What Engineers Do about Continuing Professional Development

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Workshop on the challenge of enhancing the system of the engineerING card in the field of CPD
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Motivation: Engineers, companies and associations

* Engineers
  * Update knowledge
  * New career
  * Promotions
  * Changes in job
  * Personal development
  * New techniques and technologies
  * New challenges and projects
  * Certificates

Motivation: Engineers, companies and associations

* Companies
  * Competition
  * Productivity
  * Work environment stability - promotions
  * New techniques and technologies
  * New challenges and projects
  * New tasks and needs
  * Social responsibility

Motivation: Engineers, companies and associations

* Associations
  * Quality of members
  * Public image
  * Social responsibility
  * International cooperation
  * Certification
  * Services to members
  * Legal obligations
  * Attracting members

Recognition of competences (CEDEFOP)

* Formal recognition: the process of granting official status to skills and competences:
  * ✓ through the award of qualifications (certificates, diploma or titles);
  * ✓ through the grant of equivalence, credit units or waivers, validation of gained skills and/or competences;
* Social recognition:
  * ✓ the acknowledgement of the value of skills and/or competences by economic and social stakeholders.

Validation (CEDEFOP)

* The confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard.
* Validation typically leads to certification.

Credits

* Quantitative measure: points, credits, CEU, ...
* Results from assessment: process of appraising knowledge, skills and/or competences of an individual against predefined criteria, specifying learning methods and expectations. Assessment is typically followed by validation and certification.

APEC Engineer, Washington Accord

* Competency Standards Handbook, Canada
  * Formal Education and Training Activities
  * Informal Learning Activities
  * Conferences and Meetings
  * Presentations and Publications of Papers
  * Service Activities
  * Industry involvement (for academia)
  * Every three years, 240 hours, limits on each one

Companies

* Framework model for employers of engineering professionals
* CPD Accreditation Good-Practice Framework for EU Employers of Engineers and Technicians
* Engineers Ireland (EI)
* Ordem dos Engenheiros (PT)
* AGIR (RO)

Process for companies

* Contact
* Set goal
* Guidelines
* Gap analysis
* Implement
* Submit
* Audit
* Award
* Public relations

CPD Criteria

1. Internal CPD Committee
2. CPD Policy
3. Performance management and development system
4. Formal CPD – minimum 5 days average per annum recorded
5. Mentoring for professional development
6. Linkages with professional institutions/learned bodies
7. Knowledge sharing activities
8. Evaluation of CPD impact

Employers of more than 100 engineers and technicians will be asked to address:

9. Postgraduate educational activity
10. Competency frameworks / Talent management

Only larger organisations with complex operations and rapid rate of change will be audited also against these criteria:

11. Advanced knowledge management practices
12. Fostering of creativity and innovation

ASCE
(Continuing Education Unit and Professional Development Hour)

* Maintain professional license
* CEU – equal to 10 hours of participation in an accredited program designed for professionals with certificates or licenses to practice
* PDH – one contact hour of instruction, presentation or study
* Live Webinars, Face-to-Face Seminars, On-Demand Learning, On-Site Training, eLearning Webinars
* Mandatory for about half of the states, one year or two years, 30 PDH every two years (e.g. Missouri)

Ordem dos Engenheiros

* Voluntary registration of CPD
  * 5 days recommended per year
  * Table of accepted CPD similar to FEANI
* Individual accreditation of CPD courses
  * Regulation manual
  * Credit for personal registry
* System OE+AcCEdE
  * Accredits centers providing CPD
  * Quality assurance based on EFQM
  * Automatic acceptance

FEANI

* CPD Policy (40 units/year)
  1. In-company training courses or lectures
  2. Formal post graduate academic courses
  3. External training courses
  4. Service in professional engineering organization activities.
  5. Technical visits or assignments.
  6. Updating professional development based in individual study.
  7. Preparation and presentation of a technical paper in a conference.
  8. Preparation and technical publication in a journal or a book related with the profession.
  9. Teaching or instructing in CPD related activities with the profession

Links

* http://www.oecd.org/education/skills-beyond-school/recognitionofnon-formalandinformallearning-home.htm
* https://www.youthpass.eu/da/youthpass/for/youth-initiatives/learn/information/non-formal-learning/
* http://www.cedefop.europa.eu/en/publications-and-resources/publications/4054
* http://www.ecml.at/ECML-Programme/Programme20122015/Informalnonformallearning/tabid/731/language/en-GB/Default.aspx

Links (cont.)

* http://www.eaea.org/en/policy-advocacy/eaea-and-european-policies/validation-of-
* http://www.eucen.eu/OBSERVALnet
* http://www.engineersireland.ie/CPD-Training/CPD-Training/Online-CPD.aspx
* http://pjp-eu.coe.int/en/web/youth-partnership/non-formal-learning

THANK YOU!

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