IMT Atlantique is launching a new nuclear energy master’s programme – SAfe and REliable Nuclear Applications (SARENA), a certified Erasmus Mundus programme.

The only one of its kind in Europe, the programme will open in September 2019. Initiated and coordinated by Abdesselam Abelouas, professor at the SUBATECH lab (a joint research lab associating IN2P3-CNRS, the University of Nantes and IMT Atlantique), the programme is carried by a consortium involving IMT Atlantique, the Universidad Politécnica of Madrid (Spain), Lappeenranta University of Technology (Finland) and the University of Ljubljana (Slovenia). This master’s aims to develop technical skills enabling engineers to work in all scientific fields related to nuclear energy.

The result of collaboration between four major technological training institutions, the SARENA Master’s programme deals with an area that is essential to Europe’s energy independence: nuclear energy. The programme covers a large range of nuclear applications, from the design and operation of nuclear power stations to the critical issue of radioactive waste management and the dismantling of plants. The programme responds to needs expressed by actors in this field and therefore benefits from strong support from industry (EDF, Orano, ASSYSTEM, GEN Enerjia) and public surveillance and research organisations (in particular, the Andra and the CEA in France).

The programme, taught entirely in English, will take in 66 students who will have a choice of two courses:

- Operation of reactors
- Waste management and dismantling

In the first year, IMT Atlantique will host the whole of the class during the first semester. The students who choose to study waste management and dismantling of plants will follow their course in the Universidad Politécnica of Madrid, and those who opt for the course in operating reactors will be on the Lappeenranta University of Technology campus.

In the second year, the waste management and dismantling course students will come back to IMT Atlantique while the others will finish their course at the University of Ljubljana.

The SAfe and REliable Nuclear Applications (SARENA) Master’s is a certified Erasmus Mundus programme and will therefore benefit from 66 bursaries. Financed by the EU, the programme promotes higher education in Europe. It encourages and supports student mobility and cooperation between EU learning establishments and their non-European counterparts. Its goals are to promote the European Union as a place of academic excellence on a world scale, to contribute to sustainable development of higher education in non-member countries and to offer students the best possible career opportunities.
About IMT Atlantique Bretagne-Pays de la Loire

IMT Atlantique is a grande école generalist engineering school (ranked in the A+ group of the top ten schools in the French magazine L'Étudiant ranking), and internationally recognised for its research (placed in four categories of the ShanghaiRanking). It is part of the Institut Mines-Télécom and is administered by the Ministry of Industry and Digital Affairs.

With campuses in Brest, Nantes and Rennes, and one incubator present on the three campuses, as well as a site in Toulouse, the vision of IMT Atlantique is to bring together digital technology, energy and the environment to transform society and industry through training, research and innovation, and to be the leading French institution of higher education and research working in this sector on the international scene.

From September 2018, IMT Atlantique boasts a new generalist engineering course. Students are recruited through the Mines-Ponts competitive entry exam. The school also offers two engineering degrees by apprenticeship, master's degrees, specialist master's degrees and doctorates.

IMT Atlantique’s programme is built on cutting-edge research carried out in six joint research units under its trusteeship: The Laboratory for Process Engineering for Environment and Food (GEPEA), the Research Institute of Computer Science and Random Systems (IRISA), the Laboratory of Medical Information Processing (LATIM), Laboratory of communication science and technology (LABSTICC), the Nantes Laboratory of Digital Sciences (LS2N) and the Laboratory of Subatomic Physics and Related Technologies (SUBATECH) (with the French National Centre for Scientific Research (CNRS), the French Institute for Research in Computer Science (INRIA), the French National Institute of Health and Medical Research (INSERM), universities or engineering schools). The school draws on its research excellence in its flagship areas (energy and digital technology; cybersecurity; the environment and digital technology; industry of the future; nuclear technology; health and digital technology; and risks and interactions) coupled with scientific disciplines in order to meet the challenges of tomorrow: digital transition, environmental transition, industrial transition, energy transition, healthcare of the future and primary research.

The school is a member of the Carnot M.I.N.E.S Institute (Innovative Methods for Business and Society), the Carnot TSN Institute (Telecom and Digital Society) and founding member of the Université Bretagne Loire consortium of universities and higher education institutions.

For more information http://www.imt-atlantique.fr/