Course on

Nuclear data for energy and non-energy applications

This course on nuclear data focuses on the whole range of activities in the "Nuclear Data Life Cycle".

This course covers all steps starting from the measurements to their validation and final use in nuclear reactor calculations, giving the students a full and comprehensive overview of: i) experiments and theory ii) compilation of information, iii) generation and evaluation of nuclear data libraries, iv) processing of nuclear data libraries for use in nuclear applications, v) assessment of nuclear data uncertainties, vi) importance of nuclear data adjustments, vii) and, finally, review of current activities, projects and international networks on nuclear data.

The **pedagogical format** of the course is based on a **hybrid flipped classroom**. In this format, you need to complete some **preparatory work** (representing about 40 hours of work) before attending **interactive classes** organized during 5 consecutive days (representing about 40 hours of work). Those classes are given in a hybrid set-up, with participants following the classes either onsite or remotely on the web. Research in engineering education demonstrated that such a teaching format leads to better learning outcomes and increases the interactions between the students and the teachers.

After the course you will be able to:

- Understand the "Nuclear Data Life Cycle".
- Use nuclear data bases (EXFOR, Evaluated Files, ICSBEP, …) and tools (NJOY for processing , JANIS for visualization , DICE&IDAT, NDAST for assessing the impact of nuclear data in criticality calculations, etc.).
- Know international activities and sources of information related to nuclear data.

In order to **pass the course** and be issued a **course completion certificate**, you need to obtain at least 50 points (out of 100 max. points). All activities (both during the preparatory work and the interactive classes) are graded.

The course is given by:

- Prof. Oscar Cabellos, Universidad Politécnica de Madrid, Spain.
- Three Guest Lecturers who are experts of the nuclear data community.

The interactive sessions are organized between September 4th and September 8th, 2023 at Universidad Politécnica de Valencia in Valencia, Spain and on the web.

Register before June 25, 2023, 23:59 at:

great-pioneer.eu/register