Concept for a YUFE Minor

Planning of a 30 ECTS minor offer within YUFE

Minor Title	Urban Ecology
Minor Coordinator (Name, Position)	Prof. Sarah Czerny, PhD (Faculty of Humanities and Social Sciences, Department of Cultural Studies)
Responsible YUFE University	Maastricht University ☐ University of Antwerp ☐ University of Bremen ☐ University Carlos III of Madrid ☐ University of Cyprus ☐ University of Essex ☐ University of Eastern Finland ☐ University of Rijeka ☒ Nicolaus Copernicus University in Torun ☐
Participating YUFE Universities	Maastricht University ☐ University of Antwerp ☒ University of Bremen ☐ University Carlos III of Madrid ☐ University of Cyprus ☐ University of Essex ☐ University of Eastern Finland ☒ University of Rijeka ☒ Nicolaus Copernicus University in Torun ☒ Other partners
Planned start date	March 2023
Frequency of the offer	Annual ☐ every semester ☐ other fall semester ☐ spring semester ☒
Planned number of students	10-15
Minor Language(s)	English
Minimum language requirements in the program language	English B2 level (CEFR)
Other admission requirements	None
Type of offer	Combined offer ☒ Online offer ☐

	other
Brief, summary presentation of the minor: • Qualification goal • Study content • How are the YUFE profile characteristics fulfilled?	The Minor in Urban Ecology explores the relation between humans and 'nature' in urban environments. When thinking about cities or built-up areas, human interests are often the main central focus of interest. Yet, cities are also spaces where many non-human beings reside, and this Minor will consider these interactions between humans and other living beings who live in urban spaces. The Minor also explores issues of sustainability in urban living such as the use of natural resources (e.g., water), pollution, the place and role of plant life in city spaces, and sustainable methods of food production and consumption. In sum, the course offers students a perspective where, when considering urban living, the human is analytically de-centred to include all forms of life who reside in urban areas. This is with the intention of facilitating students to find solutions into how we as humans can live a more sustainable lifestyle in urban spaces. The Minor consists of an introductory course to Urban Ecology (5 ECTS), where students will learn about the development of this field since its inception, as well as discussions in the field currently. It also offers a series of elective courses, that focus on different areas concerning urban living, environmental issues in general, as well as methods that students can use to explore these issues. Since the central aim of the Minor is for students to think about finding practical solutions in 'real life' contexts, a key part of the Minor is the YUFE Challenge where students will consider an issue related to the city of Rijeka. This is how foodways in the city can be made more sustainable. Global warming, wars, and pandemics have made this question more pressing than ever, not just for the city of Rijeka but for all urban environments. When considering this, students will work with non-governmental organisations, city institutions and the local population in order to see how the interactions between these local stakeholders unfold in practice. The ultimate aim of the Minor is that students will be able to transfer the insights they gain from the courses that are on offer, as well as the YUFE Challenge, to their local urban environments.
Challenge Type	Service Learning ☒ Internship ☐ Research project participation ☐ Organization and implementation of a conference ☐ Other
Possible entry requirements (previous technical knowledge and skills)	None
Description of the benefits of the participants in terms of further studies, personal development and the labour market.	In terms of further studies, Urban Ecology Minor allows for further specialisation and facilitates enrolment in Master level programmes in domain of sustainability studies, environmental studies and sustainable urban planning and development. Similarly, labour market prospects of students include private companies and public units dedicated to urban planning, civil society associations (e.g. NGOs) dedicated to promoting environmental sustainability, research and analytical positions at entities which continuously assess their environmental impact (e.g. companies conducting risk assessment in urban environment), as well as think thanks and research centres focusing on this issue.
Intended Learning Outcomes	**A) Students develop fundamental and generic academic skills** • *Accurately processes scientific knowledge* • *Apply appropriate research methods to analyse problems*

	• *Demonstrate logical reasoning, analytical thinking and argumentation* **B) Students acquire domain specific knowledge in their chosen field of interest** • *Explain and analyse the key current problems and challenges for sustainability at the global, regional and local level, using appropriate research methodologies for examining relevant empirical data and presenting research results* • *Compare and evaluate the relevance of models, theories and methodologies from different fields (social, natural and technical sciences) to sustainability problems and issues* • *Analyse theories, models and methodologies from different fields related to sustainability (social, natural and technical sciences) at an advanced level* • *Apply relevant research theories, models and methodologies to practical problems in the field of sustainable development, interaction between human and natural urban environment, and organizational and economic conditions of sustainability* **C) Students acquire transferable competences** • *Recognize and respond to the need to learn new vocabularies to gain a broad understanding of sustainability-related topics* • *Assess the implications of one's beliefs and actions on the larger community* • *Act in a respectful and appropriate manner in an intercultural context* • *Demonstrate openness and tolerance towards different beliefs on sustainability-related problems* • *Formulate and defend his opinion based on the acquired knowledge* • *Communicate about scientific theories, models and methodologies related to the issue of sustainability with expert and non-expert public*

Course descriptions (ILO and content)

Mandatory

- Introduction to Urban Ecology (5 ECTS), *University of Rijeka*

YUFE Challenge (mandatory)

- Sustainable Foodways in Rijeka (10 ECTS)

Elective

- Interaction Design and Sustainability (2 ECTS), *University of Rijeka*
- Extreme Natural and Social Events (6 ECTS), *University of Rijeka*
- Economy and Environment (3 ECTS), *University of Rijeka*
- Science in Crisis (3 ECTS), *University of Rijeka (online)*
- Croatia as a Tourist Destination (3 ECTS), *University of Rijeka*
- Sustainable Urban Transport Infrastructure (3 ECTS), *University of Rijeka*
- Biodiversity Now (3 ECTS), *University of Eastern Finland (online)*
- Climate Change -eLearning (2 ECTS), *University of Eastern Finland (online)*
- Bioethics (3 ECTS), *University of Antwerp (online)*
- Iweek on Sustainability (3 ECTS), *University of Antwerp (online)*
- Plants in Extreme Environments (1 ECTS), *Nicolaus Copernicus University (online)*
- Societies Facts and Challenges (6 ECTS), *University of Antwerp (online)*

	Introduction to Urban Ecology (5 ECTS)
ILO	Upon successful completion of the course, students will be able to: • Define urban ecology as a practical phenomenon of contemporary societies, and as a subject of scientific research • Define fundamental concepts in the field of urban ecology, such as ecosystem, interaction of living and non-living environment, biodiversity, sustainability. • Present the most important practical challenges in the field of urban ecology • Analyse the perspectives of different disciplines on urban ecology challenges and processes • Recognize the individual and social responsibility for topics related to urban ecology

Content	The primary aim of the course Introduction to Urban ecology is to introduce students to the interdisciplinary field of urban ecology. As a field of scholarly interest, urban ecology explores questions of sustainability in the urban context, relations between humans, animals, and plants in the urban environment, as well as questions about the use of natural resources (e.g. water) in cities and urban spaces. The course will provide students with an outline of the field's history and development, as well as an overview of contemporary interests and advances within the field. Furthermore, it will offer students an insight into the methodologies that they might use when researching areas of interest related to urban ecology. The overview offered by this course aims to give students a solid foundation from which they can more easily follow the other courses that are a part of this Minor and provide them with a conceptual framework for connecting all the diverse content into a meaningful unit.

	Interaction Design and Sustainability (2 ECTS)
ILO	Upon successful completion of the course, students will be able to: • Identify the fundamental principles of governing of common-pool resources (Elinor Ostrom, Understanding Institutional Diversity, Princeton University Press, 2005) and the fundamental propositions of the theory of normative change (Christina Bicchieri, Norms in the Wild: How to Diagnose, Measure and Change Social Norms, Oxford University Press, 2016) • Draft a design of a proposal for an interactive digital application for the purposes of assisting in the solution of a particular problem from the domain of socio-ecological sustainability • Analyse, use and justify the elements of the interaction design (in the case of a digital application) for the purposes of the design draft of an interactive digital application, in terms of - appropriateness for the recognized problem (in the context of socio-ecological sustainability according to the principles of common-pool resource governance) - quality of the justification of the expected development of the new habit in the users, required for the assistance in solving the recognized problem - quality of user experience, particularly affordance, simplicity, usability, and motivation
Content	The course introduces students to contemporary theories and practices of socio-ecological sustainability (identification and governance of common-pool resources, and the problem of collective action) and to fundamentals of interaction design in the context of assisting sustainability problems. The course is focused on the process of the development of practical knowledge, rooting it in contemporary insights from social sciences investigating socio-ecological sustainability.

	Extreme Natural and Social Events (6 ECTS)
ILO	Upon successful completion of the course, the students will be able to: • Critically analyse the impact of society and economy on the environment. • Explain the impact of scientific and technological development on society and the environment. • Describe extreme events in the environment and society, as well as their social consequences. • Apply and promote socially responsible behaviour.

Content	The course aims to develop a critical way of analysing the impact of society and the economy on the environment, as well as the impact of the scientific and technological development on the environment and society. Special emphasis is placed on the development of a critical analysis of the impact of climate change and environmental degradation on social and economic activities. The course also acquaints students with methods of calculation and presentation of models that aim to predict and manage the risks of consequences of extreme events. The final consequences of extreme events, regardless of the origin of their occurrence, are always borne by humans. Students will learn the difference between risk and uncertainty of such events.

	Economy and Environment (3 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • Grasp the complex relationship between the economy and the environment using basic economic postulates and natural laws. • Relate the causes and consequences of negative environmental change to the issue of sustainable development.
Content	The aim of the course is to familiarise students with the basic economic and environmental aspects of the interaction between the economy and the environment and to teach them why economic activities cause negative changes in the environment. The course also aims to enable students to understand the importance of sustainable development as a fundamental framework for future economic progress.

	Science in Crisis (3 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • Describe and critically evaluate what has become known as the 'credibility revolution' within psychological and related biological sciences. • Discuss science as a situated endeavour, • Argue about claims of science in crisis from a multi-disciplinary and interdisciplinary perspective, • Discuss the way the public perceived outcomes of science and factors influencing these processes • Evaluate different Open Science tools and developments.
Content	The course focuses on the critical evaluation of contemporary issues in different scientific issues in different scientific disciplines and the interplay pf the different factors influencing these issues. Due to the training and background of the lecturer, emphasis will be on contemporary developments within life sciences, however, whenever appropriate and possible, examples from other scientific disciplines will be covered (depending on the students; own background and training).

	Croatia as a Tourist Destination (3 ECTS)
ILO	*To be developed*

Content	*To be developed*

	Sustainable Urban Transport Infrastructure (3 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • explain the basic elements of the traffic system in the city and the storm water drainage system • explain the material properties needed for sustainable infrastructure solutions • explain the interaction of the drainage system, transport infrastructure and the urban environment • theoretically investigate the possibilities of application of the selected material, as well as practically (through laboratory work) examine its properties
Content	The course aims to acquaint students with the possibilities of sustainable planning of transport infrastructure, considering used materials, drainage conditions and environmental protection.

	Biodiversity Now (3 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • Recognize reasons for the ongoing biodiversity crisis and its consequences to the human society and personal life • Explore own connection to nature and diverse values you assign to it • Recognize a variety of approaches and tools to protect biodiversity, increase biodiversity and promote sustainable use of biodiversity • Apply the issues to own field of studies/work and learn how to be part of the solution
Content	The course consists of five modules and a pre-course part. The contents studied in the course: • Biodiversity crises and the concept of biodiversity • Threats to biodiversity • Protecting biodiversity • Topical discussions and questions in the field of biodiversity Each module contains videos, reading materials and exercises. There are different kind of exercises to deepen thinking and to learn multidisciplinary, and quizzes to test knowledge. All the reading material and videos can be watched without passing the quizzes, but completion of course requires passing the quizzes/tests in the right order and making other exercises. **How to pass the course:** Independent online studying 54 hours includes videos, reading materials, exercises and tests. Passing the course requires passing the exercises and tests. **How to study the course:** Online-studying independently, spring 2023.

	Materials: Online material, which includes videos, audios, reading materials and different kind of exercises. Online literature, to be announced in the course. **Additional information**: This is a Climate University -course. **Keywords**: Biodiversity, biodiversity crises, sustainability, environmental change

	Climate Change -eLearning (2 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • Understand main basic knowledge about climate change as a scientific phenomenon, as well as about mitigating it and adapting to it. • Understand the basics of how climate functions and is able to define causes and consequences of climate change. • Explain what measures can be taken to mitigate climate change and how it is possible to adapt to it. • Look at climate change from various perspectives and make connections between the environment, the economy and different parts of society.
Content	The course is based on the content of the Climate.now online course: Climate change - what is it about, the climate system, the future of the climate, the impacts, the mitigation, the adaptation and the big issues. Modes of study: Continuous evidence-based assessment: learning diary and multiple-choice questions. Modes of study will be agreed in detail at the beginning of the course. Further information: Teaching language is English or Finnish. It is possible to complete the course remotely. Content and modes of study will be agreed in detail at the beginning of the course. The number of participants in the course is limited.

	Bioethics (3 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • be acquainted with the ethical problems and discussions raised by biotechnology, biomedical sciences and human impact on the biosphere in general. • demonstrate independent critical thinking, based on scientific relevant data and on the traditions and methods of ethical reflection that steer implicitly or explicitly the actual social-ethical debates. • have an understanding of main ethical theories and bioethical principles and methodology. They will understand and form an opinion on important debates in bioethics. • form and write an informed opinion on a topic in current bioethical debate.
Content	After an introduction to ethics including methodology of the discipline, the student participates in 4 seminars, each of which is devoted to a specific theme. An overview of the lessons this year: • Lesson 1: Introduction to Bioethics

	• Lesson 2: Moral theories • Lesson 3: Applied ethics • Lesson 4: Experiments on humans, buen vivir • Lesson 5: Biodiversity • Lesson 6: Animal experimentation • Lesson 7: Genetically modified organisms • Lesson 8: Epigenetics

	Iweek on Sustainability (3 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • relate the overarching theme of the international week to the knowledge acquired in the different areas of business administration and business economics. • view the overarching theme and these areas from an international perspective. • apply gained knowledge in an international team. • produce a well-structured written report and/or share the results of group work through a clear presentation in English, showing the capacity to synthesize. • reflect ethically and critically on their topic within sustainability.
Content	The I-week is an intensive project, taking place during 1 week (dates to be confirmed). Students should be available for (online or physical) lectures and international group work from 8.30 am until 5 pm. The objective of the International Week is to foster a global perspective and intercultural climate. By exposing students to international perspectives on current issues in management, the international week experience will provide an opportunity to reflect on ethical issues in the business world, through a multidisciplinary approach. Students will participate in lectures delivered by foreign visiting professors and high-level managers of profit/non-profit organizations. The International Week focuses on the topic of sustainability, which refers to the long-term survival chances of a system, which is based on interactions with many other subsystems and a fair distribution of resources and opportunities. Sustainability can be approached and analysed in different contexts, such as the geographical context (BRIC, EU, ASEAN , etc.), the industrial context (sector/type of organisation) or the functional context (marketing, finance, production, strategy, etc.). In the different lectures/workshops these different contexts will be illustrated and discussed. In plenary sessions the global issues of sustainability will be presented by international academics as well as (business) managers. These sessions will illustrate how theory is put in practice. Specific themes or contexts can further be discussed in smaller groups. A group work helps students to learn how international organisations are setting up their sustainability strategy.

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	Plants in Extreme Environments (1 ECTS)
ILO	To be announced
Content	The aim of the course is to provide students with issues concerning the extremophile plants, their environments and their adaptations to extreme condition: water deficit, salinity, flooding etc. The wild living plants from the extreme environments introduced as new crops will be also introduced, the adaptation of extreme land not yet being used for agriculture, genetic modification of crops in to adjust for better growth and development under stress conditions, examples of agricultural land use extremely unfavourable for plants in different parts of the world.

	Societies: Facts and Challenges (6 ECTS)
ILO	Upon successful completion of the course, the student will be able to: • Understand the links, causes and consequences of the most important social developments within the welfare state. • Know the local, national, European and global context and is able to situate important social dilemmas within this context. • Have a critical attitude towards this societal and institutional context and its development.
Content	This course discusses some actual problems of the welfare state: • Growth and crisis of the welfare state • Welfare, economic growth, inflation, employment • Demographic developments • Social organisation of the welfare state • Government as redistributor

	• Poverty and inequality • Distribution of public services • Political democracy • Effectiveness of social policy