



University vs. industry OR University and industry

-

attracting companies to participate in Continuous Professional Development courses using ECVET elements

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EU funded projects realized at CEF WUT for over 20 years were (and still are) related to education of construction personnel, recognition of qualifications and facilitation of mobility.

Recognition
of industry needs

Curricula
development

Linguistic
support

Books
Manuals

Distance learning/
didactic materials

Logistic of
courses / ECTS

Co-operation with
industry

Training
organisation

International
recognition



Always – mixture of Partners:

- Universities (**science, methodology**)
- VET providers (**logistics**)
- Companies (**practical aspects / training beneficiaries**)
- Social Partners / non governmental bodies (**opinions, policy, training dissemination**)



CEF WUT ADVISORY BOARD

Representatives from 40+ large construction companies (Polish and international) and organizations related to construction (like Polish Chamber of Construction Employers).

Duties:

- advise on academic programs
- organization of practices for students (WBL)
- facilitation of employment for graduates
- organization of courses and postgraduate studies

NEW PROJECT - E-services at CEF WUT (industry)

Regional Operational Program

Task 3.5 Complex higher education

01.07.2017 – 30.10.2019



Unia Europejska
Europejski Fundusz
Rozwoju Regionalnego



**ECVET Peer Learning Seminar in Slovakia
Bratislava, 9th-10th October 2017**



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CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

Use this page to record and update your Continuing Professional Development (CPD) details.

You will be able to keep your own electronic CPD record, linked to your membership record.

To add a new record, click on Add CPD Record. Register details of your CPD using drop-down boxes where applicable, and then click Submit. Added records will automatically be added to your CPD Summary on this page.

You can view a summary of your CPD from a specific date. Select date and click View Summary:

23/09/2017

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For a more detailed view, select one of the following options:

23/09/2017	Total Hours
Less than 12 Months	16
12-24 Months	42
Greater than 24 Months	267

Summary Information < 12 Months

To view detailed information of the summary record, click on its date link

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CPD – important element of company life, related to Corporate Social Responsibility and company code of ethics.



In accordance with the recommendation of the Council of the European Union from 5th September 2012 all EU member states should ensure by 2015 the establishment of a national validation system, which will enable higher education institutions to recognise learning outcomes obtained in a non-formal education system.



The enforcement of the Polish Qualifications Framework for Higher Education in the academic year 2012/2013 by the Ministry of Science and Higher Education compelled universities to develop new evaluation systems by defining their learning outcomes (knowledge, skills, social competences) that students gain while studying at higher education institutions.

In addition, that has popularised in Poland non-formal and informal education, which also provides definite learning outcomes, in particular skills and social competences.



On 2nd May 2013 the Ministry of Science and Higher Education created a proposal of the recognition of learning outcomes. According to the proposals, learning outcomes should be recognised in the case of persons aged over 25, and a person applying for the recognition of learning outcomes is not allowed to gain in that way more than 50% of the pool of ECTS points in a given programme.

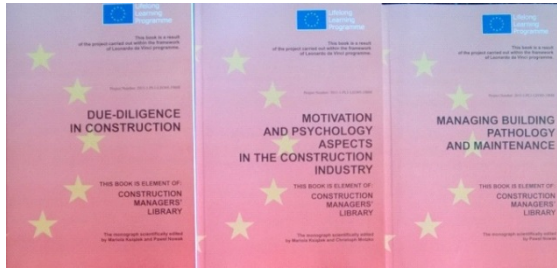
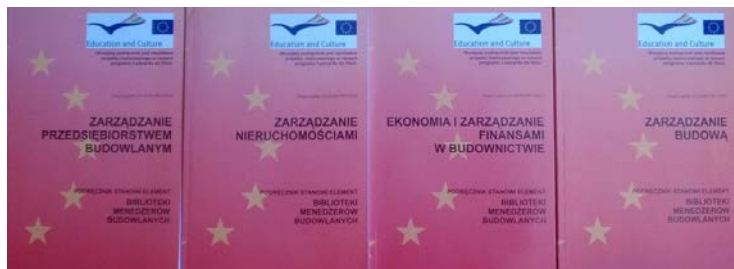
WUT created relevant procedure in 2015.
No examples yet (at CEF WUT)



Lifelong
Learning
Programme

Leonardo da Vinci PROJECT Common Learning Outcome

for Construction Managers in EU, part I, II, III (MANAG – 1999 – 2006, CLOEMC, 2007 – 2014)



ECVET Peer Learning Seminar in Slovakia
Bratislava, 9th-10th October 2017



COMMON LEARNING OUTCOMES FOR EUROPEAN MANAGERS IN CONSTRUCTION, PHASE IV CLOEMC IV

(Erasmus+, KA2), 2015 - November 2017

Promoter: PhD. Eng. Paweł Nowak, CEF WUT

Industrial Partner: AWBUD S.A., social Partners: PABM, AEEBC, co-operation: Corporation RADEX S.A.

Goal: Manuals for Construction Managers Library for managers' educational background recognition for EURBE title:

- *M20. REVITALISATION AND REFURBISHMENT IN CONSTRUCTION,*
- *M21. BUILDING INFORMATION MODELLING – BIM,*
- *M22. OPTIMISATION OF CONSTRUCTION PROCESSES,*
- *M23. DIVERSITY MANAGEMENT IN CONSTRUCTION,*
- *M24. STRUCTURAL MECHANICS FOR CONSTRUCTION MANAGERS,*
- *M25. CORPORATE SOCIAL RESPONSIBILITY IN CONSTRUCTION.*



Chosen authors from industry – case studies and problems solving





The manuals allow process of standardization in EU countries of certification process of engineers applying for the title of EurBE (European Building Expert).

(ABET -Accreditation Board for Engineering and Technology, USA; JABEE - Japan Accreditation Board for Engineering Education; SBS - Subject Benchmark Statements, UK; IEA - International Engineering Alliance; EUR-ACE - EURopean ACcredited Engineer project; CDIO - Conceive-Design-Implement-Operate initiative).

The EurBE title was developed by AEEBC (The Association of European Building Surveyors & Construction Experts, with headquarter in Brussels, Belgium). AEEBC associates construction related associations from numerous European countries.

(Belgium, Denmark, Finland, France, Germany, Ireland, Italy, The Netherlands, Poland, Spain, Sweden, United Kingdom, <http://aeebc.org/>).





CIVIL ENGINEERING FACULTY
WARSAW UNIVERSITY OF TECHNOLOGY



Leonardo da Vinci PROJECT

MBA in Construction - Postgraduate European Common Studies in Construction Project Management (MBAIC, 2013 – 2015)



Lifelong
Learning
Programme

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Leonardo da Vinci PROJECT

MBA in Construction - Postgraduate European Common Studies in Construction Project Management

Lifelong
Learning Programme
(MBAIC, 2013 – 2015)

ECTS negotiated and agreed between
Universities (ES, LT, PL, PT)

Didactic materials in PL, ENG, PT, ES, LT
Royal Institution of Chartered Surveyors –
(RICS) Accreditation



RICS presents this certificate to
**Warsaw University of
Technology**
in recognition that
**Management in
Construction**

has met the academic requirements
and has been awarded
RICS accreditation for the period
2017 to 2021
Certificate date



J.B.
Accreditation Officer Europe
Education Standards



MentorCert – Business MENTOR training and CERTification (2017-2019) ERASMUS+ 2017-1-HU01-KA202-035953

Many self-made business mentors are working in the field without certified qualification. The new trainings to be developed by the VET partners of the project and the certification procedure to be elaborated by the partnership and commercialised by accredited certification bodies will ensure the strengthening of key VET competences of business mentors and, through that, the enhancement of European recognition of the profession.



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Leonardo da Vinci PROJECT

**ARCW - Health and safety procedures
for curtain walls with the use of
Augmented Reality Technology
(2013 – 2015)**

Erasmus+ PROJECT

**ARFAT - The Augmented Reality
Formwork Assembly Training
(2016 – 2018)**

 Lifelong
Learning
Programme

 Erasmus+

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Partnership:
CEF WUT
PABM
University of Valencia
Darmstadt University
Fundacion Laboral de la Construcion
EL-jako Sp. z o.o.
PERI S.A.



Benennung	Bild	Bedeutung	Benennung	Bild	Bedeutung
• Achtung		• Hinweis auf nachfolgende Handzeichen	• Langsam		• Verzögern und langsames Fortsetzen eines Bewegungsablaufes
• Halt		• Beenden eines Bewegungsablaufes	• Ortsbestimmung		
• Halt - Gefahr		• Schnellstmögliches Beenden eines Bewegungsablaufes	• Angabe des Abstandes zum Haltepunkt		





Leonardo da Vinci PROJECT (SERIO, 2014-2016)

Health and Safety WBL training with use of multimedia techniques

Promoter:

Polish Association of Construction Employers (PL)

Partners:

CEF WUT (PL)

Chartered Institute of Building (CIOB, UK)

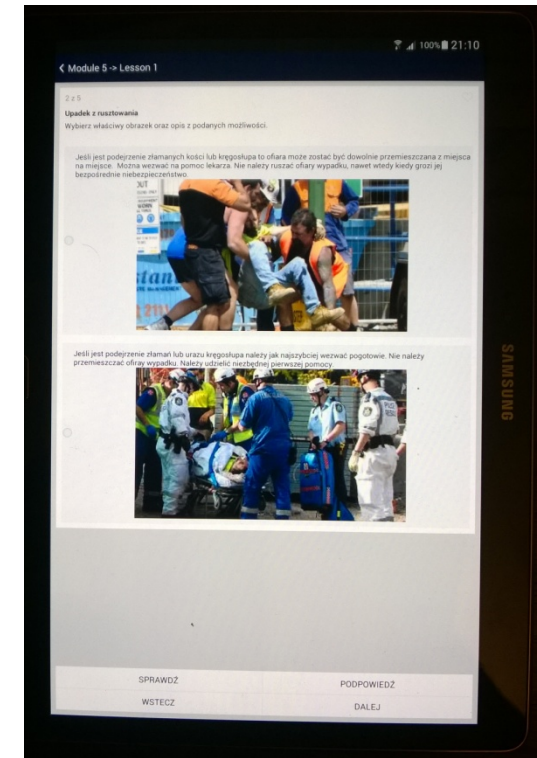
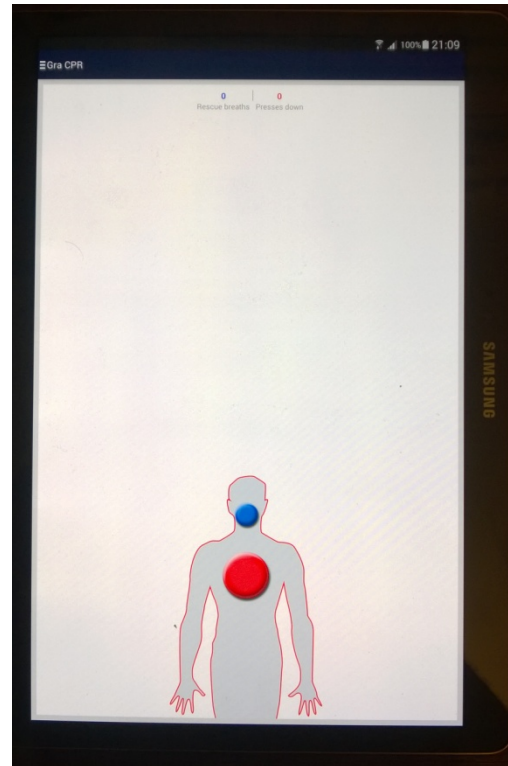
Erbil Project (TR)

Maison de la Promotion Sociale (FR)

Centro Italiano per L'apprendimento Permanente (IT)



Tablet allows training on site.





Summary:

- co-operation of Universities and industry is necessary and can be useful for both parties;
- EU co-funded projects are the proper tool for development of modern formal and informal education: WBL, AR, distance learning;
- necessity for raising awareness of informal CPD training among companies.



~~University vs. industry~~
OR

University and industry !

-

Co-operation – research /education
CPD facilitation
WBL training