	Per semester
Examination Fee	2000/-	Per semester
Internet/PERN Fee	2500/-	Per regular semester
	1250/-	Per summer session
Student Club Fee	2500/-	Per regular semester
	1250/-	Per summer session
Transport Charges	10000/-	Per regular semester
Hostel Internet Charges	2000/-	Per regular semester
Degree & transcript Fee	2000/-	Each
Migration Certificate Fee	1000/-	Each
Duplicate Transcript Fee	2000/-	Each
Duplicat Degree Fee	5000/-	Each
Degree/Transcript Verification Fee	500/-	Per copy
Paper Rechecking Fee	1000/-	Per paper
Accommodation Charges for full time students/ trainees	3000/-	Per month for shared accommodation with community bath.
	4000/-	Per month for shared accommodation with attached bath.
	5000/-	Per month for single accommodation with community bath.
	6000/-	Per month for single accommodation with attached bath.

- - Fee structure may be revised at any time.

## Fee Breakdown for First Semester

1. One Time Charges (Rs. 28,000/-)
  - a. Admission Charges Rs.12,000/- (once)
  - b. Library Security Rs.10,000/- (once, refundable)
  - c. Hostel/Transport Conservation Charges Rs.6,000/- (once)
2. Tuition Fee is Rs.1,800/- per credit hour per semester.
3. Other Miscellaneous Charges (Rs. 9,000/- + Rs. 2,000/- (optional for availing hostel internet facility))
  - a. Registration Fee Rs.2,000/- per semester
  - b. Examination Fee Rs.2,000/- per semester
  - c. Internet/PERN Fee Rs.2,500/- per semester
  - d. Student Club Fee Rs.2,500/- per semester
  - e. Hostel Internet charges Rs.2,000/- per semester. For those availing internet Connection in their rooms in PIEAS hostels
4. Transport charges Rs.10,000/- per semester. For those availing PIEAS transport
5. Hostel Accommodation Rs.3,000/- per month (shared accommodation).  
(For those availing hostel accommodation in PIEAS hostels).

Description of 1 <sup>st</sup> Semester Fee	MS
Fee excluding hostel accommodation and PIEAS transport.	Rs.58,600/- (for 12 credit hours)
Total fee including Hostel accommodation.	Rs.76,600/-
Total fee including PIEAS transport.	Rs.68,600/-

### Note:-

- First semester fee may be deposited in the form of pay order or demand draft payable to **Director Finance, PIEAS**. It must reach Registrar, PIEAS along with Acceptance form by the deadline mentioned in your admission offer letter.

## Fee Refund Policy

%age of Tuition Fee	Timeline for Refund
Complete refund after deduction of Admission Charges	Up to 7 <sup>th</sup> day of convene of first semester
50% Refund	From 8 <sup>th</sup> – 15 <sup>th</sup> day of convene of first semester
No Refund	From 16 <sup>th</sup> day of convene of first semester