

## HERE National Seminar

**"ECTS for programme design, delivery and monitoring"**

***Implementing ECTS: How to prepare measurable  
and feasible learning outcomes which meet  
international standards***

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EUROPEAN COMMUNITY COURSE CREDIT TRANSFER SYSTEM  
EUROPEAN CREDIT TRANSFER SYSTEM  
EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM

**ECTS**



# Content

- 1. Context : Learning, Teaching and Assessment**
- 2. What is a learning outcome?**
- 3. Reference Frameworks**
- 4. CALOHEE Model: Merger of European Frameworks**
- 5. Degree Programme Learning Outcomes**
- 6. Module / Unit Learning outcomes**
- 7. Challenges for HEIs**
- 8. Role of national governments**
- 9. Conclusions**



# 1. Context : Learning, Teaching and Assessment

## Paradigm of learning

*Learning Paradigm is replacing the Instruction Paradigm:*

- *output based*
- *student-centered*
- *competence based*

*Needs to be evidenced: preferably in an international context: what is/makes learning relevant and of high quality.*

*What is required?*

*COVID-19 doubles the challenge: Modernisation in an online format*



## Context: Evidencing the level of learning

*Defining the intended level of learning requires international agreement. Need for sophisticated reference frameworks of which the (level) descriptors have been established by (inter)national group of academic experts*

*We can distinguish different types:*

- Overarching reference frameworks
- Academic domain reference frameworks
- Subject-area / disciplinary reference frameworks
- Subject-area based assessment reference frameworks

*These frameworks offer the standards of learning, but also require specific approaches regarding learning, teaching and assessment*



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## 2. What is a Learning outcome?

**LEVEL** of competence is expressed in terms of Learning outcomes (required or expected achievement):

- Statements of what a learner is expected to know, understand and **be able to demonstrate** after completion of learning.
- They can refer to a single course unit or module or else to a period of studies, for example, a first, a second or third cycle programme.
- Learning outcomes specify the requirements for award of credit.

*[learning outcomes are formulated by academic staff]*



# Learning outcomes

Distinction made between:

- *Programme learning outcomes*
- *Module / Unit learning outcomes*

Do not even the wheel: Learn from others!



### 3. Reference Frameworks

*Programme learning outcomes are based on / should be fully aligned with:*

- ***Overarching Qualifications (Reference) Frameworks***
- ***National Qualifications (Reference) Frameworks***

## 4. CALOHEE Model: Merger of European Frameworks

Measuring and Comparing Achievements of Learning Outcomes in Higher education in Europe (CALOHEE):

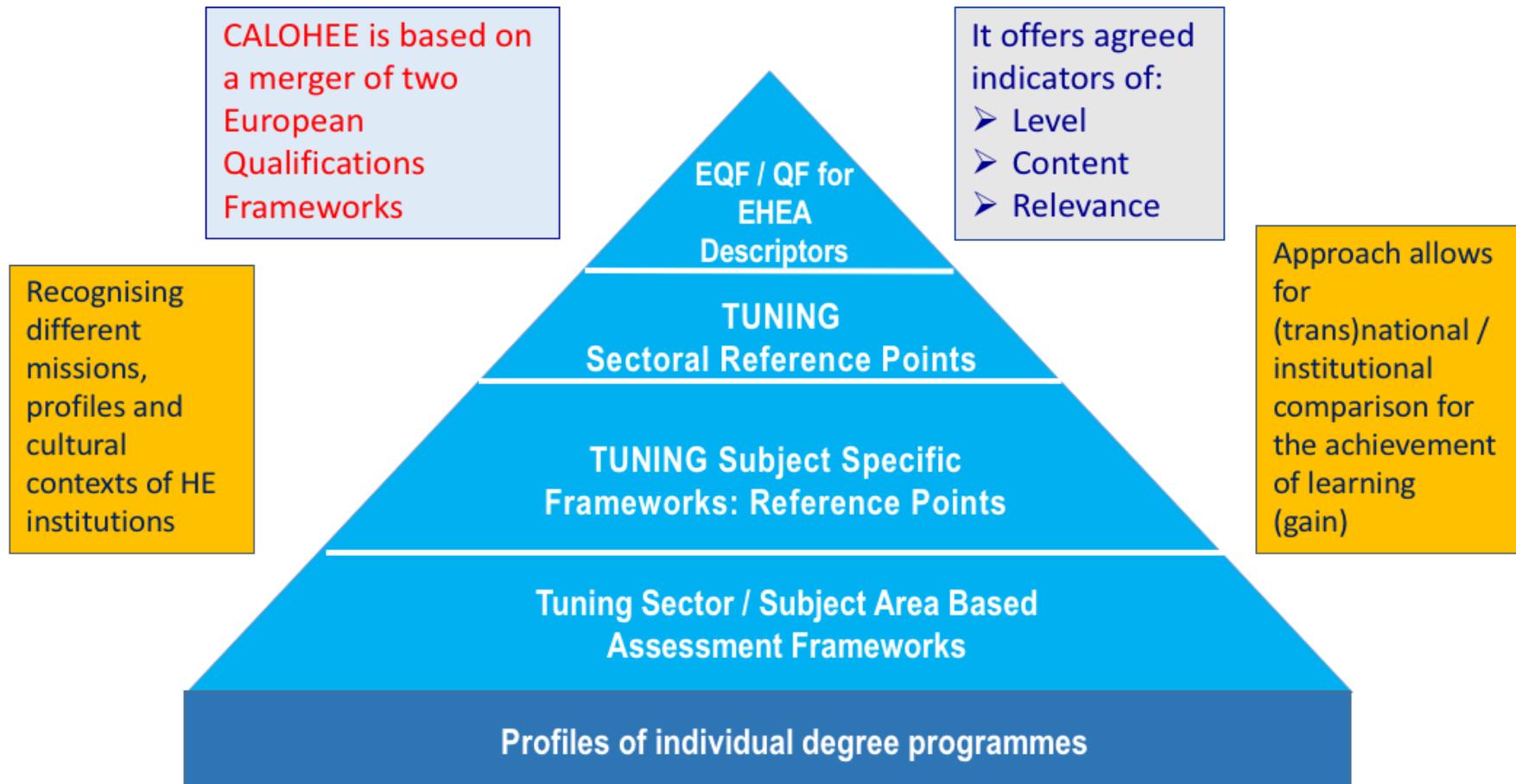
**Merger of the two European Overarching Frameworks**

***Two European Frameworks = Two different perspectives / philosophies***

- ***European Qualifications Framework for the European Higher Education Area:*** focus on the learning process itself by making a distinction between 5/6 dimensions
- ***European Qualifications Framework for Lifelong Learning:*** focus on the outcomes of the learning process (preparation for societal role)

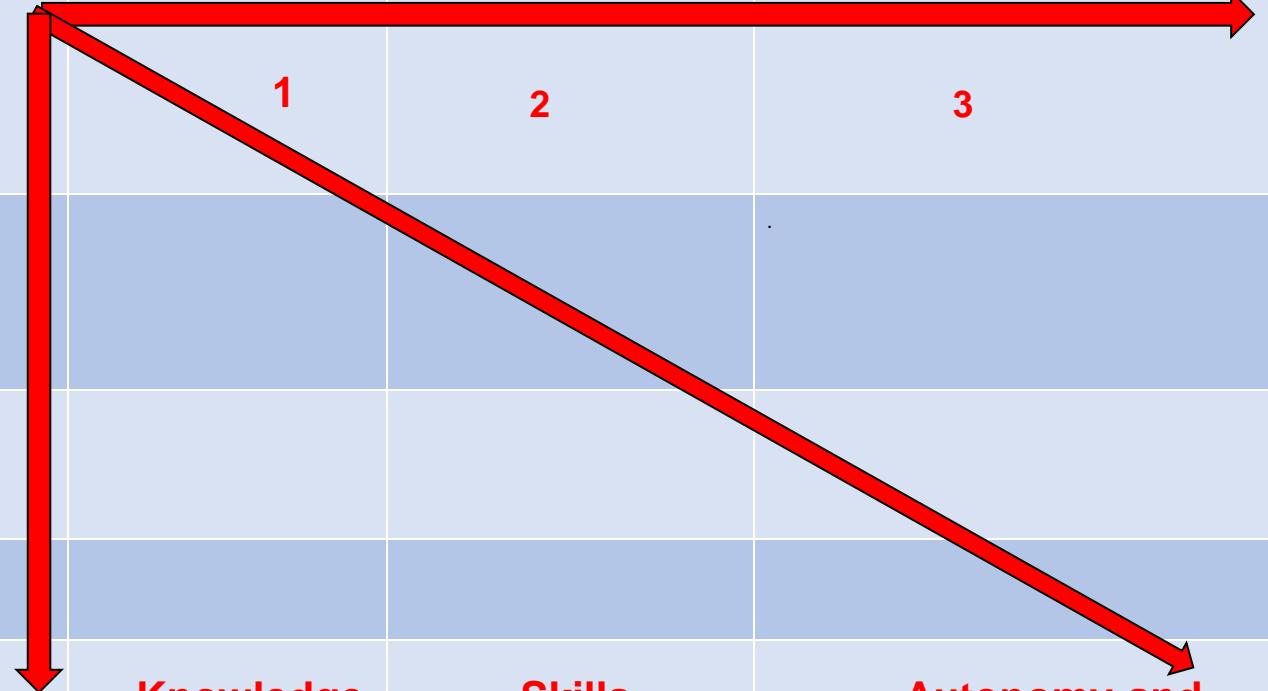
*Full integration results in very powerful instrument for defining high quality and relevance of learning*

## CALOHEE Philosophy: Alignment of Frameworks



**TEMPLATE FIRST CYCLE – BACHELOR – LEVEL 6**

TUNING Qualifications Reference Framework (Meta-Profile) General Descriptors of a Bachelor Programme in the Subject Area of ..... (LEVEL 6)

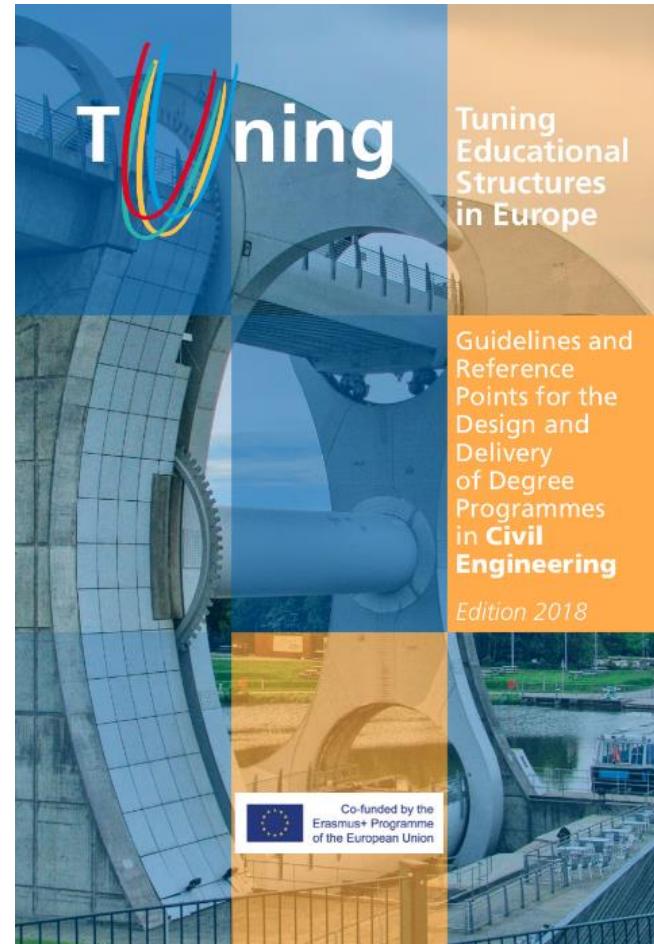
QF EHEA 1 <sup>st</sup> cycle descriptors	SQF domain dimensions Level 6 (BACHELOR)	EQF descriptor Knowledge Level 6 <i>Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles</i>	EQF descriptor Skills Level 6 <i>Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study</i>	EQF descriptor Autonomy and Responsibility (Wider Competences) Level 6 - Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts - Take responsibility for managing professional development of individuals and groups
Special feature degree programme	<b>Three progressive levels of learning domains</b>			
I. Have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study	<b>Dimensions: constructive key elements</b> 	1	2	3
II. Can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study				
III. Have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues				
IV. Can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences				
V. Have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy		Knowledge	Skills	Autonomy and Responsibility

# Guidelines and Reference Points for the Design and Delivery of Degree Programmes in ..... Civil Engineering

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## Roles and Tasks

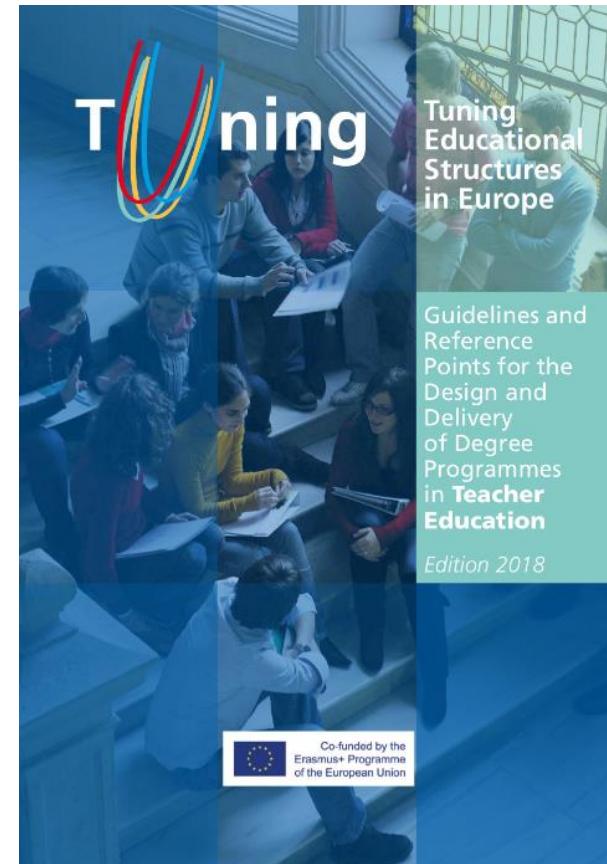


# Guidelines and Reference Points for the Design and Delivery of Degree Programmes in ..... Teacher Education

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## Roles and Tasks



# Bachelor -Teacher Education

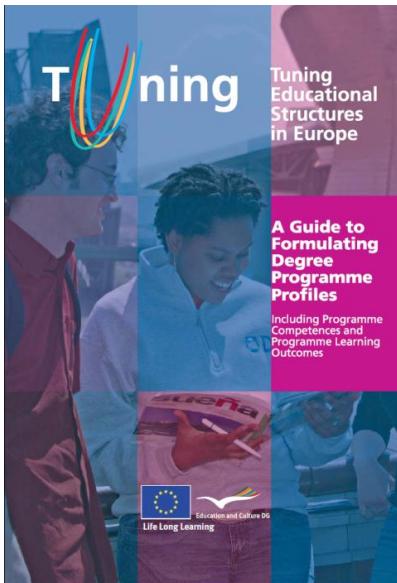
QF EHEA 1 <sup>st</sup> cycle descriptors	SQF domain dimensions Level 6 (BACHELOR)	EQF descriptor Knowledge Level 6 Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	EQF descriptor Skills Level 6 Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	EQF descriptor Autonomy and Responsibility (Wider Competences) Level 6 - Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts - Take responsibility for managing professional development of individuals and groups
I. Have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study	<b>1. Knowledge management and creation</b>	Advanced knowledge of major conceptual elements required of a teacher as knowledge manager and creator	Ability to develop different types of thinking and apply these to different situations determined by curricula, pedagogical and policy needs	Capacity to envisage consequences of position taking and commitment to act with intellectual consistency
II. Can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study	<b>2. Design and management of processes of learning, teaching and assessment</b>	Knowledge of classroom management and syllabus design and enhancement: teaching, learning and assessment processes	Ability to evaluate and select appropriate techniques and strategies of classroom management and syllabus enhancement: teaching, learning and assessment processes	Capacity and commitment to ensure that the different elements of the course contribute to the development of desired learner profile
III. Have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues	<b>3. Learner empowerment, potential and creativity</b>	Advanced knowledge of theories, strategies and tools that can support learner empowerment, and development of learner fullest potential and creativity	Ability to apply theories, strategies and tools that can foster the development of the fullest potential and creativity of each learner	Capacity and commitment to contribute to maintenance of contexts of engagement with learner holistic growth and development
	<b>4. Values and social leadership</b>	Advanced knowledge of different value systems and of how to identify and promote those which can foster the fulfilment of the teacher's professional mission	Ability to identify and implement approaches and actions required to address the social needs; ability to analyse consequences of different value choices and to manage diversity	Capacity and commitment to build a sense of social responsibility in the choices made at personal, professional and contextual levels and act on needs and potentialities identified
IV. Can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences	<b>5. Communication</b>	Advanced understanding of different critical elements, methods and tools for communicating at the interpersonal level, as well as in groups and society as a whole	Ability to identify and apply resources for improving communication at different levels, as well as stay up-to-date with ICT	Capacity and commitment to foster transparency and responsibility in interpersonal interactions, in teams and groups, as well as in social media
V. Have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy	<b>6. Development as professionals and life-long learners</b>	Advanced knowledge of sources, tools, mechanisms and main trends of personal and professional updating	Ability to critically examine applied educational research and improve own practice following evidence based approaches	Capacity and commitment to act as a critically reflective member of an international teaching community that values evidence-based practice

## Template to define Programme Learning Outcomes

### Tuning CALOHEE Model for the Bachelor / First Cycle

QF EHEA 1 <sup>st</sup> cycle descriptors	SQF domain dimensions Level 6 (BACHELOR)	EQF descriptor Knowledge Level 6 <i>Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles</i>	EQF descriptor Skills Level 6 <i>Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study</i>	EQF descriptor Autonomy and Responsibility (Wider Competences) Level 6 <ul style="list-style-type: none"><li>- Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts</li><li>- Take responsibility for managing professional development of individuals and groups</li></ul>
Special feature degree programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II. Can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. Have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV. Can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V. Have developed those learning skills that are necessary for them to continue to	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 5. Degree Programme Learning Outcomes



ENIC-NARICS –  
TUNING co-  
production

Characteristics of good verifiable, comprehensive and observable PLOs. They should be:

- **Specific** (giving sufficient detail, written in clear language)
- **Objective** (formulated in a neutral way, avoiding opinions and ambiguities)
- **Achievable** (feasible in the given timeframe and with the resources available)
- **Useful** (they should be perceived as relevant for HE studies and civil society)
- **Relevant** (they should contribute to the aim of the qualification involved)
- **Standard-setting** (indicate the standard to be achieved)

## A Learning Outcome contains 5 elements to be 'measurable' (the level of competence that has been achieved):

1. An active verb form (Bloom a.o.)
2. An indication of the type of LO: knowledge, cognitive processes, skills, autonomy / responsibility
3. The topic of the LO: this can be specific or general and refers to the subject matter, field of knowledge or a particular skill
4. An indication of the standard or the level that is intended / achieved by the LO
5. The scope and/or context of the LO



## 6. Module / Unit Learning outcomes

***Programme Learning Outcomes are the foundation for the learning unit outcomes***

***- Identify learning and progression routings***

Example

Course unit / learning outcome	Competence									
	A	B	C	D	E	F	G	H	I	J
Unit 1	x		x					x		
Unit 2		x		x			x			x
Unit 3		x			x		x			
Unit 4	x		x						x	

X = This Competence is developed and assessed and is mentioned in the Learning Outcome of this unit.

# Writing good Learning Outcomes

## The practice:

[The student has] demonstrated capability to address a research problem, retrieving the appropriate sources and bibliography, and giving critical, narrative form to his/her findings in a text of around 60 pages.

b) to address	retrieving the appropriate sources and bibliography <i>(skill)</i>	a research problem	critical, narrative form	findings in a text of around 60 pages.
<i>verb</i>	<i>type</i>	<i>subject</i>	<i>standard</i>	<i>scope/context</i>

# Writing good Learning Outcomes

## Examples of levels in the subject area History

BA

- that he/she is able to formulate texts and briefs based on up-to-date historical information such as can be of use in e.g. journalism, for local bodies and museums.
- ability to speak and write simple texts and presentations as well as the more complex and scholarly text required in the final year, using the appropriate communication registers

MA

- ability to formulate and refine a significant research problem, gathered the necessary information to address it and formulated a conclusion which can be defended in a scholarly context.
- awareness of and commitment to scientific standards in accuracy and breadth of the documentation located, utilised and cited in assignments and in the final dissertation.

PhD

- ability to elaborate and present convincingly to a group of qualified researchers a relevant and well-argued research plan for dealing with a significant problem.
- capability to carry out an extended original research product based on critical examination of sources and provided with the necessary scientific apparatus in terms of notes, bibliographies and publication of relevant documents.



## 7. Challenges for HEIs

- HEIs often still stick to ‘contact hours’ due to calculation models of staff allocation to course units
- Many HEIs have difficulties to calculate student workload correctly
- Many HEIs have great difficulties to define good quality and measurable learning outcomes for both programmes and units.
- Many HEIs still not use ECTS as a planning instrument
- In most cases TLA is not sufficiently aligned; TLA methods are outdated

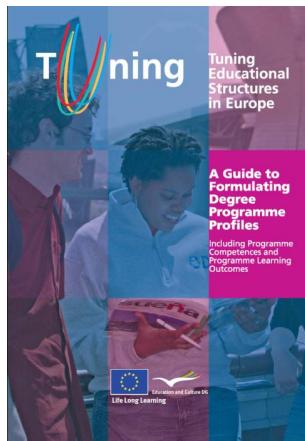
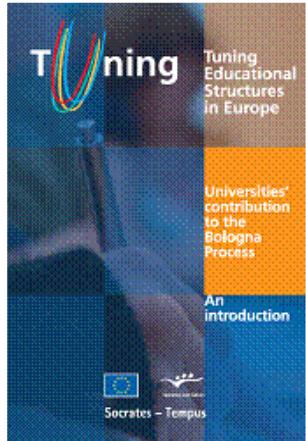


## 8. Role of national governments

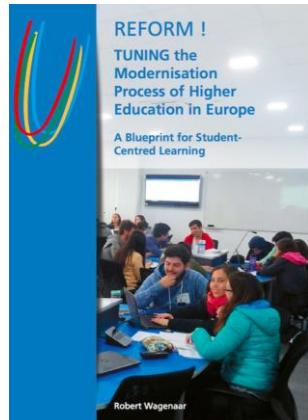
- ***Give ECTS a legal basis as the national credit system (if not done so already)***
- ***Support HEIs in using the system correctly (as agreed in the framework of the Bologna Process)***
  - Apply student workload approach as agreed (ECTS Users' Guide 2015 / Tuning models: <http://tuningacademy.org>)
  - Apply / introduce the use of the learning outcomes approach according to the paradigm of student-centred / active learning
  - Facilitate staff development and training: support initiatives to train the trainers + promote staff training and development in HEIs

**It is in the national interest to offer state of the art higher education! For both economical and societal reasons!**

# Some supporting materials to make ECTS a reality



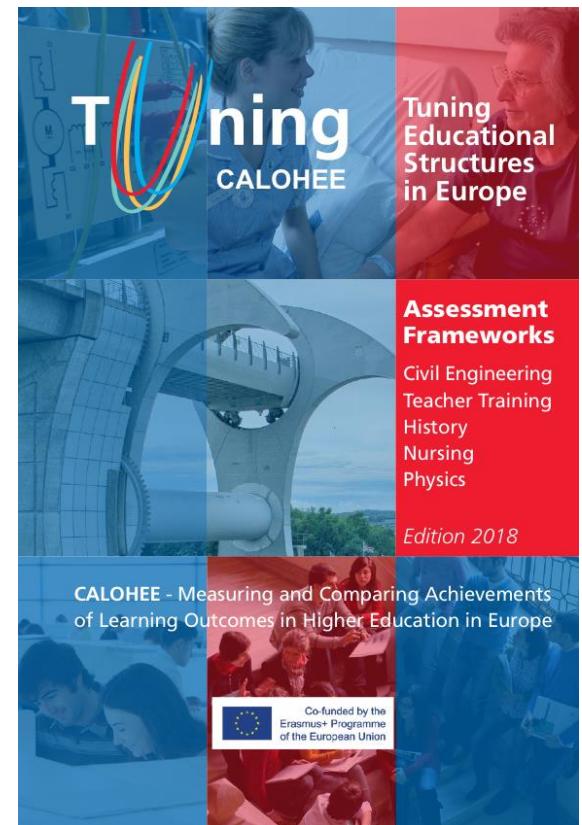
Prepared for and by academics and recognition experts



Offers background story of 20 years Bologna and 30 years of ECTS from the perspective of the HEI world

For download  
ResearchGate

Besides the ECTS Users' Guide 2015



<https://www.calohEE.eu>



## 9. Conclusions

- *Embrace the notion of student-centred learning: make students knowledgeable and skilled*
- *Base your programmes on the descriptors of Qualifications Reference Frameworks to assure they meet international standards*
- *Use the Tuning – CALOHEE models to guarantee this alignment*
- *Start with preparing Programme Learning Outcomes (not unit ones)*
- *Assure that the learning dimensions are all covered in your programme; distinguish levels of achievement of learning*
- *Distract you unit learning outcomes from the programme ones*
- *Formulate the LOs in such away that they are measurable (can be learned, taught and assessed! Meet the conditions as showed!*
- *Use the ECTS Users' Guide and the Tuning CALOHEE materials to assure full alignment*
- *Train academic staff to apply the paradigm of student-centred learning successfully*



감사합니다 Natick

Danke Ευχαριστίες Dalu

Thank You Köszönöm

Tack

Спасибо Dank Gracias

谢谢 Merci Seé ありがとう

Grazie Obrigado