



ETRAP

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IRPA

THE IRPA GUIDANCE ON CERTIFICATION OF A RADIATION PROTECTION EXPERT

Eduardo GALLEGO, IRPA Vice-president, Univ. Politécnica Madrid, Spain
Kent N. LAMBERT, Co-chair of the Working Group, Drexel University, USA
Colin PARTINGTON, Co-chair of the Working Group, The SRP, UK

On behalf of the IRPA Working Group on Radiation Protection Certification
and Qualification

International Radiation Protection Association



IRPA STRATEGIC PLAN 2008-2020

GOALS:

1. Promote excellence in the conduct of IRPA
2. Promote excellence in national and regional associate societies.
3. Promote **excellence in radiation protection professionals**
4. IRPA is recognized by its members and stakeholders as the international voice of the radiation protection profession



Goal: Promote **excellence in radiation protection professionals**

- Develop guidance documents for use by radiation protection professionals and Associate Societies.
 - Stakeholder engagement
 - Radiation protection culture
 - **Professional qualification (RPE)**
- Participation and feedback from Associate Societies through working groups



Radiation Protection Expert (RPE)

- Since the 2000-2004 term, the IRPA Executive Council has widely discussed on the definition and roles of an RPE
- An important milestone was the recognition by the International Labour Organization of Radiation Protection Expert (RPE) within the International Standard Classification of Occupations (ISCO-08; 2263). RPE is included in the group of occupations covered by the definition of Environmental and occupational health and hygiene professionals
- Qualified Expert (International Basic Safety Standards, GSR-3)
- Radiation Protection Expert (European BSS; Euratom Directive 2013/59)
 - Both require for regulatory bodies to have a system for the formal recognition of the competence of the QE/RPE



Radiation Protection Expert (RPE)

IRPA definition

- A RPE is a person having education and/or experience equivalent to a graduate or masters degree from an accredited college or university in radiation protection, radiation safety, biology, chemistry, engineering, physics or a closely related physical or biological science; and
- who has acquired competence in radiation protection, by virtue of special studies, training and practical experience. Such special studies and training must have been sufficient in the above sciences to provide the understanding, ability and competency to
 - anticipate and recognize the interactions of radiation with matter and to understand the effects of radiation on people, animals and the environment;
 - evaluate, on the basis of training and experience and with the aid of quantitative measurement techniques, the magnitude of radiological factors in terms of their ability to impair human health and well-being and damage to the environment;
 - develop and implement, on the basis of training and experience, methods to prevent, eliminate, control, or reduce radiation exposure to workers, patients, the public and the environment.
- In most countries the competence of radiation protection experts needs to be recognized by the competent authority in order for these professionals to be eligible to undertake certain defined radiation protection responsibilities. **The process of recognition may involve formal certification, accreditation, registration, etc.**



Working Group on Certification of an RPE

Formed in October 2011, with the following terms of reference:

- **Review the various certification processes being used in the IRPA Associate Societies** (and countries) that have provided documentation, Canada, UK, and US.
- **Develop a document of guiding principles** for the development and implementation of such a certification process that would be applicable internationally and useful to IRPA Associate Societies that would like to initiate such a certification process or improve an existing process in their countries.



Working Group on Certification of an RPE. Membership

Kent Lambert (co-chair), United States
Colin Partington (co-chair), United Kingdom

Abdalla Alhaj, Saudi Arabia	Perbattista Finazzi, Italy
Alexander Brandl, Austria	Daniele Giuffrida, Italy
Frik Beeslaar, South Africa	Qiuju Guo, China
Hielke Freerk Boersma, Netherlands	Toshiso Kosako, Japan
Kun-Woo Cho, South Korea	Mario Marengo, Italy
Vadim Chumak, Ukraine	Gregor Omahen, Slovenia
Giorgio Cucchi, Italy	Celso Osimani, Italy
Jeff Dovyak, Canada	Diva E. Puig, Uruguay
Heleen van Elsacker, Netherlands	Brent Rogers, Australia

Contributors from the IRPA Executive Council:

Kenneth Kase (IRPA past President 2008-2012)

Bernard Le-Guen (Executive Officer)

Roger Coates (IRPA Vice-president 2012-2106)

Eduardo Gallego (IRPA EC liaison)



Working Group on Certification of an RPE. Processes

- Almost all work was communicated by e-mail with over 500 emails exchanged.
- A first draft document was prepared and distributed to the Working Group. This draft was eventually rejected.
- To get input from a larger base, in 2014 all Associate Societies were asked to participate in a survey: 36 replies.
- There was one meeting of the Working Group during the Geneva Regional IRPA conference (June 2014).
- A second draft document was prepared and distributed. Discussed at IRPA 14 in Cape Town (May 2016) and later finished and endorsed by the EC in November 2016.



Overview of Document

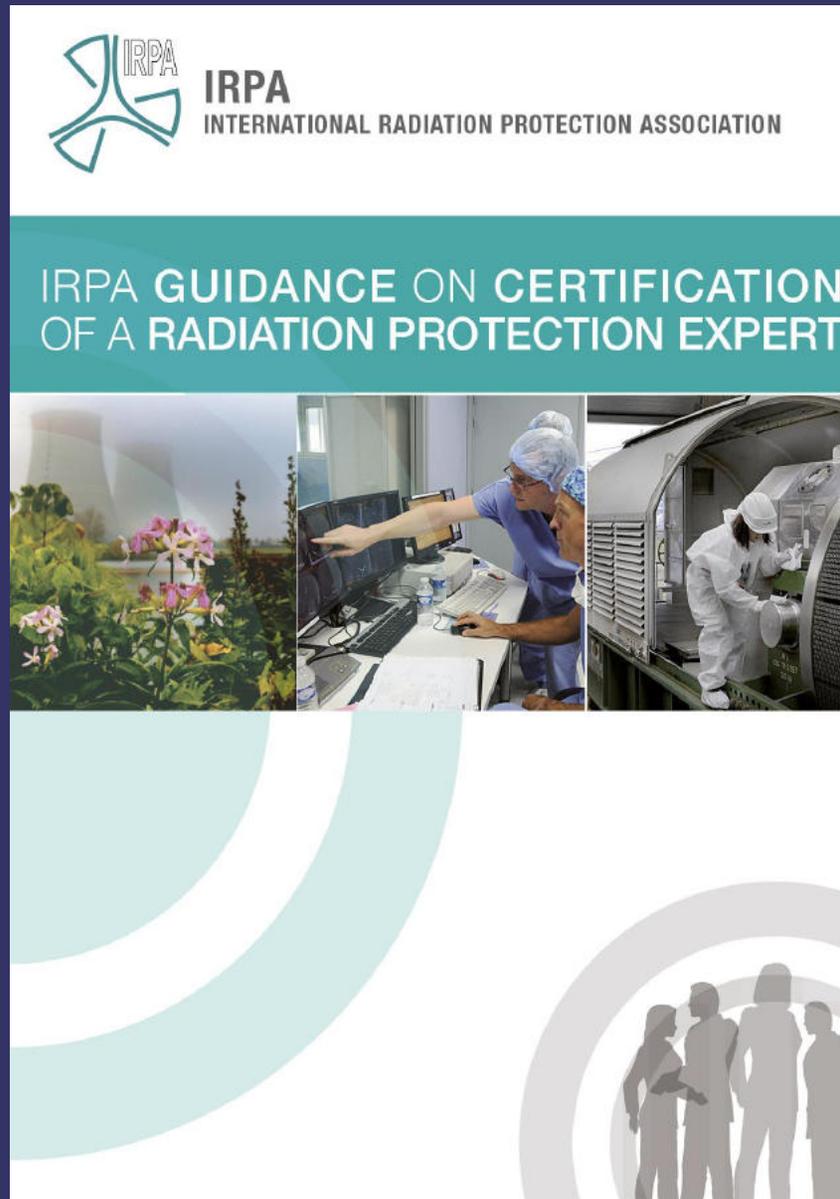




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 - **Model RPE Knowledge and Skills Syllabus**
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 - **Model Code of Practice**
 - **Accreditation Standards for Certification Boards**
 - **Representative Certification Schemes: USA, UK, Canada, Slovenia, Netherlands, Spain, Australasia, Italy, Germany**



Key Attributes of a Certification Scheme

- **Scheme Management and Governance**
- **Scope of the Role to be Certified**
- **Requirements for Certification as an RPE**
- **Assessment methods**
- **Renewals of Certifications**
- **Code of Conduct**
- **Appeals, Disciplinary Aspects, Withdrawal of Certification, Insurance Cover**
- **Accreditation**
- **Reciprocity**



Scheme Management and Governance

- **Scheme should be a specific legal entity.**
 - May be part of an Associate Society, or
 - A separate body such as a trust, corporate entity, or national authority
- **Clearly defined:**
 - Scope of authority
 - Mechanism for appointing the controlling Board
 - Application procedures
 - Assessment processes
 - Fee structure



Scope of the Role to be Certified

- **Radiation Protection Expert**
 - **Generic (comprehensive) RPE Certification**
 - **RPE Certification differentiated by field of practice or level of competence**
- **Certification for other Roles**
 - **Non-ionizing radiation protection expert**
 - **Shielding assessor**
 - **Criticality assessor**
 - **Internal dosimetry specialist**
 - **Instrumentation designer**



Certification Requirements

Assessment methods

Certification Requirements

- **Knowledge and Skills**
 - Establish minimum educational requirements
- **Competence**
 - To be assessed
- **Experience**
 - Establish minimum experience requirements

Assessment methods

- Knowledge and skills – exam, transcripts, coursework documentation
- Competence – written exam, references, portfolio, interview/oral exam
- Experience – work history



Certification Renewals

- **Scheme should have a system for renewal of certifications. Options include:**
 - **Demonstrating continued professional development for a period of years.**
 - **Re-assessment of competence – usually only if certificate expires**



Code of Conduct

- **The certification scheme should require that certified RPEs follow a code of conduct.**
- **The code of conduct should be consistent with the IRPA Code of Ethics.**



Appeals, Disciplinary Actions, etc.

- **The certification scheme should define mechanisms for:**
 - Appeals of decisions made by the scheme
 - Disciplinary proceedings against certified RPEs
- **The certification scheme should consider insurance coverage to protect against potential litigation**



Accreditation Reciprocity

- **Certifying schemes should consider having their program accredited by an appropriate accrediting organization, such as:**
 - **CESB** (Council of Engineering & Scientific Specialty Boards)
 - **NCCA** (National Commission for Certifying Agencies)
- **The certification scheme should consider whether to grant reciprocity to RPEs certified in another scheme or country**



Conclusion

- **There is an increasing need for certification schemes to meet both regulatory and professional expectations**
- **Experience has shown that there is no common, unique ‘best practice’ approach to such certification**
 - Existing schemes differ in many dimensions, for example in scope of application, knowledge, skills, competences and experience requirements and assessment methods
- **The objective of the IRPA Guidance Document is not to offer a single template of how to establish a certification scheme, but**
 - to explore and describe different options and approaches,
 - to identify their respective strengths and weaknesses, and
 - to outline the key considerations which must be taken into account when introducing and establishing a certification scheme