

DE LA RECHERCHE À L'INDUSTRIE

cea

Bratislava, 2 December 2016



[www.cea.fr](http://www.cea.fr)  
[www-instn.cea.fr](http://www-instn.cea.fr)

# The National Institute for Nuclear Science and Technology



université  
PARIS-SACLAY



instn

# What is INSTN?

**The National Institute for Nuclear Science and Technology (INSTN)** was created in 1956. It is still supervised by the French Government, to provide excellence in E&T for Human Resource Development for the nuclear sector



- *transferring nuclear and industrial knowledge and know-how*
- *providing, through partnerships, a comprehensive academic offer from a technician up to a post-graduate level*
- *organising flexible tailor-made professional training courses based on an accredited international certification policy*
- *supporting Continuous Professional Development*

**INSTN works through strong links with CEA research laboratories and industrial expertise, the French Alternative Energies and Atomic Energy Commission**

# INSTN key figures

- **115 staff members on 5 sites in France**
- **1,400 teachers, lecturers and trainers**
  - *CEA researchers and experts*
  - *French and foreign university teachers*
  - *French and foreign engineers, experts from industry, the medical sector and regulatory bodies*
- **1,100 students per year** for academic programmes (30% from abroad)
  - *students or engineers for the nuclear industry, as well as physicists, biologists, pharmacists*
- **6,400 trainees per year** enrolled in vocational courses
  - *French and foreign professionals (from EDF, AREVA, CEA, as well as French or foreign nuclear companies (incl. many SMEs), government agencies, pharmaceutical companies, school teachers, etc.)*



## → Nuclear engineering

- *Operation, maintenance, security of NPPs and research reactors*
- *Nuclear waste management and decommissioning*
- *Radiation Protection, detection and measurement*
- *NPP and environmental security*
- *Nuclear safety*

## → Radiation physics, chemistry, radiochemistry

## → Nuclear medicine, radiotherapy and radiopharmacy, molecular imaging

## → New energy technologies, energy savings

## → Human and organizational factors, Crisis management

## → Project management



# Our partners and collaborations

INSTN is the **gateway to nuclear science and technology** through our partnerships in France and abroad, and is one of the world's key players for **innovative E&T** (Internet Reactor Laboratory - ISIS, virtual reality room, serious games, MOOCs, etc.)

- Academic partnerships



- Apprentice training centres

- Industrial collaboration



- Contributions to international bodies





# Our missions

**Initial training**  
*(incl. PhD programmes)*  
**40% of INSTN activities**



*Industrial and  
social outreach*



**In France and abroad**

**Continuous  
Professional Training**  
**60% of INSTN activities**



## Professional Bachelor's degrees

- [*Dismantling, asbestos removal, decontamination and waste*]\*
- [*Decontamination, waste management and dismantling in the nuclear environment*]\*

## Master's degrees through partnerships

- [*Decontamination, dismantling of nuclear facilities*]\*
- Dismantling and waste management
- European Master in Radiation Protection

## 2 years' Higher Education level

- [*Nuclear environment*]\*
- [*Control of ionizing radiation and application of protection techniques*]\*
- [*Radiation protection technician diploma*]\*

\*[In French language]



*Students per year*

## We provide training sessions in

### 26 different trainings in French language

- *Management of a nuclear project*
- *Initiation to the dismantling of nuclear installations*
- *Dismantling in preparation to decommissioning of nuclear facilities*
- *Dismantling of sodium facilities*
- *Deconstruction of nuclear installations*
- *Waste and effluent management for decommissioning*
- *State of the place and radiological inventory for the dismantling of a facility*
- *Technical visit of ANDRA's Very-low and Low/Medium activity storage centers*
- *Shipments of radioactive materials: rules and good practices*
- ...

### 3 trainings in English

- Dismantling experience of nuclear facilities
- Nuclear waste management – International school in nuclear engineering
- Radiation protection basis

### 6 professional certificates in French language

- *Competent in radiation protection*

> 200

***Trainees per year from various industries and nuclear operators***



# World-class facilities for decommissioning training

## Simulation facilities for training activities

- decontamination
- radiation protection

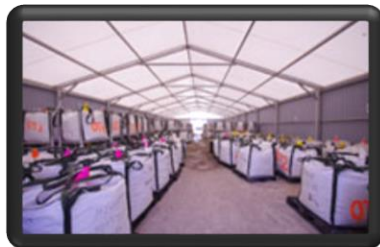


## Laboratories for practical training

- radiochemistry
- radiation protection
- detection and measurement of radiations



## Visit of worksites

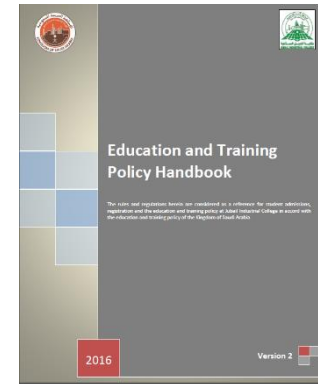


# INSTN: QUALITY AND ACCREDITATION



- ❑ Quality assurance of the whole process and organization
  - ❑ *A never stopping work*
  - ❑ *ISO standard*

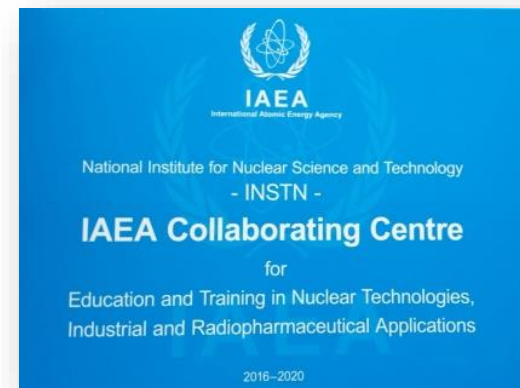
- ❑ Existence of rules of procedure
  - ❑ *Agreements for the implementation of training actions*
  - ❑ *Representation of trainees, disciplinary law*
  - ❑ *Obligation to inform trainees*



- ❑ Capability to deliver official certificates, thanks to audits by a control body
  - ❑ *Renewed every 3-4 years*



- ❑ Accreditation delivered by another organization



## INSTN contacts

Philippe Corr ea: Director  
[philippe.correa@cea.fr](mailto:philippe.correa@cea.fr)

Pascal Anzieu: Head of  
Programmes and Training  
[pascal.anzieu@cea.fr](mailto:pascal.anzieu@cea.fr)



Thank you for your attention

