





# Monthly Bulletin

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#### Why this bulletin?

In the present phase of advertising the ANNETTE Courses, in addition to a continuous update of the ANNETTE course page on the ENEN Website,

#### http://www.enen.eu/en/projects/annette/annette-project-courses1.html

we felt the need to advertise in a more effective way the next upcoming courses, in order to alert the prospective attendance. Sending a periodic reminder about courses to ENEN Members and selected Stakeholders, in fact, is considered a useful service.

In this issue of the bulletin, we advertise also courses already pointed out to your attention, for which new information has been delivered or whose places are still available. There are plenty of places in interesting courses, while others may be nearly saturated. So, please diversify your choices.

#### Thanks for your interest in our courses!

Link to the course application page

Links for asking support for mobility to the **ENEN+ project** (not assured)

PLEASE LOOK ALSO AT THE COMPLETE OFFER
FOR LAST MINUTE SELECTION OF COURSES ALREADY ADVERTISED

### COMING SOON COURSES

2-days Workshop on "Proliferation Resistance Methodologies for Nuclear Installations"

SCK•CEN (Brussels), Belgium (November 22-23, 2018)





#### **WORKSHOP CONTENT**

The goal of this workshop is to apply and compare different proliferation resistance methodologies in a case study of a nuclear installation.

The characteristics of the installation taken as case study is presented at the start of the workshop. Then, the principles of several proliferation resistance methodologies are introduced and realistic examples are shown. After the introduction of each methodology a table-top exercise is prepared to give the possibility to the participants to apply directly the methodology.

Large sections of the workshop are dedicated to the application of the different methodologies to the specific case study and discussion of the results among the participants. A comparison of the methodologies is foreseen at the closing of the workshop.

#### **REQUESTED BACKGROUND**

This workshop is intended for professionals that are involved in nuclear safeguards tasks in their organization. Knowledge of nuclear safeguards is required to attend the workshop. The principles needed to apply each proliferation resistance methodology are presented before the table-top exercise.

#### **APPLY HERE**

In order to apply for this course, please use the application form on the ENEN website here: <a href="http://www.enen.eu/en/projects/annette/annette-project-courses1.html">http://www.enen.eu/en/projects/annette/annette-project-courses1.html</a>

Please enter **Workshop on "Proliferation Resistance Methodologies for Nuclear Installations"** as the course name and **ESARDA** as the course provider.

#### **COURSE FEE**

The course is offered as part of the ANNETTE-project and there is no course fee for the participant. However, participants will need to pay for travel, accommodation and meals.

#### **CONTACT**

For questions and further information, please contact:

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Principles of Radiation
Protection.
International
Framework.
Regulatory Control
(e-learning)



#### **Course Outline and Content:**

The course is aimed to provide advanced knowledge of fundamental radiation protection principles applied to planned, emergency and existing exposure situations. The content will offer the theoretical and practical understanding of the European and international radiation protection legal framework, the regulatory control concepts to achieve an appropriate standard of radiological protection.

The programme is addressed to:

Radiation Protection Experts or Officers, Medical Physics Experts, Nuclear specialists, Specialists from other disciplines demanded in the nuclear workforce and to those who are interested in continuous professional development in order to cover present needs in different sectors of nuclear energy and ionizing radiation applications.

The course is structured as follows:

Unit 1 - Principles of radiation protection (1 ECTS)

Unit 2 - International Framework. Regulatory Control (1 ECTS)

Detailed Learning Outcomes are reported at this link

Requested Background:

The learner is assumed to have basic knowledge of Physics, Engineering (EQF Level 6).

#### Lecturers:

Mrs. Gabriela Rosca-Fartat

Mr. Gabriel Stanescu, PhD

"Horia Hulubei" National Institute for Physics and Nuclear Engineering (IFIN – HH)

**Nuclear Training Centre** 

30 Reactorului, RO-077125, Bucharest-Magurele, Romania

#### **Method of Delivery:**

Asynchronous e-learning. Links to the course material will be provided at a later stage.

Final Examination: multiple-choice test

Date of availability of the course material: 15 September 2018

STILL FREE PLACES IN AN INTERESTING HANDS-ON COURSE



CZECH TECHNICAL UNIVERSITY IN PRAGUE

Course on VR-1 Reactor (24th - 26th September 2018)

THE FULL CALENDAR **OF BNEN COURSES HAS BEEN PUBLISHED: SPEED UP TO RESERVE!** 













#### THE BELGIAN NUCLEAR EDUCATION NETWORK

BNEN Courses: the full available programme proposed for ANNETTE in a modular fashion (ACADEMIC CALENDAR)

<u>Introduction to nuclear energy (3 ECTS)</u> (24-28 September 2018)

Introduction to nuclear physics and nuclear measurements (3 ECTS) (17-21 September, 2018)

Nuclear materials (3 ECTS) (1-5 October 2018)

Nuclear fuel cycle (3 ECTS) (8-12 October 2018)

Radiation protection (3 ECTS) (15-19 October 2018)

Nuclear thermal hydraulics (5 ECTS) (3-14 December 2018)

Nuclear reactor theory (6 ECTS) (7-25 January 2019)

Safety of nuclear power plants (5 ECTS) (11-22 February 2019)

Advanced nuclear reactor physics and technology (3 ECTS) (11-15 March 2019)

Advanced nuclear materials (3 ECTS) (18-22 March 2019)

Advanced radiation protection radiation ecology (3 ECTS) (19-23 November

Advanced courses of the nuclear fuel cycle (3 ECTS) (25-29 March 2019) Nuclear and radiological risk governance (3 ECTS) (1-5 April 2019)

STILL COLLECTING **APPLICATIONS FOR** FPS@KIT SCHOOL



#### COURSES OFFERED BY THE FRAMATOME PROFESSIONAL SCHOOL (FPS) AT KIT FOR ANNETTE

- **Reactor Exercises** (on agreement: 4th quarter of 2018)
- **Design Basis Accidents for Light Water Reactors and Numerical** Simulation Tools (April 2019)
- Computational fluid dynamics with OpenFoam (November 2018)
- **Design of Pipelines against Earthquake Loads** (on demand)

#### AN EXTENDED OFFER BY FPS@KIT FOR ANNETTE (TENS OF PLACES)

- Flow and heat transfer in reactor core (24.09. 27.09.2018) (link);
- Monte Carlo criticality and shielding calculations (12.11. 16.11.2018) (link);
- Reactor physics calculations with deterministic methods (link);
- Beyond-design accidents, core-melt accidents (link);
- Coupled Neutron Kinetics /Thermal Hydraulic Codes for Safety Assessment of Nuclear Power Plants (10.12. - 14.12.2018) (link);
- Thermohydraulic Stability Analysis (link);
- Technology and Management of the Decommissioning of Nuclear Facilities (10.09. - 14.09.2018) (link);
- Radiolytic Gas Management in Boiling Water Reactors (link);
- Stress Analysis (link);
- Light Water Reactor (LWR) core design and fuel management (link);
- Light Water Reactor (LWR) core feedback and transient response (link).

For a general description of course conditions, look at this link

#### CEA-INSTN COURSES WITH NEW DATES



#### **Courses by CEA INSTN (FREE of CHARGE FOR ANNETTE)**

- Basic Operation Of Nuclear Reactor (24-28 September 2018) Click here for the Learning Outcomes
- Neutronics for light water reactors (11-15 March 2019 and 18-22 March 2019) Click here for the Learning Outcomes
- PWR operation and safety (3-7 December 2018) Click here for the Learning Outcomes
- Thermal Hydraulics and safety (14-18 January 2019)
- Materials for Nuclear Reactors (21-25 January 2019)
- Reactor core physics: Deterministic and Monte Carlo methods (21-25 January 2019)
- Nuclear fuels for light water reactors and fast reactors
   January 1 February 2019)

# INFORMATION ON RECENTLY ADVERTISED COURSES



#### REMINDERS

# COURSE BY UPPSALA UNIVERSITY



<u>Course on Human-Technology-Organisation/Human Factors for</u> <u>Nuclear Safety including Virtual Reality Resources as part of Safety</u> <u>Culture (6 ECTS)</u> (November 5, 2018, to December 21<sup>st</sup>, 2018)

INTER-SEMESTER
COURSE ON "NUCLEAR
FUEL FROM CRADLE TO
GRAVE"
(ECTS assignment done
by individual
universities)





#### KIT (from 8th October until 12th October 2018)

## SINGLE AND TWO-PHASE THERMAL-HYDRAULICS - for nuclear applications

(e-learning)



#### SINGLE AND TWO-PHASE THERMAL-HYDRAULICS

The theoretical lectures and exercise material are already posted. Videos for theoretical lectures available, videos for exercises coming soon.

MASSIVE OPEN ONLINE
COURSE ON NUCLEAR
SAFETY CULTURE





**byTECNATOM** and **UNED** 

**MOOC (Massive Open Online Course)** 

Introducing safety culture and its application to the nuclear field (30 h)

COURSE ON RADON AND ITS RADIOLOGICAL IMPACT

IFIN - HH (22 - 24 October 2018)



#### RADON AND ITS RADIOLOGICAL IMPACT

### **European Nuclear Education Network Association**



Tel: +33 637 304 617 E-mail: secretariat@enen.eu

#### **GENERAL INFO:**

Web page of ANNETTE Courses

http://www.enen.eu/en/projects/annette-project-courses1.html

Web page for course application:

http://www.enen.eu/en/projects/annette/eoi1.html





**LINK TO COURSE LIST** 

LINK TO THE APPLICATION FORM

Web page concerning the grants of the ENEN+ project <a href="https://plus.enen.eu/grants/">https://plus.enen.eu/grants/</a>