

Pakistan Institute of Engineering and Applied Sciences (PIEAS)



Offers national symposium on
**Indigenization of Nuclear Power Plants:
Opportunities and Challenges**

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About PIEAS

PIEAS was founded in 1967 as Reactor School in response to increasing manpower demand of PAEC. The institute gained university status in 2000 and its name was changed to "Pakistan Institute of Engineering and Applied Sciences (PIEAS)". The university has been ranked top institution for engineering studies in Pakistan by the Higher Education Commission (HEC) in the years 2006, 2010 and 2013. PIEAS has also been ranked as No.1 engineering university of Pakistan in the QS Asian Rankings 2014 and 2015.

About DNE

Department of the Nuclear Engineering (DNE) is the oldest department of PIEAS. It is offering MS and Ph.D. degrees in Nuclear Engineering and Radiation Physics. The department works closely with PAEC and IAEA. DNE is involved in a number of PAEC projects. It serves as the collaboration center of the IAEA as well.

IAEA Collaborating Centre

- Collaboration on research, development and capacity building for multidisciplinary application of advanced and innovative nuclear technologies.
- Contribute to technical development, system analysis, and optimization of nuclear-renewable hybrid energy systems.
- Conduct experiments at the research facilities creating new experimental data for the validation of computer codes used in modelling of advanced and innovative reactor designs.
- Train professionals on advanced and innovative reactor designs with the use of IAEA basic principle simulators and contribute to the creation of new IAEA relevant publications.

Ongoing Assigned Projects from PAEC

- Development of in-house nodal code with thermal hydraulics feedback.
- Development of Intelligent Nuclear Emergency Decision Support System.
- Development of cold immobilization technique for low level solid radioactive waste.
- Assessment of conventional island worth of KANUPP as part of KANUPP decommissioning studies.
- Development of natural circulation loop.
- Development of a room temperature semiconductor alpha particle detector.

Pakistan Institute of Engineering and Applied Sciences

NATIONAL SYMPOSIUM ON Indigenization of Nuclear Power Plants: Opportunities and Challenges

14 -16 March, 2023

Venue: Alpha Auditorium, DNE, PIEAS.



Registration Deadline: March 07, 2023

Registration Fee: Rs. 8000/-

For more Information, please visit www.pieas.edu.pk

About the Course

- Pakistan Atomic Energy Commission (PAEC) has made a significant contribution to the development of sustainable energy in the country. Nuclear power is expected to play a substantial role in meeting rising energy demand in the future. In this context, PAEC is committed to indigenize the design and construction of nuclear reactors. The purpose of this three-day symposium is to highlight the opportunities available for indigenization of nuclear power plants, identify the challenge(s) to be faced and find the solution of the anticipated problems. The course will cover a wide range of topics including planning, designing, licensing, construction and commissioning of the nuclear power plants. Experts in specialized field will deliver lectures on these topics. A visit of the construction site of PARR-III is also part of the course. The course is open for participants from various sites of the strategic establishments and universities.



Topics to be covered

- Enrico Fermi and the Beginnings of Nuclear Reactors
- Indigenization of PARR-III
- Research Reactors and their Utilization
- Project Management
- Health Physics Issues and Challenges
- Regulatory Requirement, Siting and Licensing of NPPs
- Indigenization of Nuclear Power Plants
- Neutronics and Thermal-hydraulics Design Considerations
- Nuclear Reactor Safety Requirements
- Development of Special Materials for Nuclear Reactors
- Development of Nuclear Reactor Fuel
- Shielding Requirement for an NPP
- SMRs and Advanced Reactors
- Design and Development of Instrumentation and Control for Nuclear Reactors



NATIONAL SYMPOSIUM ON INDIGENIZATION OF NUCLEAR POWER PLANTS: OPPORTUNITIES AND CHALLENGES

14-16 MARCH, 2023
PIEAS, NILORE, ISLAMABAD

Registration/Nomination Form:

Name of the applicant: _____

PIN/CNIC: _____

Designation: _____

Department: _____

Institution/Organization: _____

Mailing Address: _____

Permanent Address: _____

Phone (office): _____

Phone (Cell): _____

Fax: _____

E-mail: _____

Demand Draft/P.O. No.: _____

Drawn on (Bank).: _____

Amounting to Rs.: _____

Rs.8000/- per person

Please send this completed Form (also available at www.pieas.edu.pk) to **Dr. Inam ul Hag, PE, PIEAS** (inam@pieas.edu.pk), Tel: **051-9248611-20** Ext: **3744**, Fax:051-9248600, Nilore, Islamabad, along with the demand draft in favor of Director Finance, PIEAS. (Photocopy of this Form is also valid. Please note that all entries must be filled)