



Pakistan Institute of Engineering and Applied Sciences (PIEAS)

Information Leaflet for MS / MSc 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.

In QS Universities World Ranking, PIEAS was ranked No. 1 in Pakistan for the years 2019 and 2020.

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

PIEAS got adjudged as the Best Engineering Institution in Pakistan by HEC in 2006, 2012 and 2013.

PIEAS has four constituent colleges [sub-campuses], namely:

1. Karachi Institute of Power Engineering (KINPOE-C) at Karachi,
2. National Institute of Biotechnology and Genetic Engineering (NIBGE-C), Faisalabad,
3. Nuclear Institute of Agriculture and Bio Sciences (NIAB-C) at Faisalabad and
4. National Institute of Laser & Optronics (NILOP-C) 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. MPhil / MS / MSc Programs at PIEAS

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| 1. MPhil Biological Sciences (at NIAB-C) | 11. MS Mineral Resource Engineering |
| 2. MPhil Biotechnology (at NIBGE-C) | 12. MS Nuclear Engineering |
| 3. MS Artificial Intelligence | 13. MS Nuclear Power Engineering (at KINPOE-C) |
| 4. MS Chemistry | 14. MS Physics |
| 5. MS Computer Science | 15. MS Process Engineering |
| 6. MS Cyber Security | 16. MS Radiation Physics |
| 7. MS Electrical Engineering | 17. MS Systems Engineering |
| 8. MS Materials Engineering | 18. MSc Nuclear Medicine |
| 9. MS Mechanical Engineering | 19. MSc Radiation and Medical Oncology |
| 10. MS Medical Physics | |

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 <http://admissions.pieas.edu.pk/index.html>

There are three types of students registered at PIEAS.

1. Fellows sponsored by PAEC or other strategic organizations

2. Regular Fee-Paying Students

3. Students sponsored by IT & Telecom Endowment Fund

4. The Eligibility Criteria for MPhil / MS / MSc Programs

i. PAEC Fellowship Scheme

- For fellowship in the aforesaid MS / MSc 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. In case of semester system, a CGPA 2.5 out of 4.0 in the final degree is required.
- The maximum age limit is 32 years for MBBS doctors and 27 years for all other disciplines, calculated as of 30th June of the admission year.
- The candidates having BS (4 years) / Master's degree in Computer Sciences must have studied Physics and Mathematics at undergraduate level.
- The candidates having BS (4 years) degree in Geology and MSc degree in 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:

Master's degree Program	Eligibility (Fellowship Program)	Eligibility (Regular Fee-Paying Program)
MS Nuclear Engineering	BS/BE Electrical Engg BS/EE Electronics Engg. BS/BE Chemical Engg. BS / BE Civil Engineering BS/BE Materials Engg BS/BE Mechanical Engg BS/BE Mechatronics Engg BS/BE Geological Engg, BS/BE Mining Engg BS/BE Software Engineering	BS/BE Electrical Engg BS/EE Electronics Engg. BS/BE Chemical Engg. BS / BE Civil Engineering BS/BE Materials Engg BS/BE Mechanical Engg BS/BE Mechatronics Engg BS/BE Geological Engg, BS/BE Mining Engg BS/BE Software Engineering

	BS/BE Computer Engineering, BS(4 Years) Physics BS (4 years) Chemistry BS (4 years) Computer Science	BS/BE Computer Engineering, BS(4 Years) Physics BS (4 years) Chemistry BS (4 years) Computer Science
MS Systems Engineering	BS/BE Electrical Engg. (Electronics) BS/BE Mechatronics Engg.	BS EE (Electronics/ Telecommunication) BS/BE Mechatronics Engg
MS Electrical Engineering	BS/BE Electrical Engg. (Power)	BS/BE Electrical Engg. (Power)
MS Process Engineering	BS/BE Chemical Engg.	BS/BSc Chemical Engineering, Polymer Engineering, Petroleum, Petro-chemical, Energy and/or Environment Engineering, Applied Mathematics, Mechanical Engineering
MS Materials Engineering	BS/BE Materials Engg.	BS/BE Mechanical Engg., Mechatronics, Agriculture, Industrial Engg., Civil, Automotive, Aeronautical Energy
MS Mechanical Engineering	BS/BE Mechanical Engg. BS/BE Industrial & Manufacturing Engineering	BS/BE Mechanical Engineering, Agricultural Engineering, Chemical Engineering, Industrial & Manufacturing Engineering, Mechatronics Engineering, Aeronautical/Aerospace Engineering, Automotive Engineering, Civil Engineering and equivalent BS degrees
MS Mineral Resource	BS/BE Geological Engg,	BS/BSc Mining Engineering,

Engineering	BS/BE Mining Engg BS Geology	Geological Engineering, Geology , Chemistry, Geophysics
MS Medical Physics	BS Physics	BS (Engg.) / B.E. Electrical, Electronics, Biomedical, BS in Physics, Applied Physics, Electronics, Mathematics, Chemistry
MS Physics	BS Physics	BS(Engg). / B.E. In electrical, Electronics, Mechanical, BS in physics, Applied Physics, Electronics, Mathematics, Computer Science
MS Radiation Physics	BS Physics	BS Physics 4 Years, MSc Physics
MS Chemistry	BS Chemistry	BS (4Y) Chemistry, Biochemistry, Applied Chemistry
MS Computer Science	BS/BE Software Engineering, Computer Science, IT.	i. BS in NCEAC Accredited Computing Degrees, ii. BE in PEC Accredited (Electrical, Electronics or Computer Engg.) Degrees
MS Cyber Security	BS/BE Computer Engineering, Computer Science, Software Engineering	i. BS in NCEAC Accredited Computing Degrees. ii. BE in Mathematic, Electronics, Physics iii. BE in PEC Accredited (Electrical, Electronics, Computer, Telecom Engg) Degrees
MS Nuclear Medicine	MBBS + 1 Years house job	same as fellowship program

MS Radiation and Medical Oncology	MBBS + 1 Years house job	same as fellowship program
MS Nuclear Power Engineering	BS/BE Electrical Engg., BS/BE Mechanical Engg., BS/BE Chemical Engg., BS/BE Industrial Electronic Engg.	BS/BE Electrical Engg., BS/BE Mechanical Engg., BS/BE Chemical Engg., BS/BE Industrial Electronic Engg.
MS Artificial Intelligence	BS Computer Science / AI / Cyber Security / Information Systems / Software Engineering / Computer Engineering	BS Computer Science / AI / Cyber Security / Information Systems / Software Engineering / Computer Engineering

ii. Students sponsored by IT Endowment Fund

- In order to be eligible for scholarship under IT Endowment, 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. In case of semester system, a CGPA 2.5 out of 4.0 in the final degree is required.
- 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.
- Terms and conditions are mentioned in a separate section below.

iii. Regular Fee-Paying Students

- In order to be eligible for admission in any of the aforesaid MS degree programs as regular fee paying 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. In case of semester system, a CGPA 2.5 out of 4.0 in the final degree is required.
- Students granted admission on the basis of GAT score will be treated a Regular Fee-Paying student.

- 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.
- 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 MS admissions, the applicants who intend to apply as Regular Fee students are advised to contact the relevant Head of Department through email available on PIEAS website for their eligibility, since a lot of variety exists in degree titles at BS level.

For example,

The Department of Chemical Engineering (DChE) offers MS Process Engineering and can accommodate applicants from following backgrounds:

1. BS/BE Mechanical Engineering
2. BS/BE Polymer Engineering
3. BS/BE Industrial Engineering
4. BS/BE Petrochemical Engineering/ Petroleum Engineering/ Petroleum & Gas Engineering/ Petroleum & Natural Gas Engineering (as various degree titles exist in Pakistan)

5. Regular Students – Fee Structure for MS Programs

Fee structure for MS Programs at PIEAS is available at the following link.

http://admissions.pieas.edu.pk/Academic_Rules/fee_structure.html

6. Refund Policy

Timeline	Percentage of Fee
Upto 10th day of commencement of classes	100% fee refund
Upto 15th day of commencement of classes	80% fee refund
Upto 20th day of commencement of classes	60% fee refund
Upto 30th day of commencement of classes	50 % fee refund

31st day onwards of commencement of classes	No Refund
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This policy will be applicable from the date of commencement of the semester. And will also be applicable on the students who are offered admission after the start of first semester.

7. Selection Procedure for the MS Programs

1. The selection of the applicants as fellows of PAEC is strictly on merit for all Pakistani/AJK nationals.
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. Candidates who qualify the interviews will be called for Psychological Profiling Test.
5. Admission will be offered on merit based on the results of the written test and interview.

8. 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 "Zeroth Semester" in which fundamental concepts are reviewed.

- **Zeroth Semester**

The fellows are required to qualify a ten-week semester called the "Zeroth Semester". The students other than fellows are strongly advised to attend the zeroth semester. 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 zeroth semester is mandatory for fellows for their registration in the first semester.**

9. 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 will be paid a fellowship of approximately Rs. 58,180/= per month with the following benefits:
 1. Full tuition Fee-waiver
 2. Free indoor medical facility for self
- Fellows have to pledge a surety bond to serve PAEC for 5 years after graduation.
- PAEC may offer graduates on fellowship, induction in the Institutes, Centres and Projects of PAEC after the successful completion of their studies with a minimum CGPA of 3.0/4.0. 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 with minimum CGPA of 3.0/4.0, the fellows who are selected for induction in PAEC will be given additional benefit of advance increments and relaxation in promotion as admissible under rules.

10. Terms and Conditions of IT Endowment Fund Scholarship

- Admission to only MS Computer Science / MS Cyber Security programs is available under this scholarship.
- 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. 28,000/- only during MS studies subject to their performance.
- The candidate will have to pay university Fees/Charges as a Regular Fee-Paying student.
- Candidate will 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.

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 advertisement in newspapers/PIEAS website.
- All applicants are required to apply through online admission portal.
- 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.**
- **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.

12. Application Processing Fee*

Institute Options	Application Processing Fee (APF)	APF With Late Fee
PIEAS	3500	4000
KINPOE-C	3500	4000
PIEAS / KINPOE-C	4000	4500
NIBGE-C	3500	4000
NIAB-C	3500	4000
NIBGE-C / NIAB-C	4000	4500
NILOP-C	3500	4000

** Application processing fee is non-refundable.*

- The Challan of Application Processing Fee must be deposited in any Askari Bank Branch of Pakistan only with no Bank Charges.
- The Application Processing Fee can also be deposited through online mode in Pakistan only.

**There will be Rs. 40/- service charges for online payment of application processing fee.*

13. Step by Step Application Procedure

- Application submission will be online only. Hard copy applications are not acceptable.
- Go to <http://pieas.edu.pk/> and click “Admission” tab
- Create an account and Login to start the online application.
- Fill in and submit online application form. [Read the instructions carefully]
- Upload recent passport size colour photograph as per the defined standard.
- Upload academic documents.
- Print “**Bank Challan**” for Application Processing Fee.
- Make payment in nearest Askari Bank and upload scanned copy/image of deposited fee slip at PIEAS admission portal.
- Print the “**Call Letter**” (which will be made available after verification of fee through bank).
- Appear for Test at the venue and date mentioned in your call letter.
- **Merit List** will be placed on PIEAS website within 3 weeks after test.
- Keep visiting your profile on our website for any update before and after **Entry Test**.