

<b>EU Training Course on “Nuclear power reactor technology and NPP safety from a regulatory perspective”</b>	
<b>Duration</b>	1 W
<b>Content</b>	<p>The training course will provide a presentation of the nuclear reactor and NPP technologies, the nuclear safety conception, related provisions as safety principles, requirements and design/operational solutions to achieve high level safety.</p> <p>The course will cover in a logical and progressive approach:</p> <ul style="list-style-type: none"> <li>- Current reactor technology, basic concepts of reactor safety: safety objectives, safety functions, safety classification of SSC, safety systems, frontline and auxiliary safety systems, safety requirements for SSC as conception, design, redundancy, independence, lay-out, environmental and seismic qualification, accident analysis, etc.</li> <li>- Concepts, objectives, scope and use of deterministic safety analysis and probabilistic safety analysis highlighting the differences and the complementarities in the overall safety evaluation of the NPP from the licensee side and also from the regulatory side.</li> <li>- Concepts of accident initiators list (external and internal), Design Basis Accident, Design Extended Conditions (or BDBA) and related requirements for accident analysis and radiological consequences calculations and how to report it in the SAR and how to review it from the regulatory side during licensing process.</li> <li>- Design provisions and accident management requirements for severe accident conditions with damaged fuel in a NPP: safety objectives. Regulatory requirements and evaluation during the design approval.</li> <li>- Use of PSA to perform an overall safety analysis of the overall NPP for risk of CDF or large release and as insight tool to identify weaknesses and effectiveness of possible improvements in the safety of the design conception of the NPP and its systems.</li> <li>- Reference safety standards from IAEA and relevant national standards will be presented and discussed. Examples of SAR content and regulatory evaluation will be presented and discussed with reference to the various licensing steps.</li> </ul> <p>Practical cases and examples will be elaborated.</p>
<b>Achievements</b>	<p>The attendees will attain the knowledge, and the learning of main aspects, related to technological aspects, NPP safety conception, regulatory requirements for nuclear reactor and power plant, regulatory approach for evaluation (deterministic and probabilistic) in particular for design approval.</p>