

The Nuclear Education, Skills and Technology (NEST) Framework



*Developing and Training the Next
Generation of Nuclear Professionals*

What is NEST?

The NEST Framework is a multilateral initiative which, through international collaborative research projects, trains and facilitates the skills development and training of the next generation of nuclear professionals.

NEST helps countries to leverage resources and address short- and long-term educational and research needs through:



Developing training activities in challenging nuclear projects;



Building long-lasting partnerships between university, industry and with all nuclear stakeholders to create a global nuclear network of fellows, mentors and organisations.



Building a talent pipeline from universities to industry and regulators by preparing the workforce with the skills and competencies specific to the nuclear sector;

How NEST works

NEST is implemented through dedicated projects and activities in any participating country. The NEST projects are multi-disciplinary and involve organisations (universities, research centres, industries, technical support organisations [TSOs], regulators) from at least three NEST countries.

Master, PhD, PostDoc and young professionals, will develop skills and acquire competencies and knowledge in new areas of nuclear science and technology through hands-on activities developed as part of NEST projects. Each project addresses a specific real-world issue or challenge (safety, decommissioning, nuclear new builds, radioactive waste management...).

Each Fellow is assigned a NEST mentor, to help them acquire knowledge and critical thinking skills that come from working in close contact with experts and leaders in the field. In a second phase, fellows continue working on exploratory research projects related to the challenges and issues faced. This could eventually lead to development of new technologies and greater innovation.

Finally, through networking among themselves as well as with a wide range of experts from different countries and disciplines, NEST fellows broaden their knowledge of the nuclear field which could lead to new opportunities crucial for their career development.

A global network

Universities, research organisations, industries, TSOs and regulators from ten countries are currently participating in the NEST Framework.

This global nuclear network of stakeholders will help to:

- Leverage human capacity building and development activities to create the appropriate dynamics for knowledge and expertise to be shared and acquired by NEST fellows;
- Encourage scientists and engineers in various fields to collaborate on a variety of projects and strengthen working relationships;
- Facilitate the development of new technologies and innovation to address real-world challenges and issues.

What's in it for universities?

Universities are the first stop to nurture the next generation of nuclear leaders and professionals. They provide the "Know-Why", which is the knowledge to understand why something should be done in a certain way and why certain tools and techniques should be used. Industry instead tends to be more interested in the "Know-How".

By establishing links between universities and industry, the benefits for universities are to:



Support both academia and the nuclear industry by bridging the gaps between the "know-why" and "know-how";



Foster the dynamics for a shared understanding of the issues at stake by involving all actors, from universities to industries to regulators and research organisations.



Strengthen university education programmes;



Test research results and discoveries in real-world environments;

How to join NEST

More information can be found at: www.oecd-nea.org/nest

Contact the NEST Secretariat at nest@oecd-nea.org

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Through the NEST Fellowship I became connected to other scientists and student researchers from different cultures and different background and each with their own viewpoint.

From conversations I learned how others see the world and approach problems, which were always unique and something I simply would not experience at home. Furthermore, the work I engaged in was closely supervised by experts within the field and I was able to dedicate the entire internship time to learning novel techniques to accomplish challenging objectives and was able to apply the knowledge after the internship on new projects. The NEST Fellowship served as one of the significant foundations in my scientific journey and opened the door to many cultures that I never experienced before.

Stephen King, Texas A&M,
NEST Fellow at Paul Scherrer Institute 2019

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The Nuclear Energy Agency (NEA) is an intergovernmental agency within the framework of the Organisation for Economic Co-operation and Development (OECD) headquartered in Paris, France. Its main objective is to promote international co-operation assisting member countries in maintaining and further developing the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes.
