

PhD Programme in “Energy and Nuclear Science and Technology”

The PhD programme in “Energy and Nuclear Science and Technology” offers 22 positions (of which 17 fully funded with scholarships) for the 36th PhD cycle at Politecnico di Milano. All scholarships cover three years of study and research.

The STEN PhD graduate is specifically trained for leading, organizing, planning, managing and controlling research activities at the highest levels of international competitiveness in the all the fields of Energy and Nuclear Science and Technology. The STEN PhD Programme is strictly related to the research activities and laboratories of the Department of Energy. Internships or visiting periods to international research institutes, private companies and qualified laboratories, as well as participation to conferences, seminars, etc. are warmly encouraged. The STEN PhD programme is organized in two tracks. The “Energy” track allows to develop scientific and research competencies in all aspects related to production, conversion and rational and sustainable use of energy in fixed or mobile plants as well as in all the fundamental aspects related to energy saving for civil applications, comfort and environment quality control. The “Nuclear” track allows the PhD candidate to develop competences in the pioneering research necessary to design build and operate a nuclear system, including: reactor physics, radiochemistry, radioactive waste management, radioprotection, decommissioning, radiation measurements and applications of ionizing radiations to energy-related issues in other fields.

The present call includes the following scholarships:

#	Type	Research topic	Granting Institution
1	Generic	<i>“Energy and Nuclear Science and Technology”</i>	Italian Ministry of University and Research Politecnico di Milano
2	Generic	<i>“Energy and Nuclear Science and Technology”</i>	Italian Ministry of University and Research Politecnico di Milano
3	Generic	<i>“Energy and Nuclear Science and Technology”</i>	Italian Ministry of University and Research Politecnico di Milano
4	Generic	<i>“Energy and Nuclear Science and Technology”</i>	Italian Ministry of University and Research Politecnico di Milano
5	Generic	<i>“Energy and Nuclear Science and Technology”</i>	Italian Ministry of University and Research Politecnico di Milano
6	Topic	<i>“Development and Experimental Benchmarking of Optimization Algorithms for Aggregated Multi-Energy Systems”</i>	Department of Energy



7	Topic	<i>"Fabrication and Atomic Scale Investigation of Nano- and Hetero-Structures on Surfaces"</i>	Department of Energy
8	Topic	<i>"Fuel Driven Absorption Heat Pump for Residential Applications"</i>	Department of Energy
9	Topic	<i>"Home Energy Management System"</i>	Department of Energy
10	Topic	<i>"Hydrogen Combustion in Partially and Fully Premixed Swirl Burners"</i>	Department of Energy
11	Topic	<i>"Hydrogen Production and Storage for Use in Heavy Industrial Applications"</i>	Department of Energy
12	Topic	<i>"Innovative Solutions for Small Modular Reactors and Transmuters"</i>	Department of Energy
13	Topic	<i>"Passive Neutron Dosimetry with Track Detectors"</i>	Department of Energy
14	Interdisciplinary	Horizon Europe: <i>"Modeling Combustion In Electrified, High-Efficient Ic Engines Operating With Alternative Fuels"</i> . In Collaboration with the PhD Program in "Industrial Chemistry and Chemical Engineering")	Politecnico di Milano

The following three further scholarships will be included in the grant in late May. Candidates who participate to the call will be invited to option these scholarships through the online procedure by mid-June.

#	Type	Research topic	Granting Institution
15	Topic	<i>"Advanced Modelling and Simulation for the Risk Assessment of Highly Critical Energy Systems"</i>	Department of Energy
16	Topic	<i>"Smart Reliability and Maintenance Modeling for Smart Industry"</i>	Department of Energy
17	Topic	<i>"Small Modular Reactors: Modelling and Experimental Investigation of Passive Safety Strategies"</i>	ENEA Department of Energy

Please notice that, in order to be eligible for the scholarships, you must (in the registration process) declare that you intend to compete for a scholarship (see section 6.4 of the [Quickstart](#)), then from 12 to 19 June 2020 you must select the topic/interdisciplinary scholarships you want to apply (see section 7.6 of the [Quickstart](#)).

For further information about the Topic scholarships please visit the [Topic Scholarships webpage](#)

For further information about the Interdisciplinary scholarships please visit the [Interdisciplinary Scholarships webpage](#)