

Background

After the pioneering initiative of [BNEN](#), the Belgian Nuclear higher Education Network, other countries, e.g. Italy, United Kingdom, Germany, Switzerland, etc., created their own pool of education. At the European level the [ENEN](#) Association (European Nuclear Education Network) is a sustainable product generated by an FP5 project.

Objectives

The main objective of the ENEN Association is the preservation and the further development of higher nuclear education and expertise. This objective is realized through the co-operation between European universities, involved in education and research in the nuclear engineering field, nuclear research centres and nuclear industry.

Principal results

ENEN, more than a network: a European project

The BNEN experience can be considered as pioneering in the sense that the achievements performed at the scale of a small but tri-cultural country has been extrapolated at the European scale. In order to ensure sustainability both from an organisational and a financial point of view, the participants in the ENEN project have founded the ENEN Association, a non-profit association under French law. This international association can be considered as a step towards the creation of a virtual European Nuclear University. . The ENEN association operates for two years (www.enen-assoc.org). It has currently 41 members and has contributed to and benefited from the NEPTUNO project which involved 35 partners.

The European Master of Science in Nuclear Engineering (EMSNE) certificate

The first European Master of Science in Nuclear Engineering certificates has been granted in December 2005 to students having obtained a part of their credits (at least 20 ECTS out of the total of 60 ECTS) in a foreign institution member of the ENEN association.



Nuclear engineering students preparing for the EMSNE certificate

The NEPTUNO communication system

The NEPTUNO communication data base includes more than 200 nuclear courses offered by the ENEN/NEPTUNO partners (www.neptuno-cs.de).

Participation in the EUROTRANS project

Training of doctoral students and young researchers in the objectives of the ENEN Association. An opportunity to achieve this is achieved in the IP EUROTRANS project. The IP EUROTRANS is an integrated project of FP6 for the TRANsmutation of High Level Nuclear Waste in an Accelerator Driven System (ADS). During the whole duration of the project ten "Internal Training Courses" are organised for doctoral students. ENEN is responsible for the general organisation of these internal training courses

The five ENEN Committees

The activities of the ENEN Association are organized in five committees.

The Teaching and Academic Affairs Committee establishes the equivalence between nuclear engineering education curricula, awards the ENEN Master of Science Certification, promotes student and teacher exchanges, and organizes International ENEN courses.

The Advanced Courses and Research committee ensures the link between ENEN members and research laboratories in the European Community. In particular, education and training courses materialize in the EMSNE core curricula. The Training and Industrial Projects Committee identifies the industrial needs for continued professional development. Pilot editions of courses and try-outs of training programmes have been successfully organized with support of nuclear industries and international organisations.

The Quality Assurance Committee examines the quality assurance practices adopted in partner institutions. It collects information about rules and practices such as selection, training and certification of teachers, and proposes a scheme for their harmonization.

The Knowledge Management Committee identifies and monitors deficiencies in scientific knowledge relevant to nuclear technology and safety. It implements an action plan to ensure that valuable scientific knowledge is not lost.

Future work

Although the working field of the ENEN Association started with and is still focused on nuclear engineering education, the activities expand into the definition, harmonisation and trans-national recognition of professional training for several key functions in nuclear industries and regulatory bodies. With the support of its members and the endorsement of its activities by the European Commission, future extensions towards education and training in radiation protection, nuclear and radiochemistry, nuclear applied sciences, nuclear instrumentation, accelerators, radioactivity measurements, and even into nuclear waste management may be expected. The expansions from engineering into other nuclear disciplines and from the academic field into the industrial and regulatory areas form the backbone of a new project introduced for the final call of the 6th EC framework programme. It will be for the ENEN association a challenging task, which will significantly contribute to the dissemination and management of nuclear knowledge within the European Union as well as on a world-wide level, through the ENEN Associations' international contacts with its sister Network ANENT in Asia, and by its participation to activities of the World Nuclear University.

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Main reference

P. De Regge, The European Nuclear Education Network Association – ENEN, Nuclear Energy for New Europe, 5-8 September 2005, Bled, Slovenia.

P. De Regge, '[The role of the European Nuclear Education Network Association in the academic and industrial environment](#)', ETRAP, 3rd International conference on Education and Training in Radiological Protection, 23-25 November 2005, Brussels, Belgium.