As the number of power plants and other nuclear installations facing their decommissioning phase has grown, attention for this “end of life” period becomes more and more important for the nuclear community.

As a consequence, the need for knowledge and skills on how to prepare the decommissioning, how to proceed with the technical operations and how to implement an adequate radiation protection program is emerging.

Based on the experience gained during the European pilot project of the decommissioning of BR3 and taking advantage of our involvement as advisory body in the decommissioning of the Belgian research reactor Thetis of the Ghent University and of the MOX fuel production facility Belgonucléaire, the SCK•CEN Academy has developed several training modules that serve a training course on decommissioning of nuclear installations.

**Available modules**

- Legal and regulatory framework
- Strategies for decommissioning
- Decommissioning project management
- Safety aspects and management
  - Dose follow-up: individual and workplace monitoring
  - Optimization tools (VISIPLAN)
- Inventory, facility and site characterization
- Material management and characterization
- Dismantling operations
- Decontamination techniques
- Final survey plan and safety report
- Case studies
  - BR3-Pressurized Water Reactor
  - Belgonucléaire MOX production facility
  - Thetis Research Reactor

**Target audience**

Our courses are developed for decommissioning stakeholders such as regulators, plant managers and operators, health physicists, and technical service organizations (already involved by decommissioning operations or planning such operations in the coming months of years).
Methodology

All courses are tailored to the needs of the customer:
- The program consists of one or more of the available modules;
- Topics that are not listed above but that are SCK•CEN R&D subjects can also be offered;
- The level is adapted to the target audience;
- Courses are given in English, French or Dutch;
- Courses are given preferably at SCK•CEN’s premises in Mol (Belgium) because of the availability of the specialized laboratories and installations, and possibilities for exercises. Alternatively, if only theoretical classes are involved courses can also be given at the customer’s premises.

Lecturers

Courses are given by top-level SCK•CEN scientists and engineers with solid expertise in their research domain. Furthermore, they have followed learning facilitator training sessions and can thus transfer their theoretical knowledge and practical experience to the course participants efficiently and effectively.

Some examples of tailor made specialized courses provided in the past

- What are today’s best strategies for dismantling (WANO, 2005)
- Size reduction of components for decommissioning of nuclear facilities: a visual and “hands-on” experience (IAEA, 2008)
- Decommissioning Dose Assessment & Dose Optimization (IAEA, 2010 & 2013)
- Radiological characterization & release (Training of Lithuanian Experts, Ignalina NPP, 2006)
- Performing a radiological survey: selection of measurement methods and devices (Applus (NL), 2015 & 2016)
- Practical training on decommissioning, decontamination, characterization (MoST (IQ), 2012)
- Decontamination (ENGIE Electrabel (BE), 2010 & 2012 and Staelens (BE), 2010)
- Decommissioning – general approaches (ENGIE (BE), 2012 & 2013)
- BR3 waste streams (Tecnubel (BE), 2014)

Since 2014, we organize on regular basis a one-week open course on decommissioning with a fixed program.

For some courses the SCK•CEN lecturing team is extended with guest lecturers from renowned national and international organizations dealing with decommissioning.