#### Technologies to Enhance Education

#### Current Trends and Future Perspectives

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#### The changing landscape in Europe



The most influential technological innovations in Europe in recent decades:

- Open Educational Resources
- Open Educational Practices
- Virtual Mobility and international virtual exchange
- MOOCs and open online learning for digital networked society
- Open Science, open data
- Learning analytics
- Artificial intelligence in Education, Personalization and flexibility
- Recognition of open online learning
- Digital and Micro-Credentialization

#### The need for open and online education

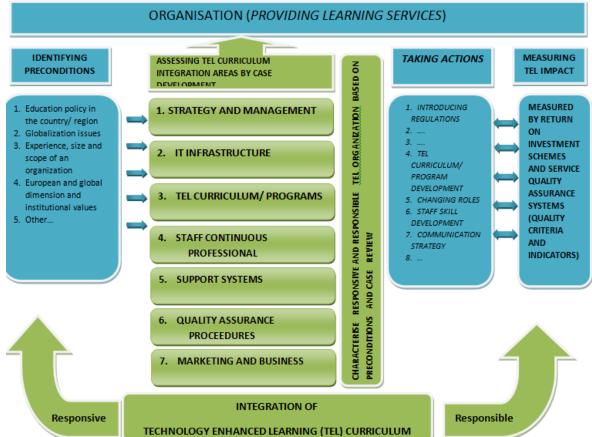


- To prepare young people to argue for the open and collaborative society through:
  - Open education (OER, OEP and open learning recognition)
  - Participation and involvement of stakeholders into the study process with the support of ICT
  - Transparent debate and co-creation of university curriculum in digital space
  - Development of their digital competences to combat social and economic inequalities
- To support university teachers with European and global knowledge –
   hub co-creation, through open virtual collaboration
- To advocate the autonomy and flexibility of higher education to implement its mission and open up to digital and network society

There is no policy nor any other force that can prevent this

# Framework of quality assurance of online learning integration into an organization





https://www.vdu.lt/cris/handle/20.500.12259/42950



#### 1. Strategy and management

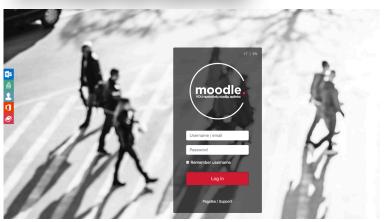
#### **Documents and regulations**

Documents and regulations for organization of online studies at Vytautas Magnus University

- 1. Regulation for Organization of Online Studies at Vytautas Magnus University (in LT)
- 2. Quality Assurance Metodology for online (and blended) studies (in LT)
- 3. Documents for quality assessment and accreditation of modules adapted to online studies:
  - a. Application from study department (template, in LT);
  - b. Assessment form (in LT) for online studies and virtual mobility studies (in EN).
- 4. Regulation for Virtual mobility organization at Vytautas Magnus University (in LT)
- 5. Regulation for non-formal studies at Vytautas Magnus University (in LT)
  - a. Assessment form (in EN) for non-formal studies

#### 2. Infrastructure for online studies







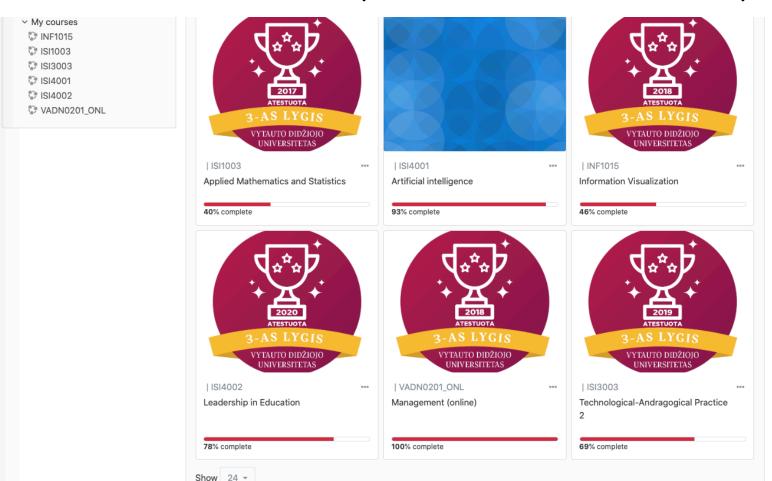


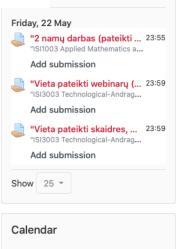
Video conferencing tools



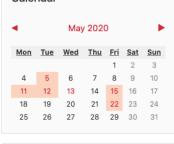


## 3. Online courses (VMU, 2010 – 2019)



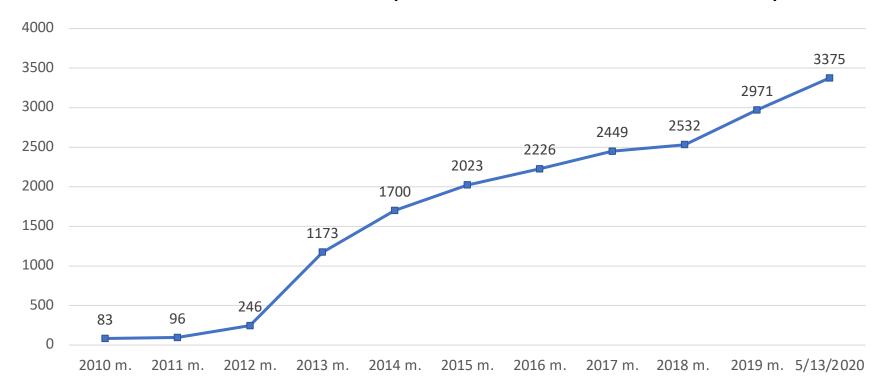


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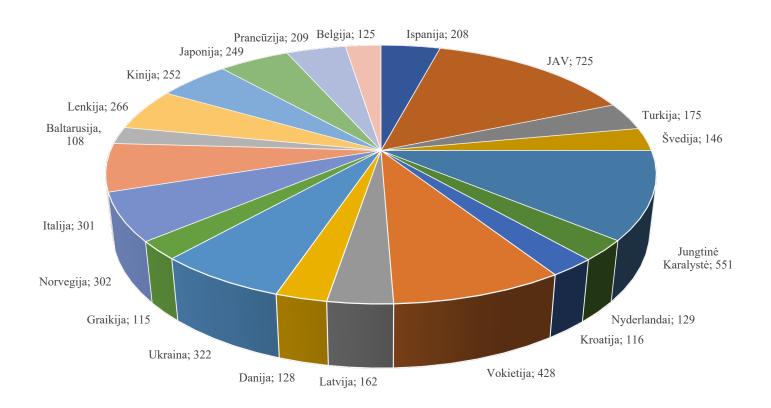




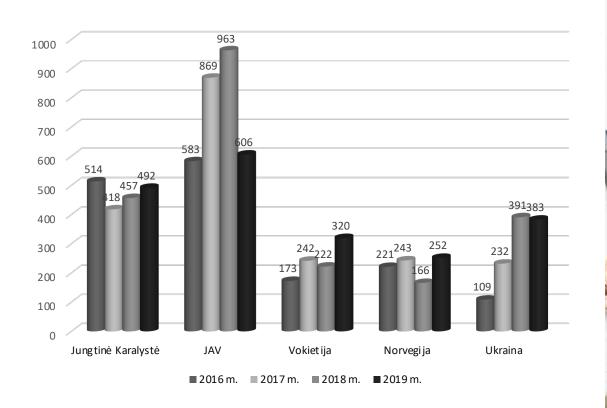
### 3. Online courses (VMU, 2010 – 2019)



#### Access to Moodle from countries where there are more than 100 unique IPs 2019



#### Leader countries 2016-2019





#### 3.2. The use of Open Educational Resources



2. OER practices, quality, evolution and reliability.					
2.1. The quality of OER. What has been discussed so far?					
The Quality of OER. Airina Volungevičienė. Lecture notes.					
What is a good OER? (By OUUK)					
Lecture record by Prof. Ulf D. Ehlers (University of Duisburg-Essen) recorded in the framework of VMCOLAB project on Nov. 13, 2013.					
Handbook for Quality Management of Peer Production (additional material)					
Open Learning Recognition (additional material)					
Evaluating OER (by OUUK)					
JISC project toolkit - OER QA					
2.2. Creative Commons.					
CC licencing for Open Content. Airina Volungevičienė. Lecture notes.	<b></b>				
Prof. L.Lessing on CC (video record)	<b></b>				
B.Fitzgerald (2005). Open Content Licencing for OER. OECD report.	<b></b>				
How do CC work?					
How to chose a licence?	<b></b>				

# 3.3. Curriculum designing based on learning outcomes

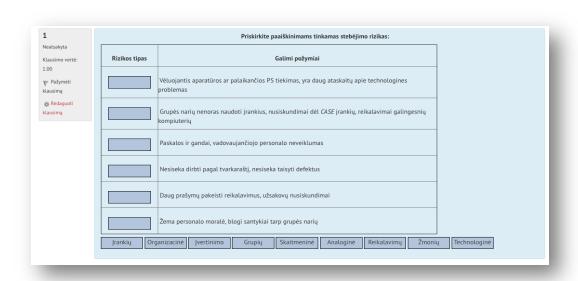


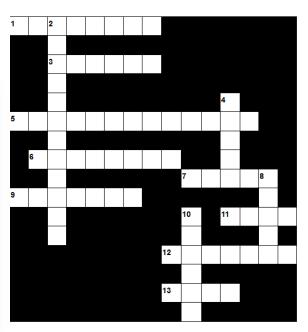
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Ω	anonfirstname20 anonlastname20	Pateikta vertinimui Įvertinta	Įvertis 8.00 / 10.00	Redaguoti 🕶	Komentarai (0)	8.00 / 10.00	Apibūdinti e.mokymosi ir technologijomis grindžiamo mokymosi modelius, sąvokas, pasiūlą, išryškinant jų charakteristikas ir skirtumus: Competent
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Ω	anonfirstname23 anonlastname23	Pateikta vertinimui Įvertinta	Įvertis 9.00 / 10.00	Redaguoti =	Komentarai (0)	9.00 / 10.00	Apibūdinti e.mokymosi ir technologijomis grindžiamo mokymosi modelius, sąvokas, pasiūlą, išryškinant jų charakteristikas ir skirtumus: Competent
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Ω	anonfirstname25 anonlastname25	Pateikta vertinimui Įvertinta	[vertis	Redaguoti ▼	Komentarai	10.00 / 10.00	Apibūdinti e.mokymosi ir technologijomis grindžiamo mokymosi modelius, sąvokas, pasiūlą,

#### 3.4. A variety of learning organization methods.

## E.g. Practicing

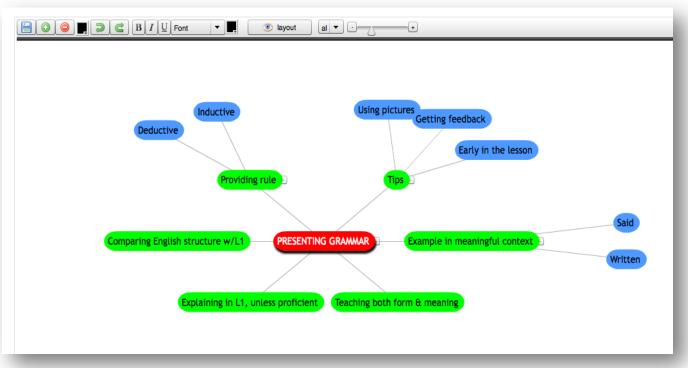






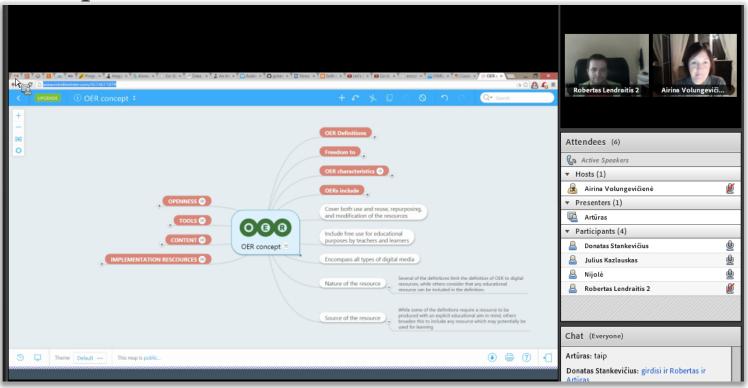
3.4 Discussing, experimenting, practising and creating.





# 3.4. Engagement of students into group work and presentations

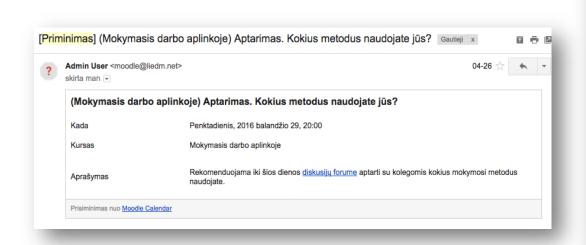


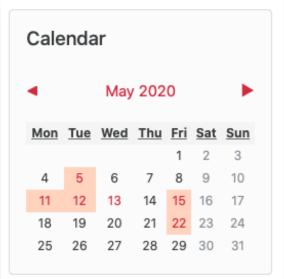




#### 3.5. Monitoring and supporting learning

Course calendar - month activity view. Course calendar sends reminder to student email.





#### 3.5. Learning progress measuring tools

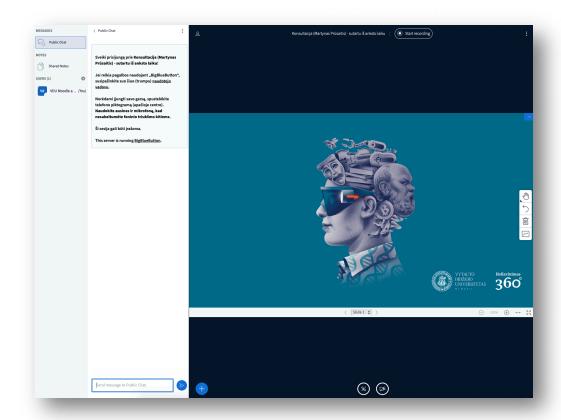




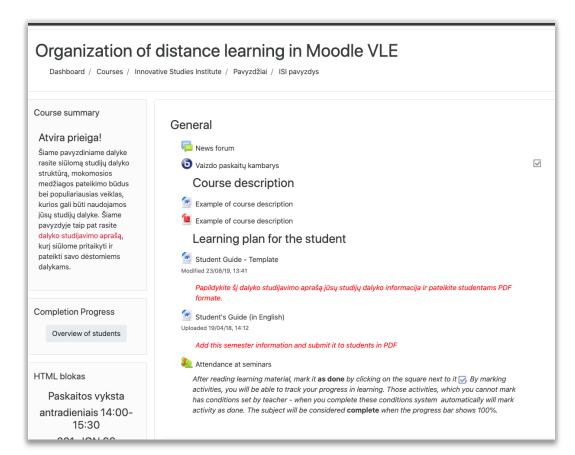


#### 3.5. Communication and collaboration tools

- Video tools
- Moodle tools
- Integrated tools



#### 4. Staff training and Digital competence development



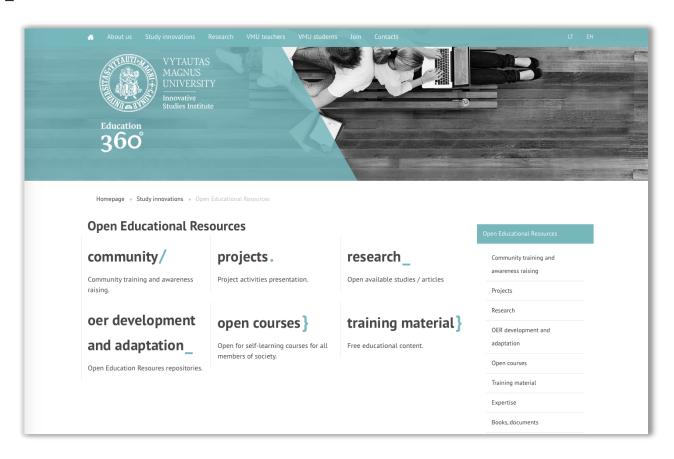
# Technology established innovations





#### Open Educational Resources (OER)





#### http://openstudies.vdu.lt

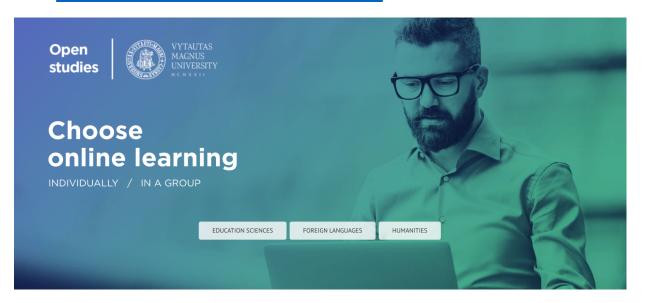


The idea of online non-formal learning is opening university curriculum for Lithuanian-speaking people all around the world.



#### http://openstudies.vdu.lt





#### Most recent subjects



Spanish A1.1

Nigilija Ziuraite



E-Learning Technologies

Airina Volungevičienė, Estela
Daukšienė



Language and Society **a** Jūratė Ruzaitė, Violeta Kalėdaitė



German language A2.1

A Juraté Andriuškevičienė, Gintarė
Gelūnaitė—Malinauskienė

ALL SUBJECTS

# Virtual mobility for university studies























#### Virtual (blended) mobility

"set of information and communications technology supported activities, organized at institutional level, that realize or facilitate international, collaborative experiences in a context of teaching and/or learning"



# Virtual mobility: involved actors

- Higher education institutions (2+)
- Teachers in student VM (2+, organizing VM academic exchange)
- Students in VM (student groups in 2+ countries)
- Teachers in VM (professional development in 2+ institutions (research, academic teaching, socio-cultural exchange))

#### VM impact for HE institutions



- Development and exploitation of intercultural studies
- Joint study programs, quality enhancement and expertise sharing, transparency of professionalism and academic processes
- Modernisation and internationalisation of curriculum (transferrable quality standards, modular curriculum based on learning outcomes, updating pedagogical models)
- Multi-institutional instead of bilateral collaboration
- Improvement of education attractiveness and HE competitiveness
- Expanded areas of learning for students
- Additional transferrable skills and knowledge areas
- Teacher professional development
- Additional skills and experience for students

# Support for Lithuanian Schools







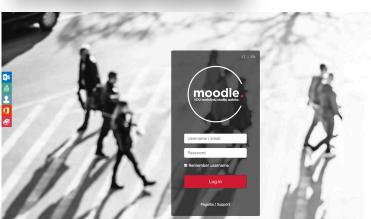
#### LieDM association



#### Infrastructure for schools











Video conferencing tools







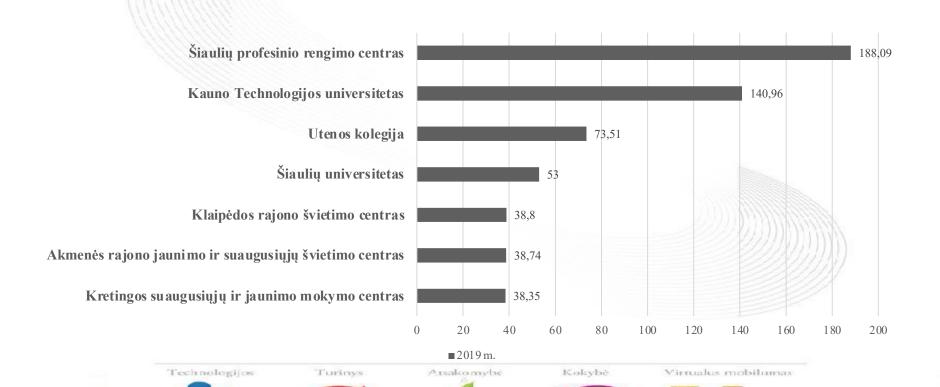








#### Video conference records (annual average in hours) http://ac.liedm.net



# Digital and Micro-Credentialization

A look to the nearest future and preparation in progress





#### Digital and Micro-Credentials



http://studyonline.lt/en/study-of-innovation/micro-credentials/

The term "Micro-Credentials" is relatively new, described in the joint effort of researchers and practitioners, as well as policy makers. We suggest Erasmus+ program KA3 project MicroHE definition: Micro-Credentials are considered to be a smaller segment of credentials which can then be aggregated to create a macro-credential or to be considered as a segment of a portfolio. Examples of micro-credentials include the following: Digital Badges, MicroMasters, NanoDegrees, and Verified Certificates.





About Partners

Devel

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proje



The main aim of ECCOE is to facilitate the endorsement and appropriation of open, online and flexible higher education. In support of this overarching objective, the project aims to increase trust in technology-enabled credentials among students, higher education institutions (HEIs) and employers.

#### **ACTIVITIES AND OUTPUTS**

- Develop quality descriptors for credentials relating to courses, modules, MOOCs and groups of competences;
- Create and validate a Model Credit Recognition Agreement which will be available in 6 languages (DE, EN, FR, IT, LT, NL);
- . Set up an online catalogue of over 60 disciplinary and transversal modules which have passed the selection criteria for cross-institution recognition;
- . Design a system for technology-enabled credentials



#### Welcome to Europass

You are about to create your new Europass profile. You will be invited to describe basic information about yourself, your skills, qualifications and experiences,

You decide what to complete - you can 'skip', edit and delete all information - there are no mandatory fields except for your name! Build a profile that best describes who you are - this is your personal profile to describe all your life, learning and work experiences.

By registering, you agree to Europass using your profile information in line with the Europass Privacy Statement

Upload my Europass CV

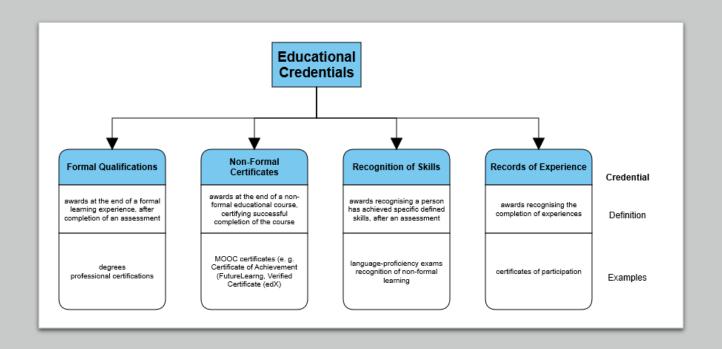
Create my profile

#### VMU involvement in the area

http://studyonline.lt/en/study-of-innovation/micro-credentials/



The problem addressed – old type credentials



Types of Educational Credentials







#### **Student**

#### **Higher Education Institution**

#### **Open Education Provider**

wants to

- display
- accumulate
- transfer credentials/credits using the

needs sufficient information about a credential to make an informed and consistent decision on recognizing open learning as ECTS credits towards a degree programme needs to know which information they should provide and which formal requirements exist regarding workload, learning outcomes, assessment, ID verification, EQF level, etc.

#### Learning passport

Open Course A Open Course B Open Course



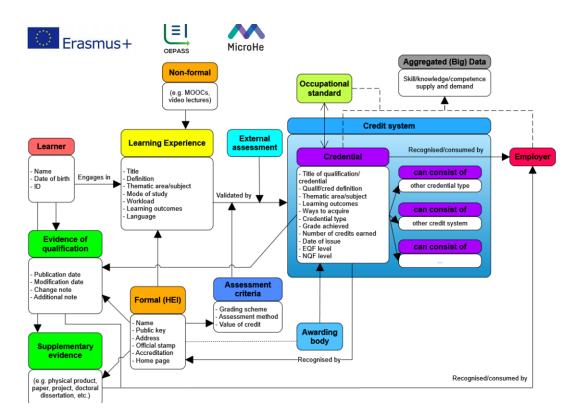
Descriptive	Structural	Administrative		
Title	Identifier	Homepage		
Alternative label	Reference language	Landing page		
Definition	EQF level	Release/publication date		
Learning outcome description	NQF Level	Update/modification date		
Field	Credit / Token System	Change note		
Is partial qualification	Number of Credit Points	History note		
Is made up of	ECTS credit points	Additional note		
Ways to acquire	Volume of learning	Status		
Related occupation	Entry requirement	Replaces		
Awarding activity	Expiry period	Replaced by		
Awarding method	Accreditation	Owner		
Recognition	Supplementary document	Provenance Agent		
Mode of Study		Publisher		
Assessment_method				
Grade scheme				



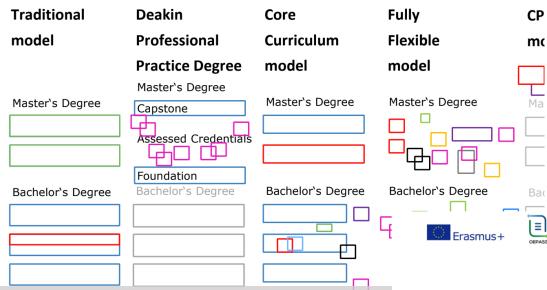
Requirements for Recognition towards a Higher Education Qualification

Workload Learning Outcome Assessment & ID

# Stakeholders involved



#### **Unbundling of Higher Education**

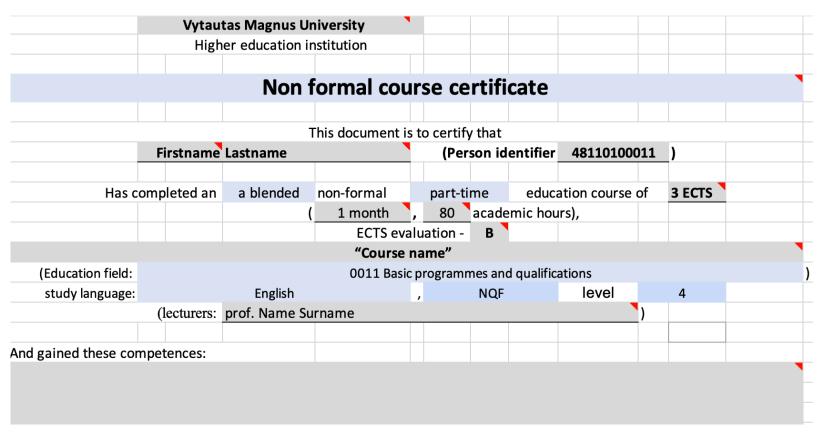


European framework for digitallysigned credentials



#### Model of Digital Credential Template





### https://eccoe.eu/outputs/io1/o1-open-peer-

review/#/

Type of assessment:	formativ	e and summative	online assessment v	without I	O verification of	a learner with	secure login into I	_MS	
Assesse	ed by independe	ent assessor (third	d party) ,	Format	of assessment	automatic gr	ading		
	Ass	signments			Units	Weight	Total Weight		
Written exam without a	1	60%	60%						
self-assessment	4	5%	20%						
Final exam		1	20%	20%					
Contact hours						_			
Grading scheme and grade d	istribution guidanc	е.							
Grading scale	Definition	··					ECTS grade	Pass/fail	
10	Excellent: excelle	nt performance, outs	tanding knowledge and	skills			A		
9	Very good: strong	g performance, good	knowledge and skills				В		
8	Good: above the	average performance	С	Pass					
7	7 Highly satisfactory: average performance, knowledge and skills with unessential shortcomings								
6	6 Satisfactory: below average performance, knowledge and skills with substantial shortcomings								
5*	Sufficient: knowledge and skills meet minimum criteria							1 !	
1-4 Insufficient: knowledge and skills do not meet minimum criteria/below minimum criteria									
0	Zero: absence in the testing or failure to observe deadlines in presenting work for intermediate assessment or							Fail	
* The last positive passing grad	dishonest behavio de is 5 (sufficient).	ur recorded							
Alongside the ten-point system For the courses that do not en							aded.		
		,					Name Surname		
Rector	Seal				Signature				
Date and p	lace of issue:	Kaunas	19/10/2020						
Registration num	ber: SO	-20-1815	, Unique creden	tial ID:	5f574c4	4d-3bc4			
Vytautas Ma	gnus University	Higher educ	ation institution	Accredit	ed by Centre	e for Quality A	ssessment in High	er Education	
Access requireme			ation institution	Accredi	led by Cellin	e for Quality As	ssessifient in High	er Luucation	
Access requireme	ints. computer	interacy skills							



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