

EUR-ACE Spread

WP10 - Provisions for accreditation for CPD to be included into the EUR-ACE framework standards

Draft Report

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Part A - Overview of Tasks

1. Summary

The work plan was devised taking into account the limited resources and time frame. The goal was to respond to the planned objectives of proposing a set of recommendations to include Continuing Professional Development training in the EUR-ACE framework standards. The strategy was based on the analysis of existing accreditation and of quality systems for CPD. From that analysis results choose the most appropriate system in accordance with the EUR-ACE requirements.

2. List of Activities

a) Consultation and research about existing practices and tools with stakeholders besides the partners mentioned in the proposal. The sources for information were:

- IACEE International Association for Continuing Engineering Education (www.iacee.org);
- ASEE American Society of Engineering Education (www.asee.org);
- APEC Asia Pacific Economic Community Engineer (www.apec.org);

- Washington Accord (www.washingtonaccord.org);
- IFEES International Federation of Engineering Societies (www.ifees.net);
- Engineering Council UK (www.engc.org.uk);
- Engineers Ireland (www.iei.ie);

This research and analysis was performed between February and April 2010. The research was based on direct contacts with organizations and documental search using the relevant sites.

b) A consultative group was created with elements with relevant experiences on CPD of engineers. This activity was accomplished in April 2010. The consultative group was composed by:

- SEFI WG CEE - Mervyn Jones, member, Imperial College London and past previous president of IACEE
- FEANI - Sari Taukojarvi, president of FEANI CPDC
- IACEE - Flemming Fink, previous president of IACEE, Aarhus University and member of SEFI WG CEE
- SEFI WG CEE - Markku Markula, Aalto University
- ASEE - Nelson Baker, Georgia Tech, US coordinator of DAETE2 (Development of Accreditation in Education and Training in Engineering) and President of IACEE

c) A proposal for accreditation of CDP for engineers based on the analysis of the case studies and of the research performed was drafted. The proposal was presented and discussed with the consultative group. These activities occurred between May and July 2010.

d) The proposal was submitted to the W10 members and to the Management Committee of EUR-ACE Spread. This task was performed during July 2010.

e) The proposal was revised and completed during the month of September 2010. The final proposal is presented in Part B.

Part B

Proposal of WP10

1. Objectives

The proposal for accreditation of Continuing Professional Development (CPD) of Engineers has the purpose of ensuring that EUR-ACE can ensure quality of training for Engineers.

2. Characteristics of CPD for Engineers

- Practice of engineering:
 - Technical work in field of specialization.
- Formal learning/training:
 - Attendance at and provision of seminars, conferences, workshops, university courses, in-house instruction, and development of programs
- Informal learning/training:
 - Self-directed learning, reading, discussions with peers, participation in meetings and committees.
 - Publications
 - Preparation and publication of papers, journals, or Codes or Standards.
- Participation:
 - Active participation in professional or technical societies.

As can be seen from the above characterization of CPD for engineers the types of training take different formats. These formats vary in time, content, teaching method and delivery mode. It is therefore necessary to address this variety. The certification of training programs is not possible due to the following reasons:

- They occur one or few times;
- The diversity is high;
- The programs are prepared and delivered on a timeframe not compatible with a previous appreciation;

- Learning objectives and outcomes are very different.

3. Quality assurance proposed

The system proposed results from the analysis of systems in place in several countries and regions where CPD is required or recommended, with the necessary adaptations to the national reality. To ensure minimum quality levels for the CPD actions, the possibilities are to accredit each training activity or to accredit the CPD training centres for engineers. The description of the methods for each option is:

a) Singular CPD activities accreditation - Quality assurance of the CPD is established through a verification process established in accordance with the quality manual adopted by the engineering regulator. This assessment of the quality of the proposed activity will be made by an independent entity or use an existing method like the QA manual of Liverpool John Moore University, UK (<http://www.ljmu.ac.uk/Quality/91139.htm>) or the QA&CPD manual, Australia (<http://www.racgp.org.au/QACPD>).

b) Accreditation of CPD centres - The accreditation of CPD centres in Engineering is based on the application of the EFQM (European Foundation for Quality Management) model. This is a process adapted by IACEE (International Association for Continuing Engineering Education). This worldwide association has tested and validated the method in various centres of CPD, in Europe and in the USA. This method a self-assessment is made by each centre, which is then validated by the independent accreditation body created by the national Engineering professional association. It is proposed that this independent body is linked to IACEE for advice and validation procedures. In this evaluation process, each centre will have a rating that will be in the range from 0 to 1000 points. According to the classification obtained and the threshold adopted, the centre will be accredited or will be refused. Details of this method can be found by consulting the site www.daete.up.pt.

As examples of application of this approach are the case of Tsinghua University Continuing Education center, China, has not only used, but translated the documents/processes and together with IACEE have held sessions for other CEE units in China (May 2010) and the National Academy of Engineering Lifelong Learning Imperative workshop (June 2009) (www.nae.edu/Activities/20676/21702/26338/26533.aspx),

The system proposed is the second based on the accreditation of the providers of CPD instead of accrediting the individual training programs. This accreditation of the providers of CPD is periodic and is based on self-evaluation complemented by an external auditing of the self-evaluation.

4. Actions Proposed

The actions that can be undertaken to define a framework compatible with EUR-ACE standards are:

- Create a committee within ENAEE in charge of implementing CPD accreditation;
- Consult with IACEE to evaluate the possibility of having technical and scientific support;
- Propose a model, with a business plan, to the Engineering associations of ENAEE;
- Test the model in three countries;
- Refine and adopt a model to accredit CPD centers for engineers by ENAEE;
- Explore the possibility of a new engineering accord (including Washington Accord, Sydney Accord, Dublin Accord, APEC Engineer) addressing CPD.