

INAR

INSTITUTE FOR ATMOSPHERIC AND
EARTH SYSTEM RESEARCH

Designing MOOCs for sustainability education

11.2.2025

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INAR

INSTITUTE FOR ATMOSPHERIC AND
EARTH SYSTEM RESEARCH

Contents

- Una Europa MOOCs and Micro-credential in Sustainability: process and outcomes
- Why MOOCs?
- Mini-workshop on MOOCs

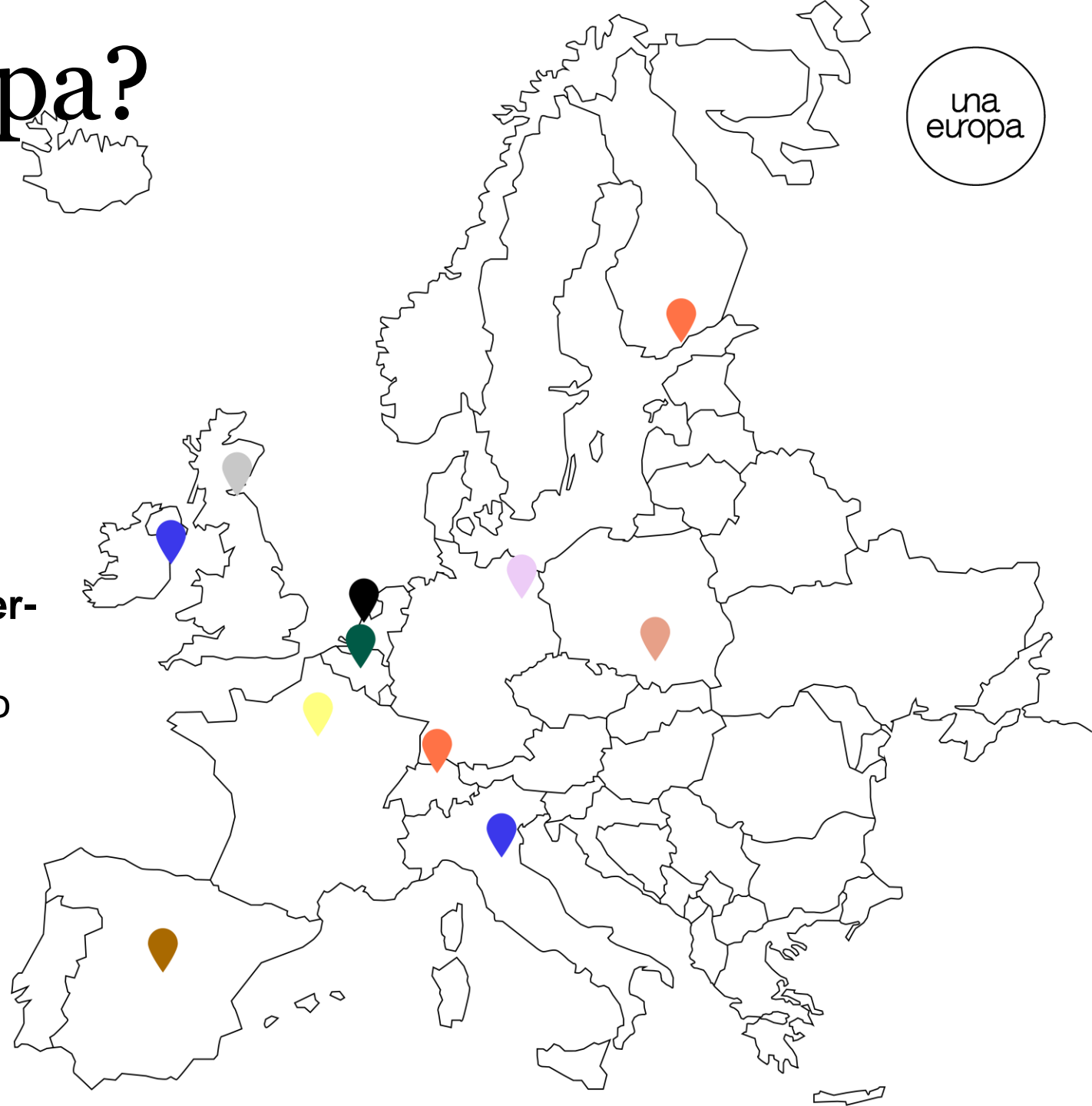
Una Europa Micro-Credential in Sustainability



What is Una Europa?

una
europa

- Una Europa is an **alliance of 11 leading universities** from all corners of Europe.
- Together, we are forging a **new path for education and research in Europe** and beyond to shape our shared future for the better.
- Una Europa is working **towards a truly inter-university and pan-European campus**, shaped by universities' central obligations to society: research and innovation, teaching and learning, and societal outreach.
- “Pan-European campus of 11 universities”



Timeline

- 7.10.2022 – launch as hybrid event from Helsinki, Krakow and Bologna
- 11.10.2023 – 1st year review workshop
- 1.2.2024 – UnaVEx project start
- 29.1.2025 – Online community event



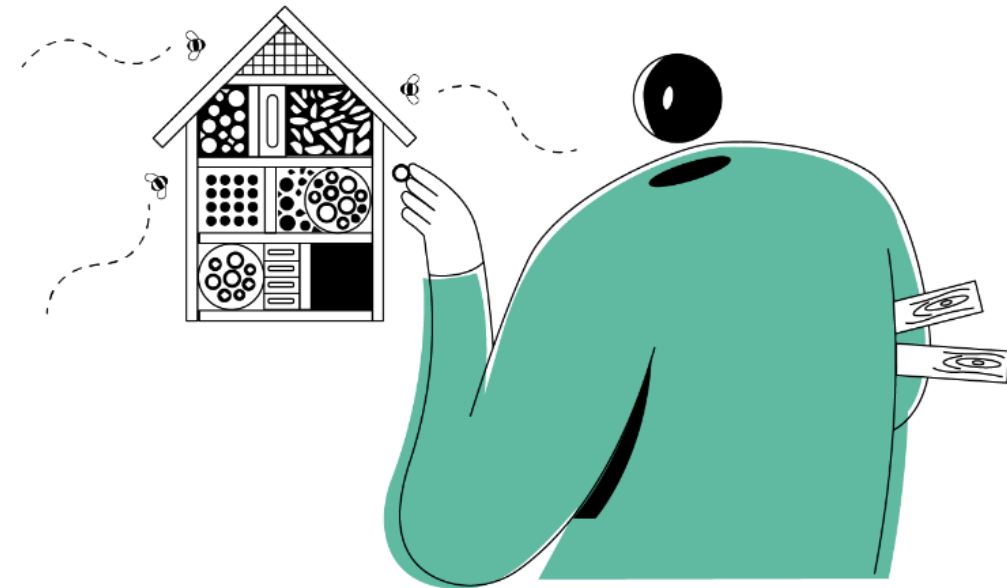
Climate change



Learning outcomes



- a holistic understanding of global sustainability challenges
- basics of climate change, biodiversity loss, sustainable economy
- perspectives on how sustainability is addressed in the arts
- interdisciplinary skills and critical knowledge to analyse sustainability
- a systems perspective



10 ECTS Micro-Credential

consisting of five MOOCs:



Introduction to sustainability, 3 ECTS
University of Helsinki



Climate.now, 2 ECTS
University of Helsinki



Biodiversity.now, 2 ECTS
University of Helsinki



Political economy of sustainability, 2 ECTS
Jagellonian University



Sustainability and the arts, 1 ECTS
University of Bologna

Introduction to sustainability



<https://courses.mooc.fi/org/uh-inar/courses/introduction-to-sustainability>

Learning outcomes:

In this course you'll learn...

1. to introduce the fundamental concepts and theories of sustainability and sustainable development.
2. to appreciate the interrelationships between human activity and environmental change with its global dimensions.
3. to appraise policy and other interventions critically, taking account of issues such as ecological limits and complex processes of social equity.
4. to practise more sustainable behaviour and societal participation to make a better future for all.



Introduction to sustainability



<https://courses.mooc.fi/org/uh-inar/courses/introduction-to-sustainability>

Content and exercises:

1. Sustainable development as a concept and in politics

Quizzes (22 x 1p), exercise (3p), peer-review essay (10p)

2. Ecological sustainability

Quizzes (14 x 1p), feedback (2p)

3. Social sustainability

Quizzes (14 x 1p)

4. Economic sustainability

Quizzes (15 x 1p), feedback (2p)

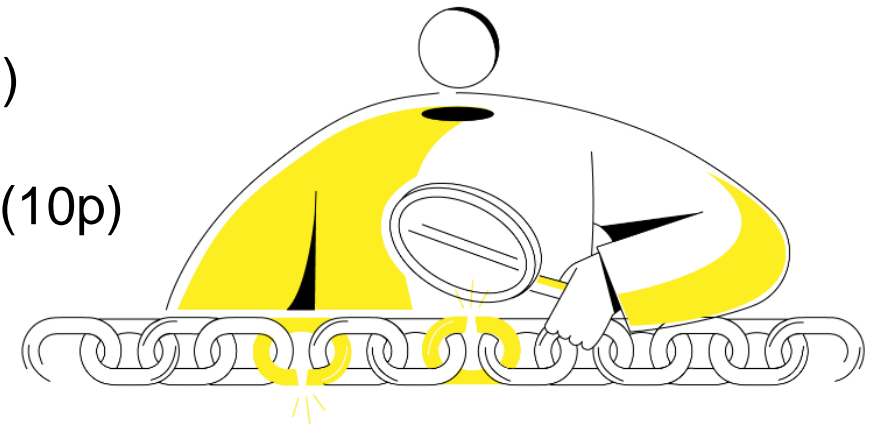
5. Cultural sustainability

Quizzes (12 x 1p), exercise (2p), peer-review essay (10p)

6. Towards a sustainable future

Quizzes (16 x 1p), feedback (2 x 2p), peer-review essay (10p)

- Total 138 points, 110 required for completion (80%)



Climate.now

In this course, you'll learn how to:

1. look at climate change from different perspectives and create connections between them.
2. reflect your own role in climate change and apply what has been learned on the course to your field of study.
3. examine different perspectives, solutions, information sources and the current debate on climate change critically.

Contents:

- climate change as a scientific phenomenon
- how it can be prevented (mitigation)
- how adaptation is possible

<https://courses.mooc.fi/org/uh-inar/courses/climate-now>




Climate.now




Course overview




Chapter 1
Climate change - what is it about?

A teal square containing a white icon of two circular arrows forming a loop, representing a cycle or process.

Chapter 2
Climate system

A teal square containing a white icon of a cloud with diagonal lines representing rain falling from it.


Chapter 5
Mitigation

A teal square containing a white icon of two wind turbines.


Chapter 6
Adaptation

A teal square containing a white icon of a gavel with a paragraph symbol (§) below it.


Chapter 3
The future of the climate

A teal square containing a white icon of a line graph with a question mark at the end, representing uncertainty or future projections.

Chapter 4
Impacts

A teal square containing a white icon of a plant with three leaves, representing nature or environmental impact.

Chapter 7
Big issues

A teal square containing a white icon of two hands shaking, representing agreement or a major issue.

Chapter 8
Applied perspectives and assignments

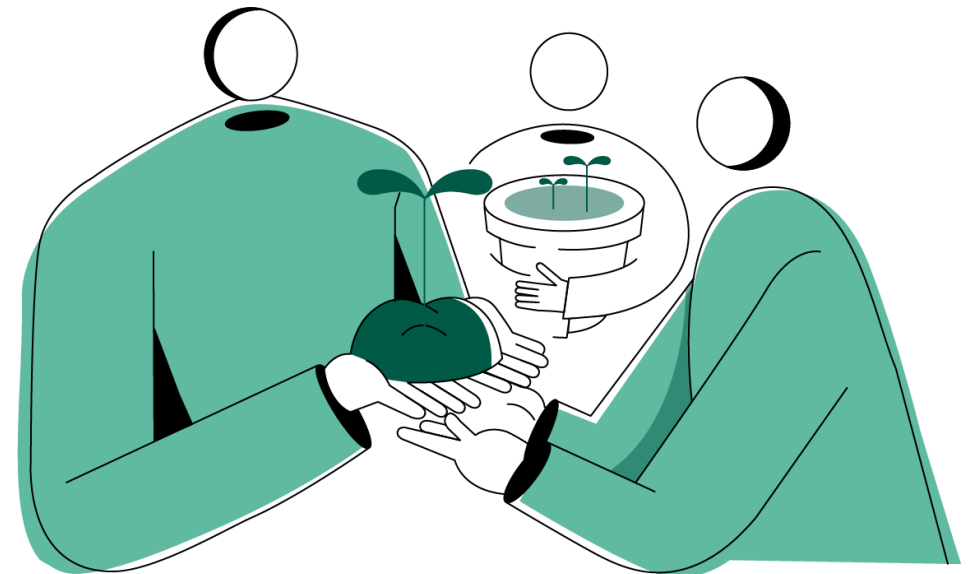
A teal square containing a white icon of a speech bubble, representing communication or discussion.

Biodiversity.now

In this course, you'll learn to:

- recognize reasons for the ongoing biodiversity crisis and its consequences for human society and for one's personal life
- explore one's own connection to nature and the diverse values you assign to it
- recognize a variety of approaches and tools to protect biodiversity, increase biodiversity, and to promote the sustainable use of biodiversity
- apply the issues to one's own field of studies/work and learn how to be part of the solution

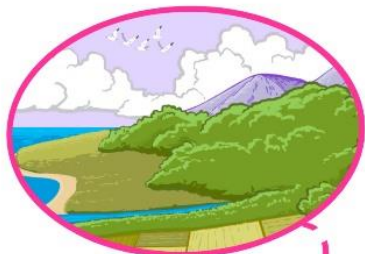
<https://courses.mooc.fi/org/uhiinar/courses/biodiversity-now>



Biodiversity.now

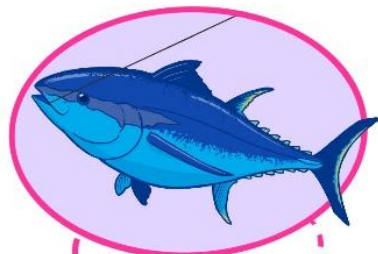
Pre-course part

Vocabulary, learning materials, quiz



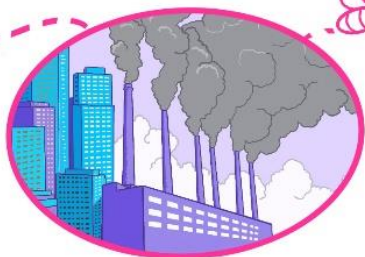
Module 2

Learning materials, exercises, quiz



Module 4

Learning materials and exercises



Module 1

Learning materials, exercises, quiz



Module 3

Learning materials, exercises, quiz



Module 5

Reflection exercises

Required for completion:

- Quizzes
- Peer-reviewed assignments
- Final reflection

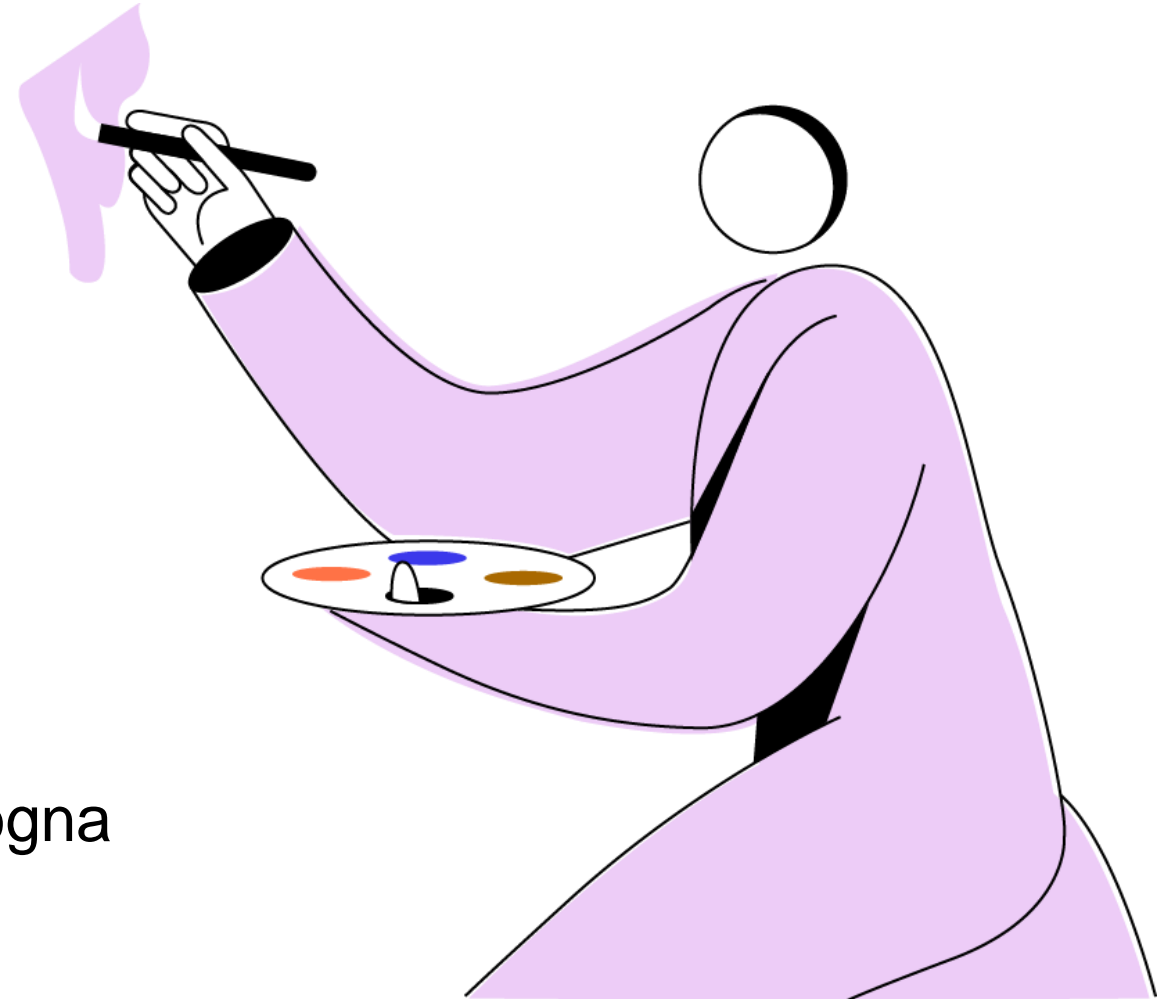
Political economy of sustainability



Maciej Grodzicki, Jagellonian University



Sustainability and the arts

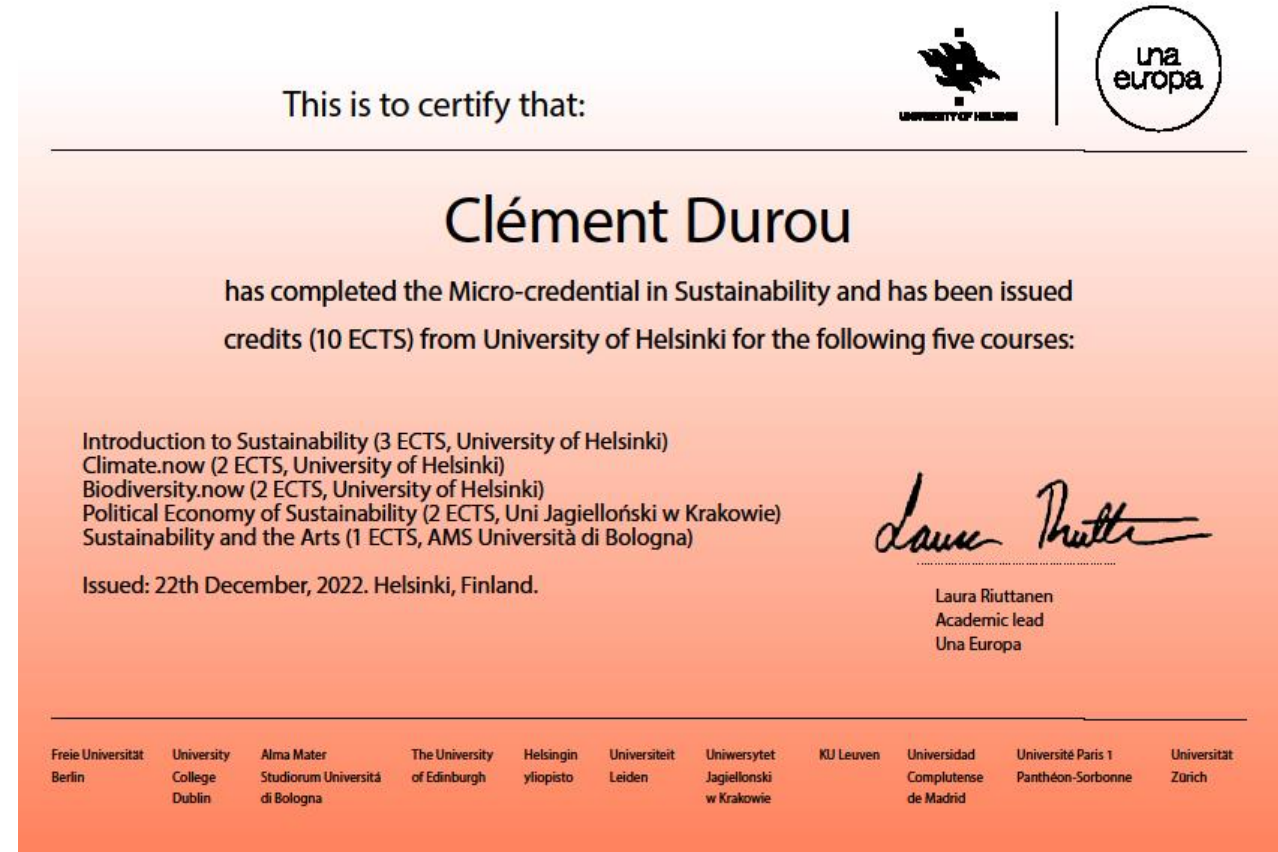


Francesco Spampinato, University of Bologna

Micro-Credential certificate



- When student has completed all 5 MOOCs, they get a certificate of the Una Europa Micro-Credential in Sustainability, 10 ECTS, including full transcript of studies.
- Administrative contact person: aleksi.vauhkonen@helsinki.fi



MOOC pro's and con's

from the Una Europa Online Community Event

29.1.2025



- **Strengths:** wide reach, flexibility in time and location, accessibility, free of charge
- **Weaknesses:** low level of interaction, high dropout rates, no support from teachers or peers, how to make sure the knowledge is internalised, limited options for evaluation, differences in recognition between universities, no space for extra studies in degrees
- **Opportunities:** continuous learning, intercultural learning, democratisinc access to education and expertise, to connect with other activities, can be used as learning material in other studies, one tool in a bigger toolbox of education, collaboration and co-creation
- **Threats:** misuse of AI, misuse of courses to gain easy ECTS, discunnection from local context, budget cuts in in-person and interactive teaching

Together for sustainable futures!



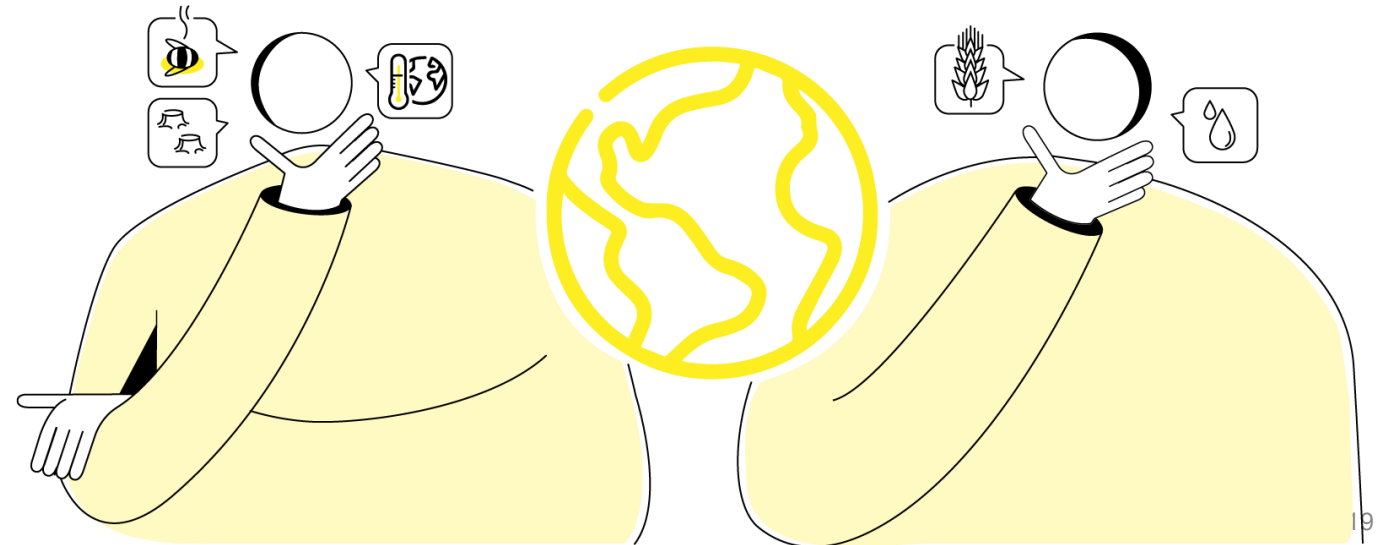
- How to create interaction, collaboration, feedback?
- Our solutions:
 - Online community events
 - Join the LinkedIn group: <https://bit.ly/unacomunity>
 - Virtual Exchanges with African universities (UnaVEx) 2024-2027



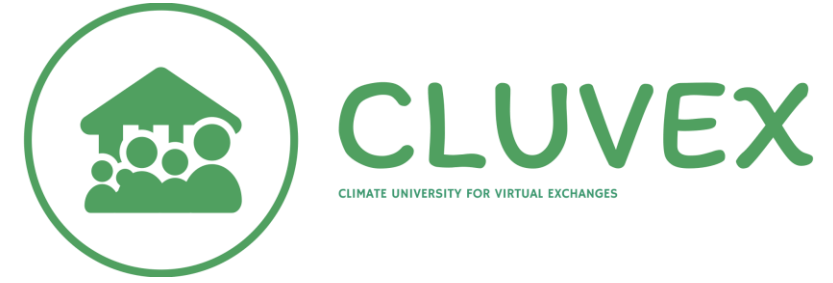
Una Europa Virtual Exchanges (UnaVEx)



- 3-year Erasmus+ project for 2024-2026
- Virtual Exchanges for 2500 students from Europe and Africa
- Based on the Una Europa Micro-Credential in Sustainability
- Partners:
 - University of Helsinki (coordinator)
 - University of Bologna
 - KU Leuven
 - University of Johannesburg
 - University of Nairobi
 - University of Kinshasa
- Associated partners:
 - All Una Europa universities
- <https://www.atm.helsinki.fi/unavex/>



Climate University for Virtual Exchanges



1st VE week 14.-18.10.2024

- Erasmus+ project for 2023-2026
- Virtual exchanges for 2500 students in Finland, Denmark, Ukraine and Armenia
- Students attend a VE week + Climate University courses
- Climate Ambassador Certificate in the end
- Collaborators: University of Helsinki (coord), University of Copenhagen, Odessa State Environmental University, Taras Shevchenko National University of Kyiv, Yerevan State University, BioArt Society
- Registration open: <https://www.atm.helsinki.fi/cluvex/>



Funded by
the European Union

Una Europa Micro-Credential in Sustainability bit.ly/unaeuropamcs



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europa

Mini-ideation

- Do I have a topic for a MOOC?
 - Why is it needed? Who needs it?
 - Is it connected to a bigger whole?
 - With whom to collaborate?
-
- What could the learning outcomes be?
 - What kind of contents? Assignments?
 - Evaluation?



Lead a sustainable life

Greetings to students who want to make the sustainability transformation in the society real

surround yourself with people who have different skills than you

Just do it! Be the change!



Let's do it together

be compassionate when it comes down to sustainability!

One small change at a time is always a movement in the right direction!

Big things start from individuals

Do it progressively! Don't need to make drastic changes! Baby steps :)

Don't care about other people's opinions, trust science and good intentions

Don't be afraid to be the first one to do something

Your butterfly wings matter, thanks to you, we are heading for the right direction 🦋🦋

Insist on it

Stronger together!

This course has exceeded my expectations, I recommend it warmly!

Step by step. It's change.

Just start with small steps - and realize the difference you make

When forming groups, go for "change the world"!

Learn to deal with failures and how to overcome them :) Failure is not an end of the world!

Be the change you want to see in the world! :)



Find your own sweet spot for making the biggest impact!

Don't be afraid to think big

Sustainability is not an abstract concept. It is our now and future! So be present, and learn as much as you can, to be better!



SUSTAINABLE.NOW

course students 2021
University of Helsinki

We do not inherit the Earth from our ancestors; we borrow it from our children

We do not own the Earth

#ClimateUniversity



climateuniversity.fi

