

Engineering Graduates Attributes: EQF, Dublin Descriptors, EUR-ACE Standards

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Graduate Attributes

- **Used to describe what a graduate has acquired in a degree programme.**
- **A graduate from an accredited engineering degree programme should have the attributes necessary to qualify as an engineer.**
- **Are the requirements for an accredited degree programme consistent with:**
 - **EQF: European Qualifications Framework for Life-long Learning;**
 - **DD: Dublin Descriptors;**
 - **EAFS: EUR-ACE Framework Standards?**

Deciding Consistency

- **Four aspects to quality assurance of degree programmes:**
 - content of programme;
 - level of programme;
 - support and resources for programme;
 - decision making organisation.
- **Support and decision making are organisational.**
- **Content and Level are educational and need to be specified for engineering accreditation.**

EUR-ACE Framework Standards (EAFS)

- **EUR-ACE operated by European Network for Accreditation of Engineering Education (ENAAEE).**
- **EAFS developed in 2005, revised (slightly) 2008.**
- **EAFS evaluates standards of accreditation agencies (meta-accreditation).**
- **Specifies Programme Outcomes for authorising accreditation agencies to award EUR-ACE Label.**
- **Programme Outcomes for 1st and 2nd cycle programmes that provide education for qualifying as an engineer.**



This is to certify that the _____ programme

Official name of the education programme in original language and (in English)

provided by

Name of Educational Institution, and Faculty or Department, (if applicable)

accredited by

(Accrediting Agency)

on (dd month yyyy) until (dd month yyyy)

satisfies the outcomes of **First Cycle programmes** specified in the **EUR-ACE Framework Standards for the Accreditation of Engineering Programmes**, and therefore for the above period of accreditation is designated as a **FIRST CYCLE EUROPEAN ACCREDITED ENGINEERING programme**.



For the European Network for Accreditation of Engineering Education (ENAE)
The President
Prof. Ing. Giuliano Augusti, Sc.D.

Brussels, xx Month 200x

For xxx

The xxx
xxx
x

xxx, xx Month 200x

EAFS (Continued)

- **At present seven agencies authorised; ASIIN (Germany), CTI (France), EC (UK), EI (Ireland), MUDEK (Turkey), OE (Portugal), RAEE (Russia).**
- **Over 700 programmes have EUR-ACE label.**
- **Applications from agencies in Switzerland, Lithuania, Romania, Poland.**
- **EAFS has 6 types of Programme Outcomes:**
 - **Knowledge and Understanding;**
 - **Engineering Analysis;**
 - **Engineering Design;**
 - **Investigations;**
 - **Engineering practice;**
 - **Transferable skills.**

Dublin Descriptors (DD)

- **Developed in 2004 within Bologna Process.**
- **Requirements of programmes in EHEA for Short, First, Second and Third Cycles.**
- **Detailed comparison shows Content of EAFS First and Second Cycle is consistent with DD.**

DD (Continued)

- **DD specifies Level in 1st Cycle as:**
 - ‘some ... knowledge of the forefront’.
- **In EAFS, 1st Cycle Level is specified by:**
 - ‘coherent knowledge ... some at the forefront’.
- **In DD, 2nd Cycle Level ‘extends’ 1st Cycle level.**
- **In EAFS, 2nd Cycle Level is**
 - ‘critical awareness of forefront...’.
- **Statements of Level are consistent in DD and EAFS but ‘forefront’ has to be interpreted.**

European Qualifications Framework (EQF)

- **Published in 2008 by European Commission as a framework for life-long learning.**
- **Enables comparison of qualifications in different countries.**
- **Defines 8 levels of knowledge, skills and competences.**
- **Levels for Higher Education are:**
 - **Level 6 equivalent to First Cycle (Bachelors);**
 - **Level 7 equivalent to Second Cycle (Masters);**
 - **Level 8 equivalent to Third Cycle (Doctorate).**

Conclusions

- **EUR-ACE Framework is consistent with Dublin Descriptors which in turn is consistent with European Qualifications Framework.**
- **Is Russian FES standard consistent with EUR-ACE Framework?**
- **And in addition ENAEE and IEA are:**
 - **working on developing a joint glossary;**
 - **looking at the equivalence of standards in EAFS and Washington and Sydney Accords.**

- **Thank you.**
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