



# Structures for the internationalization and flexibilization of curricula

Zagreb 16.11.2023

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# Prologe: Transparency instruments, Bologna Process

- Qualification Frameworks and Descriptors
  - European Qualification Framework (EQF)
  - National Qualification Framework (NQF)
    - EQF Descriptors
    - Dublin Descriptoren (DD)

– ...

- European Credit Transfer & Accumulation System, [ECTS Users Guide 2015](#)

– Credits

– Learning Outcomes

– Quality Assurance, [ESG 2015 \(enqa.eu\)](#)

– Diploma Supplement (DS), [Filling Aid Diploma Supplement \(BMBWF\)](#)

– ...

➤ ...



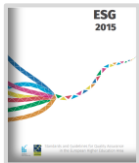
# Prologe: Teaching & Learning in Austria

In Austria, more than **390,000 regular students** take advantage of the diverse range of study degree programs in one of the national **higher education sectors**.



23	public universities (Öffentliche Universitäten) <i>...like Universität Innsbruck</i> <i>6 universities of arts, 3 medical universities, 3 technical universities</i>
21	universities of applied sciences (Fachhochschulen)
14	university colleges of teacher education (Pädagogische Hochschulen)
17	private universities (Private Universitäten)
2	private higher education institutions (Private Hochschulen)

- **all national higher education sectors are subject to audit processes**
- **only public universities (Öffentliche Universitäten) do not need to carry out program accreditation**
- **ESG** - Standards and Guidelines for Quality Assurance in the European Higher Education Area must be applied as well.



# Prologe: Teaching & Learning in Austria

## All-Austrian University Development Plan (7 System Goals)

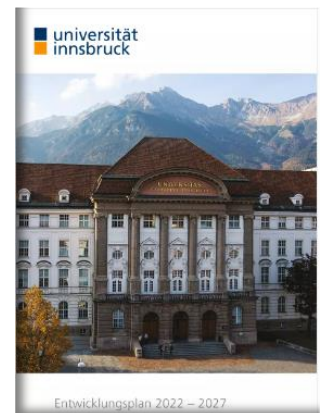
- further development and strengthening of the university system
- strengthening university research
- improving the quality & efficiency of university teaching
- promotion of young scientists & artists
- expansion of knowledge and innovation transfer as well as locational advantages
- increasing internationalization & mobility
- social responsibility of universities - service to society: gender equality, diversity and social inclusion, responsible science, Agenda 2030 and implementation of the SDGs, digital transformation



# Prologe: Teaching & Learning in Austria

## All-Austrian University Development Plan (Implementation Goals - Exzerpt)

- **learning outcome based** and **research led/driven** teaching & learning
- **future proof curricula models** (flexibilisation, individualization, interdisziplinarität,...)
- **strengthening future topics/skills** such as diversity, inclusion, sustainability as cross-cutting issues, enabling intellectual independence (of students) and methodical ability to act
- supporting the acquisition of **international perspectives** by(...) and students
- implementation Recommendations of the European Council on a strategic approach to **micro-credentials**
- **further development of European Universities Alliances** with Austrian participation
- ...



# Overview

## Part I: Frameworks

- **EQF/NQF**
  - **Descriptors**
- Curriculum
  - Programme profile
  - Windows of Opportunity
  - Micro-credentials

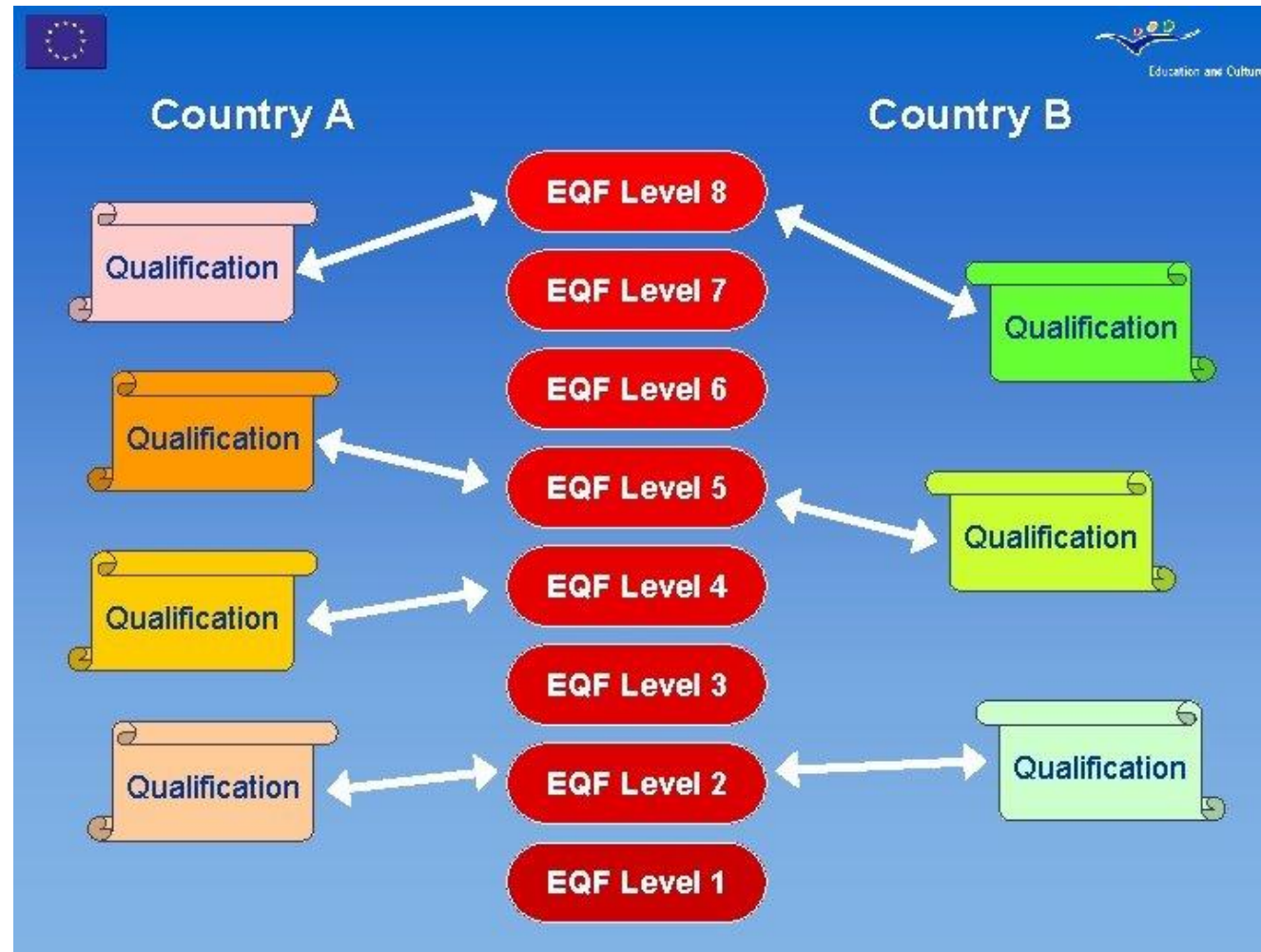
## Part II: Learning Outcomes

- Professional learning outcomes
- General academic (...) learning outcomes

## *Part III: Recognition*

- *Substantial difference*

# Qualification frameworks – National (NQF) – European (EQF)



<https://slidetodoc.com/towards-a-european-qualifications-framework-for-lifelong-learning/>

# EQF Descriptors – Dublin Descriptors (DD), Level 6

Knowledge (EQF)	Skills (EQF)	Competences (EQF)
<p><b>Advanced knowledge</b> of a field of work or study, involving a <b>critical understanding of theories and principles</b></p>	<p><b>Advanced skills</b>, demonstrating mastery and <b>innovation</b>, required to <b>solve complex and unpredictable problems</b> in a specialised field of work or study</p>	<p><b>Manage</b> complex technical or professional activities or projects, taking <b>responsibility for decision-making</b> in unpredictable work or study contexts; take <b>responsibility for managing professional development of individuals</b> and groups</p>
Knowledge (DD)	Skills (DD)	Competences (DD)
<p>... <b>knowledge (...)</b> that <b>builds upon</b> their general secondary education                      ... supported by advanced textbooks (...) <b>informed by knowledge of the forefront</b> of their field of study</p>	<p>... can <b>apply their knowledge</b> and understanding in a manner that indicates a <b>professional approach</b></p>	<p>... typically demonstrated through <b>devising</b> and <b>sustaining arguments</b> and <b>solving problems</b> within their field of study;                      ...relevante <b>soziale, wissenschaftliche</b> oder <b>ethische</b> Belange <b>berücksichtigen</b>                      ... <b>reflection</b> on relevant <b>social, scientific</b> or <b>ethical</b> issues;                      ... <b>communicate</b> information, ideas, problems and solutions to both <b>specialist</b> and <b>non-specialist audiences</b>;                      ... learning skills (...)to <b>continue</b> to undertake further <b>study</b> with a <b>high degree of autonomy</b></p>



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# Curricula – definition

“From an institutional perspective, designing a programme means planning a **curriculum** and its components in credits, **indicating learning outcomes** and **associated workload, learning activities** and **teaching methods** and **assessment procedures/criteria.**“

[ECTS Users' Guide 2015](#)

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## Programme profile – definition

“The profile presents the **distinctive features** of the programme (Lockhoff et al., 2010). It indicates (...) the **main focus**, the **key learning outcomes expected on completion**, the learning environment and the main learning, teaching and assessment activities. An effective programme profile will make it clear to students and stakeholders what **generic and subject specific competences** will be developed and the **employability potential of the programme.**”

[ECTS Users' Guide 2015](#)

# Programme profile - conclusions

- Modular learning outcomes are "building blocks" of the programme profile
- The programme profile is more than the sum of its parts (modules)
- Qualification profile and learning outcomes are decisive for "recognition" and "admission"



Observe "signal words" from the NQF and use them in a level-appropriate manner for the respective profile



*In other words: Do not use signal words from the NQF that are "connoted" with other (lower) NQF levels for the core qualifications (programme profile) of a study programme!*

# Programme profile – (further) conclusions



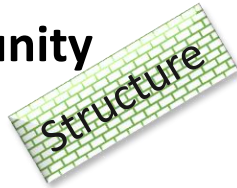
## ➤ Qualifications according to the profile of the Higher Education Institution

- Digital skills
- Entrepreneurial skills
- Social engagement
- Green skills ...
- Ability to innovate
- Intercultural skills
- Communication competence
- Critical thinking
- Problem solving competence
- Research / information competence
- Ability to work in a (intercultural) team
- Taking responsibility/perspektives
- ...

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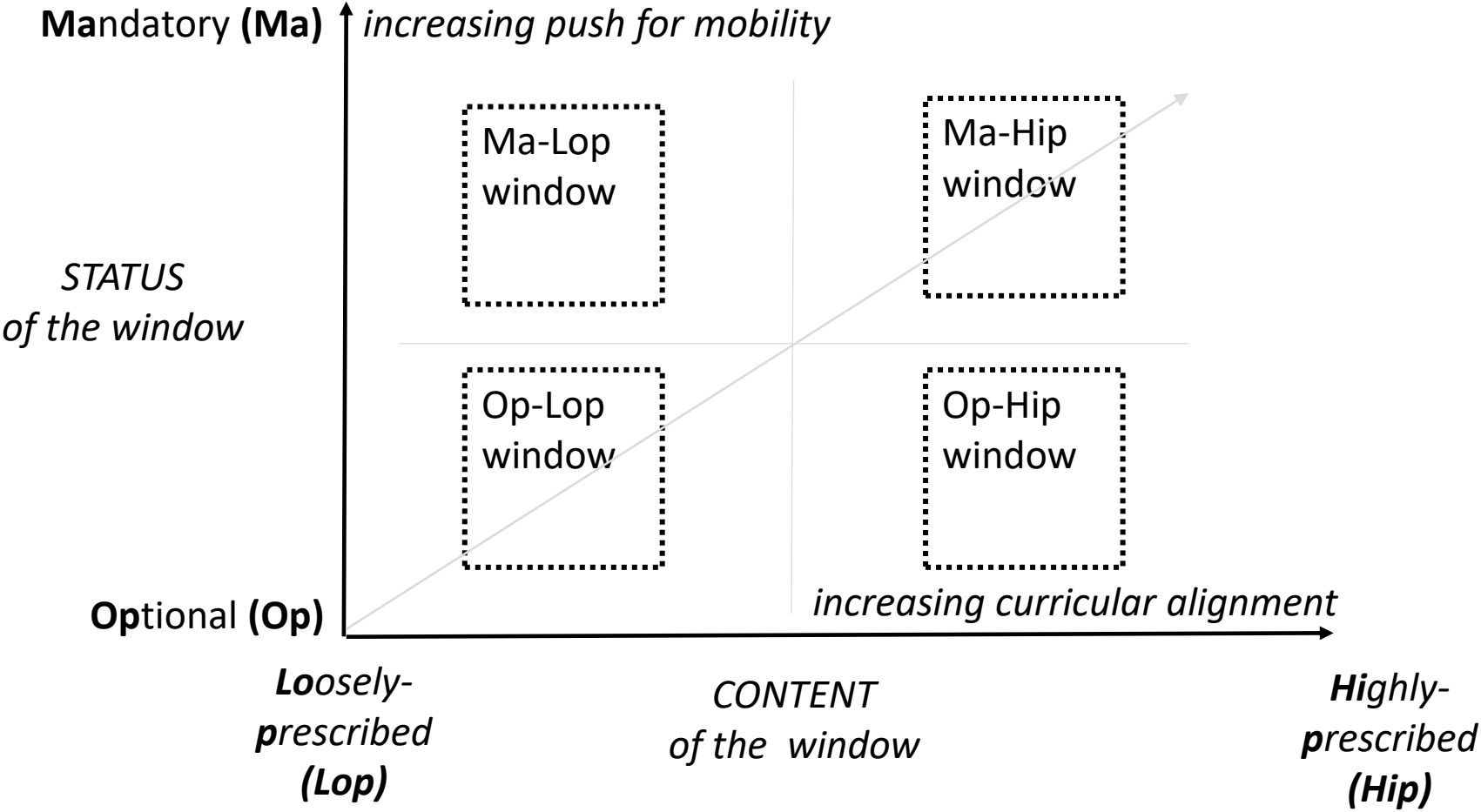
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# Curriculum - structures



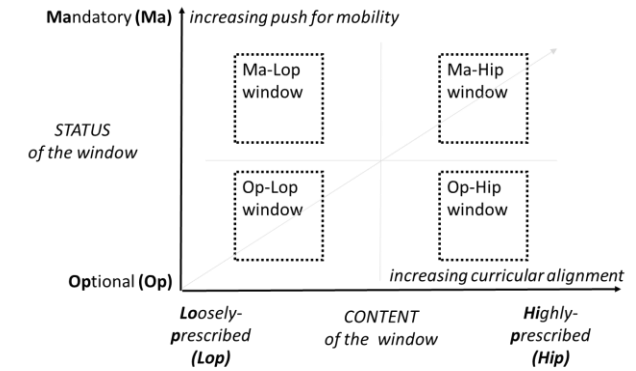
*Mobility Windows From Concept to Practice (2013): Ferencz, Hausschildt, Garman (p. 41)*



UNIVERSITAS  
LEOPOLDINO - FRANCISCEA



# Curriculum – structures: “windows”



## Windows of Opportunity

Periods of time embedded in the curriculum that allow for (virtual, physical) student mobility as well as participation in international or intercultural exchange (locally) and the acquisition of individually required competences.

## Mobility Windows

are, in the sense of acquiring credits, periods of time embedded in the curriculum for (international) student mobility.

*Definition based on Ferencz 2013*

# Curriculum - Structure “Window of Opportunity”

## *Window of Opportunity*

(20 + 10 = 30 ECTS credits)

**Periods of time embedded in the curriculum enabling (virtual, physical) student mobility, participation in international or intercultural exchange (locally) and the acquisition of individually required competences.**

If there is a corresponding (institutional) offer, a “*Window of Opportunity*” can help:

- transition to more flexible curricula (learning paths)
- considering requirements of diverse student group
- enabling collaborative teaching and learning (with other subjects/disciplines and/or universities)
- internationalisation at home/of the curricula, fostering mobility
- creating awareness for global challenges, discussing different (international) perspectives
- questioning one’s own value concepts and reflecting on future contributions (socio-economic and/or social)

→ **Enabling recognition/allocating of learning outcomes that are not intended/provided**

Master Curriculum

1<sup>st</sup> Semester

--

2<sup>nd</sup> Semester

--

3<sup>rd</sup> Semester

--

4<sup>th</sup> Semester

--

disciplinary  
modules

(total of 30 ECTS  
credits)

disciplinary  
modules

(total of 30 ECTS  
credits)

**Masters' Thesis  
incl. defence**

(total of 30 ECTS  
credits)

Complementary  
Subject Area

(total of 30 ECTS  
credits)

*Window of  
Opportunity*

(total of 30 ECTS  
credits)

## Example: Master Curriculum

1<sup>st</sup> Semester

disciplinary  
modules  
(total of 30 ECTS  
credits)

2<sup>nd</sup> Semester

disciplinary  
modules  
(total of 30 ECTS  
credits)

3<sup>rd</sup> Semester



4<sup>th</sup> Semester

**Master's Thesis  
incl. defence**  
(total of 30 ECTS  
credits)

**AURORA**


Micro-  
credential  
amounting to  
10 ECTS  
credits


### „Sustainability & Climate Change“


„Sustainability & Climate Change“ is a micro-credential (10 ECTS credits) and a planned transdisciplinary educational programme (30 ECTS credits) jointly created by the Aurora European Universities Alliance, open to all Aurora Master students of all disciplinary backgrounds.

Students who will complete the joint educational programme get certified, that they know the background and the structures of the 17 Sustainable Development Goals (SDGs), approach the concept of sustainability holistically, including complex societal problems in various ecosystems. Students can attend courses at their home institution or at Aurora partner institutions according to their own needs and interests to complete the 30 ECTS credit programme.

Link: [aurora-universities.eu](https://aurora-universities.eu)

 universität  
innsbruck



 Co-funded by the  
Erasmus+ Programme  
of the European Union

# AURORA



# Aurora European Universities Alliance: Sustainability & Climate Change

Minor 30 ECTS credits

Micro-credential 10 ECTS credits

## „head & heart“ synthesis/analysis 10 Credits

Social  
Entrepreneurship  
& Innovation  
focusing on  
Sustainability &  
Climate Change

Sustainability  
& Climate  
Change

[800.725](#)

[800.870](#)



blended, incl. mobility

COIL, 100% online

## „hands on“ practice-oriented 10 Credits



individual/joint  
offer & choice



individual/  
joint offer  
& choice

## „head“ theory-based 10 Credits

individual/joint  
offer & choice



individual/  
joint offer  
& choice



# Aurora European Universities Alliance: Sustainability & Climate Change

„head & heart“  
synthesis/analysis  
10 Credits



Social  
Entrepreneurs  
hip &  
Innovation  
focusing on  
Sustainability  
& Climate  
Change

Sustainability  
& Climate  
Change  
[800.725](#)

Micro-credential (10 Credits)

students: **42**

home universities: **6**

Argentina: 1	Netherlands: 1	Spain: 2
Austria: 2	Nigeria: 1	Uganda: 1
Germany: 6	Norway: 1	<i>(rest: not specified)</i>
Italy: 2	Peru: 1	
Malaysia: 1		

academics: **15**

home universities: **6 (7)**

language of instruction: English

delivery:

100% online, COIL





# AURORA



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  - **Micro-credentials**

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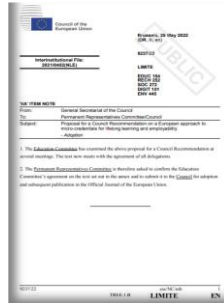
## *Part III: Recognition*

- *Substantial difference*

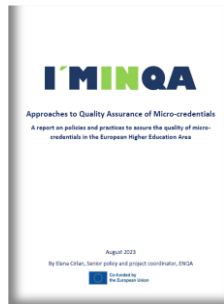
# “MICRO-CREDENTIALS” - Basic Information



Basic documents (selection)



– [Council of the European Union \(2022\): Council Recommendation on a European approach to micro-credentials for lifelong learning and employability](#)



– [ENQA \(2023\): Approaches to Quality Assurance of Micro-credentials A report on policies and practices to assure the quality of micro-credentials in the European Higher Education Area](#)



[Austrian Higher Education \(2021\): Position paper](#)

[BOFUG: Recommendation of the national Bologna Follow-up Group on the implementation of micro-credentials in Austria](#)

[HRK \(2023\): Microcredentials an Hochschulen – strategische Entwicklung & Qualitätssicherung](#)

# “MICRO-CREDENTIALS” - Definition



‘Micro-credential’ means the **record** of the **learning outcomes** that a learner has acquired following a **small volume of learning**.

These **learning outcomes will have been assessed against transparent and clearly defined criteria**. Learning experiences leading to micro-credentials are designed to provide the learner with **specific knowledge, skills** and **competences** that **respond to societal, personal, cultural or labour market needs**. Micro-credentials are **owned by the learner**, can be **shared** and are **portable**. They may be **stand-alone or combined** into larger credentials.

They are underpinned by **quality assurance following agreed standards** in the relevant sector or area of activity.

*„Council Recommendation on a European approach to micro-credentials for lifelong learning and employability“ (p. 13)*

<b>1</b>	<b>Information identifying the holder of the qualification</b>	
1.1	Family name(s)	Mustermann
1.2	Given name(s)	Anna
1.3	Date of Birth (YYYYMMDD)	1900-01-30
1.4	Other information suitable for identification	000000000
<b>2</b>	<b>Information identifying the issuing institution(s)/organisation(s)</b>	
2.1	Name and status of the organization issuing the micro-credential and responsible for quality assurance	Universität Innsbruck, Public university
2.2	Name(s) and status of administering the micro-credential	Universität Innsbruck, Aurora, European Universities Alliance
2.3	Country/countries, region(s) of issuing	Austria
<b>3</b>	<b>Information identifying the micro-credential</b>	
3.1	Title of the micro-credential	Sustainability & Climate Change
3.2	Learning outcomes	
3.3	Language(s) of instruction	English
3.4	Workload required to achieve the learning outcomes (if possible in ECTS credits)	10 ECTS credits
3.5	Required prerequisites / entry qualifications	Admission to a study degree program on master level
3.6	Target group(s)	Master students of all disciplines
3.7	Type of assessment / grades achieved	Course examination (see transcript)
3.8	Form of participation in the learning activity	
3.9	Description of the quality assurance	See § 14 UG (University Act)

Graduates of the micro-credential “Sustainability & Climate Change” have key qualifications in the field of “Social Entrepreneurship & Innovation” and the field of Sustainability. They know the background and structures of the 17 Sustainable Development Goals (SDGs) and understand the concept of Sustainability holistically and do not limit it to the ecological or economic perspective. Graduates understand complex societal issues (Civic Engagement) associated with sustainability, climate change and entrepreneurship (Impact Competence) and are able to carry out sustainability assessments for companies. Graduates of the certificate have learned to use the expertise available in interdisciplinary and international teams (Global Learning) to identify and jointly discuss complex problems of sustainability and climate change (Problem Solving/Transversal Competence). They are also able to develop innovative solutions to difficult problems with entrepreneurial thinking (Entrepreneurship Competence). Graduates have become acquainted with communication strategies in order to communicate research results to both politics and the public (Communication Competence).

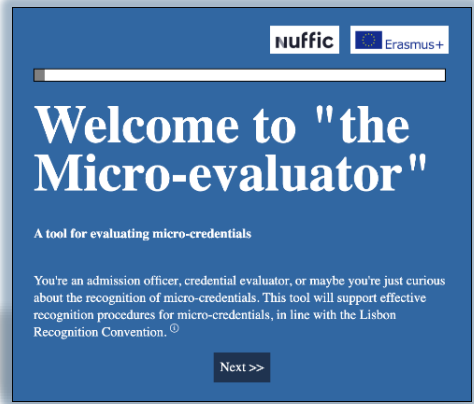
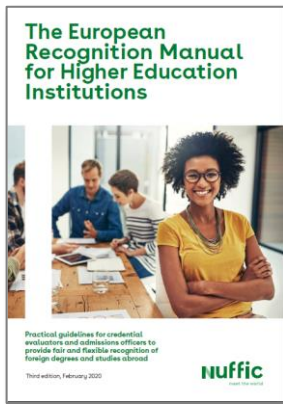
course examination:  
VU Sustainability & Climate Change (5 ECTS credits)  
KU Social Entrepreneurship & Innovation focusing Sustainability & Climate Change (5 ECTS credits)

4	Other relevant information	
4.1	Level of micro-credential	
4.2	Stackability	Planned joint program
4.3	Expiry date	Not applicable
4.3	Further information	
5	Certification (official digital signature, date of issue)	
5.1	<i>The document should be officially signed according to § 19 of the E-Government Act BGBl. I No. 10/2004 as amended.</i>	

The two courses of the micro-credential come from studies with the EQF Level 7 (Master)

[www.uibk.ac.at](http://www.uibk.ac.at)  
<https://aurora-universities.eu/>

Signatory	serialNumber=C40250771464, CN=Universitaet Innsbruck, O=Universitaet Innsbruck, C=AT
Date/Time-UTC	2023-01-23T11:13:59+01:00
Issuer-Certificate	CN=a-sign-corporate-07, OU=a-sign-corporate-07, O=A-Trust Ges. f. Sicherheitssysteme in elektr. Datenverkehr GmbH, C=AT
Serial-No.	218608918
Verification	Information about the electronic signature of the signed document in digital form can be found at <a href="http://www.signaturpruefung.gv.at">http://www.signaturpruefung.gv.at</a> For information on verifying the printout of electronic signed documents, please visit: <a href="http://www.uibk.ac.at/impressum/">http://www.uibk.ac.at/impressum/</a>
Note	This document was signed with an official signature. According to § 20 E-Government-Act, a printout of this document has the probative value of an official document.
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- *Substantial difference*

## Learning Outcomes (ECTS Users' Guide 2015)

Learning outcomes are **statements of what the individual knows, understands and is able to do on completion of a learning process**. The achievement of learning outcomes has to be assessed through procedures based on clear and transparent criteria. Learning outcomes are **attributed to individual educational components and to programmes at a whole**. They are also **used in European and national qualifications frameworks** to describe the level of the individual qualification.

[ECTS Users' Guide 2015](#)



# Learning Outcomes – central aspects of how to phrase them\*

- Using verbs in active voice to express what learners are expected to know and be able to do
- Identification of the object/skill to which the learning outcome relates
- Definition of how the achievement of the learning outcome can be demonstrated
- The number of learning outcomes per course/learning unit depends on the level and type of course/learning unit or the estimated workload

*\*ECTS Users Guide (S 23) [https://education.ec.europa.eu/sites/default/files/document-library-docs/ects-users-guide\\_de.pdf](https://education.ec.europa.eu/sites/default/files/document-library-docs/ects-users-guide_de.pdf)*

# Learning Outcomes - conclusions

- are statements about what students know, understand or are able to do after successfully completing the course unit and thus provide orientation
  - all "cognitive process categories" can be represented at all (study) levels
- are formulated in active voice and a student-centred way
- are always correlated with the ECTS credits awarded and the other (also legal) framework conditions (constructive alignment)
  - must also be considered within examination regulations

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# Taxonomy of Learning (Anderson/Krathwohl revising Bloom)

## COGNITIVE PROCESS DIMENSION

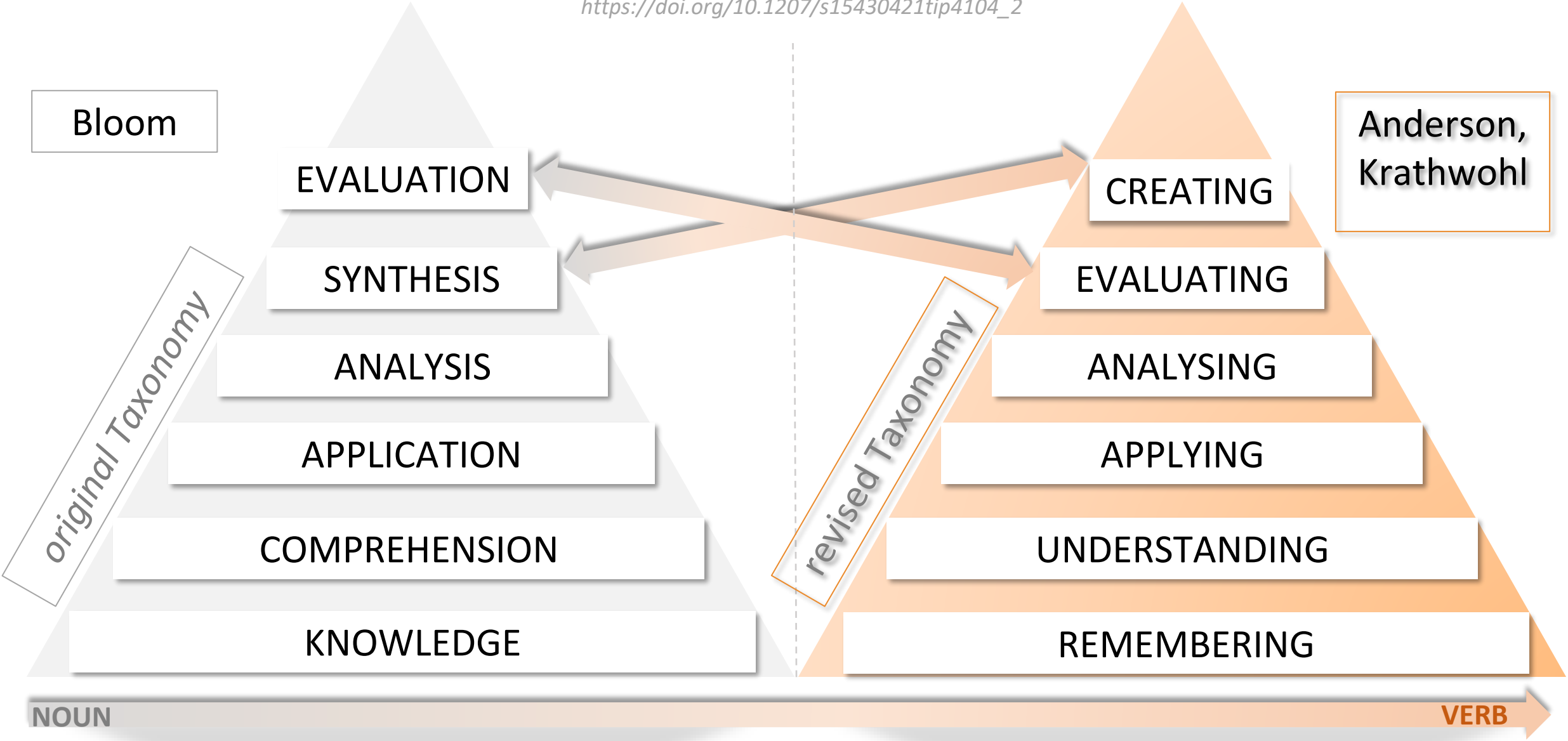
## VERBS / SUBTYPES

<b>Creating</b> <i>Putting elements together to form a novel coherent whole or make an original product</i>	<i>generating, planning, producing</i> compose, construct, create, design, develop, generate, hypothesize, invent, make, perform, plan, produce
<b>Evaluating</b> <i>Making judgments based on criteria and standards</i>	<i>checking, critiquing</i> appraise, argue, assess, choose, conclude, critique, decide, evaluate, judge, justify, monitor, predict, prioritize, prove, rank, rate, select
<b>Analyzing</b> <i>Breaking material into its constituent parts and detecting how the parts relate to one another and to overall structure or purpose</i>	<i>differentiating, organizing, attributing</i> analyze, characterize, classify, compare, contrast, debate, deconstruct, deduce, differentiate, discriminate, distinguish
<b>Applying</b> <i>Carrying out or using a procedure in a given situation</i>	<i>executing, implementing</i> apply, change, choose, compute, dramatize, implement, interview, prepare, produce, role play, select, show, transfer, use
<b>Understanding</b> <i>Determining the meaning of instructional messages, including oral, written and graphic communication</i>	<i>interpreting, exemplifying, classifying, summarizing, inferring, comparing, explaining</i> classify, compare, conclude, demonstrate, discuss, exemplify, explain, identify, illustrate, interpret, paraphrase, predict, report
<b>Remembering</b> <i>Retrieving relevant knowledge from long term memory</i>	<i>recognizing, recalling</i> define, describe, draw, find, identify, label, list, match, name, quote, recall, recite, tell, write

Sources: Anderson & Krathwohl (2001): *A Taxonomy for Learning Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* New York: Adison Wesley Longman  
D.R. Krathwohl (2002) *A Revision of Bloom's Taxonomy: An Overview*, *Theory Into Practice*, 41:4, 212-218: [https://doi.org/10.1207/s15430421tip4104\\_2](https://doi.org/10.1207/s15430421tip4104_2)

# Taxonomy of Learning

D.R. Krathwohl (2002) A Revision of Bloom's Taxonomy: An Overview, Theory Into Practice, 41:4, 212-218  
[https://doi.org/10.1207/s15430421tip4104\\_2](https://doi.org/10.1207/s15430421tip4104_2)



# Taxonomy of Learning - table

D.R. Krathwohl (2002) A Revision of Bloom's Taxonomy: An Overview, Theory Into Practice, 41:4, 212-218

[https://doi.org/10.1207/s15430421tip4104\\_2](https://doi.org/10.1207/s15430421tip4104_2)

Knowledge Dimension	1. Remembering 1.1. recognizing 1.2 recalling	2. Understanding 2.1 interpreting 2.2 exemplifying 2.3 classifying 2.4 summarizing 2.5 inferring 2.6 comparing 2.7 explaining	3. Applying 3.1 executing 3.2 implementing	4. Analysing 4.1 differentiating 4.2 organizing 4.3 attributing	5. Evaluating 5.1 checking 5.2 critiquing	6. Creating 6.1 generating 6.2 planning 6.3 producing
A. Factual Knowledge						
B. Conceptual Knowledge						
C. Procedural Knowledge						
D. Metacognitive Knowledge						

Cognitive Process

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# Learning Outcomes – LOUIS

Learning Outcomes in University for Impact on Society is based on the AAC&U-VALUE-Rubrics. It consists of 16 distinct general academic and/or personal competences.

LOUIS is applied as a component of the (student) Competence Framework of the Aurora European Universities Alliance

## 16 LOUIS Competences

<u>Civic engagement</u>	<u>Creative thinking</u>	<u>Critical thinking</u>	<u>Ethical reasoning</u>
<u>Global learning</u>	<u>Information literacy</u>	<u>Inquiry and analysis</u>	<u>Integrative learning</u>
<u>Intercultural knowledge &amp; competence</u>	<u>Foundations for life-long learning</u>	<u>Oral communication</u>	<u>Problem solving</u>
<u>Quantitative literacy</u>	<u>Reading</u>	<u>Teamwork</u>	<u>Written communication</u>

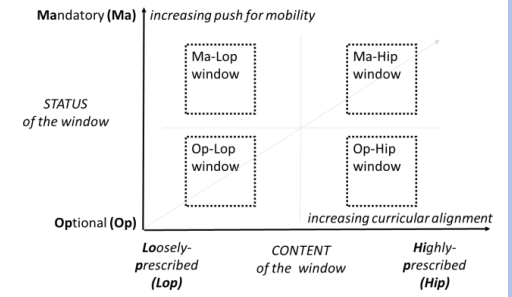




*Thank you for your attention!*

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# Curriculum – structures: “windows”



**Window of Opportunity**  
Periods of time embedded in the curriculum that allows for (virtual, physical) student mobility as well as participation in international, intercultural, interdisciplinary exchange (locally) and the acquisition of individually required competences.

**Mobility Windows**  
Periods of time embedded in the curriculum for (international) student mobility.  
*Definition based on Ferencz 2013*