ENETRAP II WP5

Develop mechanisms for evaluation of training and education

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RPE and RPO

Radiation Protection Expert (RPE)
an individual having the knowledge, training and experience needed to give radiation protection advice in order to ensure effective protection of individuals, whose capacity to act is recognised by the competent authorities

→ occupational and public exposures

Radiation Protection Officer (RPO)
an individual technically competent in radiation protection matters relevant for a given type of practice who is designated by the undertaking to oversee the implementation of radio action protection arrangements of the undertaken

(Recommendation 2nd EUTERP workshop, 2008)
WP 1 Co-ordination

WP 2 Requirements and methodology for recognition of RPEs

WP 3 Requirements and reference standards for RPO training

WP 4 Establish the reference standards for RPE training

WP 5 Mechanism for the evaluation of training materials, events and providers

WP 6 Database of training events conforming to the agreed standard

WP 7 Development of course material (text book, e-learning)

WP 8 Pilot sessions – Test methodologies and effectiveness

WP 9 Introduction of the training passport and mutual recognition system of RPEs

WP 10 Collaboration for building new innovative generations of specialists in radiation protection
WP5 Objective

To develop a mechanisms for the comparison, through a transparent and objective methodology, of

1. Training material
2. Training events
3. Training providers

Which can be used by the national authorities to evaluate their national RP training programme with for compliance with the European RP Training Scheme (ERPTS)

Deliverables

1. Protocol for the comparison of training material
2. Protocol for the comparison of training events
3. Protocol for the comparison of training providers
4. Application of the mechanism to some examples
Working programme

1. Organisation of a kick off meeting and subsequent meetings
2. Defining a detailed working programme for WP5 and subsequent division of tasks
3. Identification of elements that are essential for the comparison of training materials
4. Identification of elements that are essential for the comparison of training courses, incl. exercises, on the job training, work experience, examinations, etc
5. Defining the range of detail for course elements that is sufficient for compliance with the ERPTS
6. Identification of elements that are essential for the comparison and evaluation of training providers
7. Setting up and apply a quality assurance protocol for the comparison of training materials, courses and providers on the basis of the above-mentioned elements
8. Reporting to the Steering Committee
Identification of elements that are essential for the comparison of training materials

List of subjects
- IAEA syllabus
- EG Basic Syllabus
- European masters degree in RP (ENETRAP)
- Existing national tables of subjects
- ERPTS

Subdivision of subject
- same level as ERPTS
Identification of elements that are essential for the comparison of training courses

Types of training
- Theoretical training courses
- Practical exercises
- E-learning
- On the job training
- Work experience
- Examinations

Comparison elements
- Learning objectives
- Duration
  - Theoretical
  - Practical
  - Class hours vs. Study hours
- Level
Identification of elements that are essential for the comparison and evaluation of training providers

Quality assurance
- Programme
- Level of teachers
- Evaluation
- Examination regulations
- Demands from stakeholders
- E.g. ISO 17024 or only different subjects

Evaluators
- National regulators for national quality assurance
- EUTERP for European quality assurance
Setting up and apply a quality assurance protocol

Items needed
• ERPTS
• Comparison protocol training material
• Comparison protocol training events
• Comparison protocol training providers

Tested on
• National recognition systems
• EMRP
• National courses
Grades at which subjects are covered in training material

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<td>global, quantitative</td>
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<td>important subjects covered, quantitative</td>
<td>to be able to work with the subject</td>
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<td>Detailed, quantitative</td>
<td>very familiar with the subject and able to work with it</td>
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Radiation Protection training scheme

General physical and chemical subjects

- Composition of matter
- Ionisation, excitation
- Nuclide Chart

Radioactivity

- Proton - neutron ratio
- Radioactive decay, half-live
- Decay formula and –constant
- Mother - daughter relation
- Specific activity
- $\alpha$-, $\beta$-, $\gamma$-decay, electron capture
- X-rays, Auger electrons
- Decay schemes
- Particle- and energy fluence and density
## Comparison of training material

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<tr>
<th>level of competence</th>
<th>book A</th>
<th>book B</th>
<th>3 (RPE small institutes)</th>
<th>2 (RPE large institutes)</th>
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2nd approach - relatively

- Rating the level of conformity with reference schemes
- Makes the system ECVET ‘ready’
- Beside ‘knowledge’ add ‘competence’
WP 5 partners

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Thank you for your attention!