



McSAFER Training Course on “SMR neutronics and thermal hydraulics”

Lappeenranta-Lahti University of Technology LUT (Finland)
March 22 - 24, 2022

PROJECT OVERVIEW

The aim of the **McSAFER project** (*High-Performance Advanced Methods and Experimental Investigations for the Safety Evaluation of Generic Small Modular Reactors*) is to advance the safety research for SMRs by combining experimental investigations and numerical simulations. McSAFER has received funding from the Horizon 2020 Euratom Research and Training Programme.

COURSE THEME AND STRUCTURE

The training course focuses on core neutronics and thermal hydraulics of light water SMRs. It will consist of lectures by experts from the McSAFER project, a tutorial to the new Finnish computational reactor analysis framework Kraken developed at VTT and an experimental thermal hydraulics session at the LUT research laboratories.

Day 1: Lectures

The course lectures will present various McSAFER neutronic and thermal hydraulic analysis tools and methods applied for SMRs, such as CAREM, F-SMR, NuScale and SMART.

Day 2: Kraken

The new reactor analysis framework Kraken is introduced and demonstrated with practical examples of its application to SMR analyses.

Day 3: Laboratory

The experimental thermal hydraulic session will include a hands-on experiment and measurements related to natural circulation and introduction to advanced measurement techniques as well as the LUT test facilities including the SMR model MOTEL.

After the contact teaching, the participants are expected to complete on-line quizzes and return a short report on the laboratory work in the course digital learning environment.

ADDITIONAL INFORMATION

Venue: LUT University, Yliopistonkatu 34, Lappeenranta, Finland

Participation: The course is **free of charge** but **limited to 20 participants**.

ECTS: LUT University will grant **2 ECTS credits** for students who pass the course.

COVID-19: The course is planned to be organized as contact teaching at LUT but is subject to the current corona virus regulations. See <https://www.finentry.fi/en/> for up-to-date guidelines for traveling to Finland.

Web page: <https://mcsafer-h2020.eu/news-and-events/>

REGISTRATION AND FURTHER INFORMATION

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