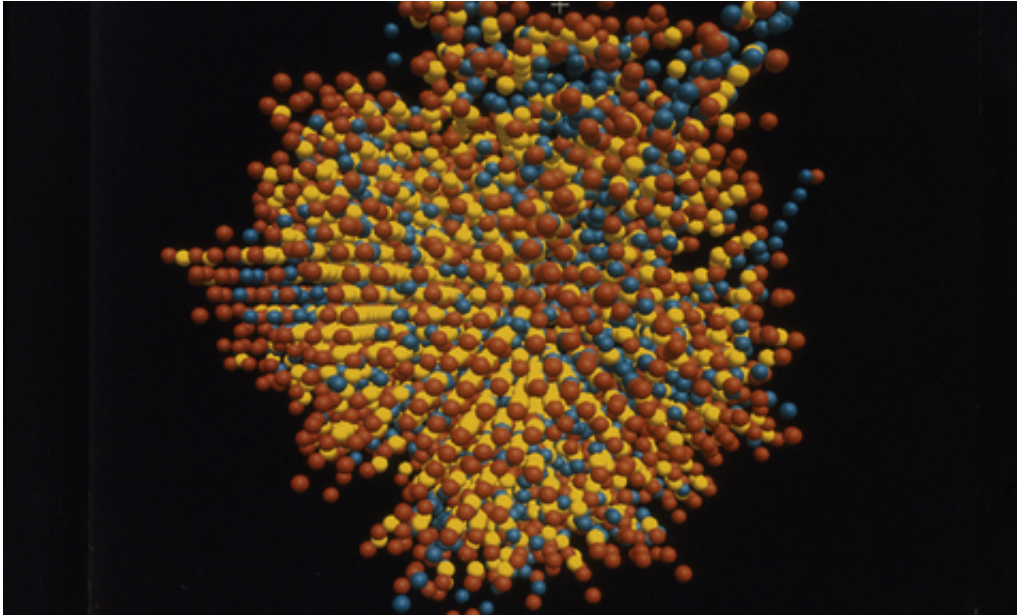


# Materials for nuclear reactors, fuels and structures - International school in nuclear engineering

Code référence : 965



## OBJECTIFS

- Describe the mechanisms of irradiation damage.
- Identify the available techniques to investigate the evolution of materials under irradiation.
- Compare the properties of steels used for reactor core structures;
- Explain the evolution of fuel and cladding during operation.

## PUBLIC

The doctoral course is designed for young researchers, PhD students, post-doctorates and engineers from nuclear industry companies, research centres, Universities, Technical Safety Organizations (TSO), regulatory bodies.

## PRÉ-REQUIS

Minimum background: Master of Science in Nuclear Engineering or Materials Science.

## CONTENU

- Mechanisms of irradiation damage.
- Introduction to fuel materials.
- Behaviour of in core metallic materials:
  - Steels for LWR, FBR and fusion,
  - Zr alloys for Fuel Assembly in LWR.

- Carbides, SiC and ZrC high temperature materials for GenIV reactors.

## MÉTHODE

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Lectures, exercises and technical tour.

Maximum number of trainees: 24.

## COLLABORATION

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CEA/DEN (Nuclear Energy Division)

## PRIX PUBLIC - 2016

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2300 €

## DURÉE - 2016

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5 jours (30 heures)

## LIEU ET DATE - 2016

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### Saclay

- 18-22 janvier 2016

## COORDINATION - 2016

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Responsable(s) pédagogique(s) :

### Saclay

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## CONTACT - 2016

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