



# **International 4EU+ Semester in Geography / Geosciences**

## **4EU+ Plug-In Modules**

**Fall Semester 2024**

## 4EU+ Plug-In Modules

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The following pages present an overview of the 4EU+Modules as offered during the Fall Semester 2024. Each module contains information about the course options.

The exact course dates will be published in summer before the start of the semester.

# 1. Copenhagen University

## Module 1: Human Geography and Geoinformatics (Block 1)

*This module contains courses addressing human geography in a broad sense, including topics such as development, economic, and social geography, as well as human-environment interactions and land use change. In addition, there is a GIS component for application of GIS to human geographical analysis. The focus is global, but there are more elements of Global South topics in this module.*

### Content

**Courses:** 4

**ECTS:** 7,5 each

**Dates:** September – November

### Course Options:

- Environment, Society and Development in the Global South
- The Dynamics of City Regions: Social and Economic Change
- Land Use Transitions in the Global South
- Applied GIS and Geoinformatics for Urban Spatial Analysis

## Module 2: Human Geography and Geoinformatics (Block 2)

*This is a continuation of module 1, addressing human geography in a broad sense, including topics such as development, economic, and social geography, as well as human-environment interactions and land use and global value chains. In addition, there is a GIS component for application of GIS to human geographical analysis. The focus is Global, but there are more elements of Global North topics in this module.*

### Content

**Courses:** 4

**ECTS:** 7,5 each

**Dates:** November-December

### Course Options:

- Advanced Geoinformatics
- Urban and Rural Transformation: uneven geographies in the Global North
- Globalisation and Dynamics in Global Value Chains
- Rural landscapes: transformation and governance

## Module 3: Physical Geography and remote sensing (Block 1)

*This module focuses on a wide range of physical geographical topics such as climate change, coastal geoscience and soil science. It also addresses remote sensing of the environment, which has both physical and human geographical applications. The focus is global.*

### Content

**Courses:** 3

**ECTS:** 7,5 each

**Dates:** September – November

**Course Options:**

- Ecosystems, Climate and Climate Change
- Remote Sensing of the Bio-Geosphere
- Coastal Geoscience

**Module 4: Physical Geography and remote sensing (Block 2)**

*This is a continuation of module 3. It focuses on a wide range of physical geographical topics such as glacial geoscience and soil science. It also addresses advanced remote sensing and spatial analysis, which has both physical and human geographical applications. The focus is global.*

**Content**

**Courses:** 3

**ECTS:** 7,5 each

**Dates:** November-December

**Course Options:**

- Glacial Geoscience
- Environmental Soil Science
- Spatial and Temporal Pattern Analysis

## 2. Heidelberg University

**Module 1: Challenging Topics in Urban & Economic Geography**

*This module brings together courses in urban and economic geography. Relevant theories, current developments, actual discussions and empirical studies.*

**Content**

**Courses:** 3

**ECTS:** 5 each

**Dates:** October,14-December, 20

**Course Options:**

- Mobilities
- Governance Case Analysis
- North American Cities

**Module 2: Physical Geography**

*This module combines methodological aspects for the investigation of soils and sediments in the field and in the lab with current issues of quaternary landscape evolution and the study of natural hazards.*

**Content**

**Courses:** 3

**ECTS:** 5 each

**Dates:** October, 14-December, 20

**Course Options:**

- Geomorphological and geophysical investigation of quaternary soils and sediments
- Sedimentological and geochemical analyses of soils and sediments
- Hazards in drylands
- Natural hazards in the Anthropocene

### 3. University of Milan

**Module 1: Food Economies**

*Food systems are responsible for around one-quarter (26%) of global greenhouse gas emissions. This includes emissions from land use change, on-farm production, processing, transport, packaging, and retail. Therefore, studying them is the first step to understanding what is wrong and building a newer and better economy for our collective future. This module will deepen your knowledge on how the food industry functions, legally, practically, as well as subjectively.*

**Courses:** 3**ECTS:** 5 each**Dates:** October-January**Course Options:**

- Food Chain in the Global Market
- Food Marketing and Consumer Behaviour
- Environmental Management
- Environmental and Food Law (OPTIONAL)

**Module 2: Food Industry and Sustainability**

*Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. As the food industry and the energy will play a more and more fundamental role for our progress, making them as sustainable as possible is indeed crucial. This module will give you a brief overview of the state-of-the-art of international regulations regarding environmental matters, to then go into the details of economic practices for both energy and sustainable businesses.*

**Courses:** 3**ECTS:** 6 each**Dates:** October-January**Course Options:**

- Environmental and Food Law
- Energy Economics
- Environmental Management (OPTIONAL)

## Module 3: Sustainable Development and Environmental Stewardship

*This module charts a course through the essential themes of sustainable development, blending agricultural innovation, environmental policy, economic analysis, and resource management. It comprehends a focus on transforming agricultural waste into resources using clean technology, setting the stage for a deeper understanding of sustainability in practice. Students will then navigate the complexities of green public procurement and its role in fostering sustainable development, alongside learning quantitative methods for evaluating environmental and policy impacts. The module culminates in examining the stewardship of georesources, emphasizing their importance in a sustainable and circular economy. Designed for those who aspire to make a difference, this module equips future leaders with the knowledge and skills to drive sustainable innovation across sectors and scales, paving the way for a harmonious, prosperous future.*

**Courses:** 3

**ECTS:** 6 each

**Dates:** October-January

**Course Options:**

- Waste Management and Sustainability
- Green Procurements
- Georesources and Sustainability
- Applied Environmental and Resource Economics (OPTIONAL)

## 4. Sorbonne Paris

### Module 1: Environmental changes and human impact: geographical perspectives

*This module combines courses on different topics: from ecological challenges to social questions.*

**Courses:** 3

**ECTS:** 3 each

**Dates:** September-December

**Course Options:**

- Ecological challenges from a multidisciplinary perspective
- Approche intégrée des bassins-versants (M1)
- Ecologie urbaine, ville durable (M2)

### Module 2: Cultural and Social Geography

*Food is central to the social practices of human groups and an important topic in Social Geography.*

**Courses:** 1

**ECTS:** 5

**Dates:** September-December

**Course Options:**

- Religion and Food

### Module 3: Geography of Migration

*This module adapts several concepts of social sciences to migratory processes.*

Part I - Geography of Migration

Part II - Methodology

**Courses:** 3

**ECTS:** 5 each

**Dates:** September - December

**Course Options:**

- The migrants' body in European area
- European fieldwork and visual anthropology
- Quantitative methodology in social sciences

## 5. Charles University Prague

### Module 1: Physical Geography: Hydrological and meteorological hazards

*This module focuses on natural hazards related to hydrosphere and atmosphere. It provides an overview of contemporary big ideas in physical geography, recent approaches to flood risk management, hydrological modelling and it is also devoted to high-impact weather phenomena such as heat waves, heavy rains etc.*

**Courses:** 4

**ECTS:** 3-5 each

**Dates:** October-January

**Course Options:**

- Hot topics in Physical Geography
- Flood risk management
- Modelling of hydrological processes
- High impact weather phenomena

### Module 2: Advanced GIS and remote sensing applications

*This module provides different courses of data analysis and visualization.*

**Courses:** 4

**ECTS:** 4-5 each

**Dates:** October-January

**Course Options:**

- 3D modelling and geovisualization
- Time series analysis in remote sensing
- Advanced GIS and Database Techniques for Urban and Population Studies
- Advanced Earth observation for urban and population studies

## 6. University of Warsaw

### Module 1: Geography of Sustainable Tourism

*This module brings together courses in tourism and socio-economic geography. Relevant theories, current development, examples, actual discussions and empirical studies.*

**Courses:** 3

**ECTS:** 5 each

**Dates:** October - December

**Course Options:**

- Concepts in Tourism Geographies
- Heritage Tourism
- Tourism and Cities

### Module 2: Global and Regional Geography

*The module combines the regional and global approach to the geography of the world. The courses present contemporary, global problems from different perspectives (environmental, political, cultural, socio-economic) and covers the issues of the relations between local and regional development.*

**Courses:** 3

**ECTS per course:** 4-9 ECTS

**Dates:** October – December

**Course Options:**

- Global problems in the contemporary world
- Geography of the World
- Sustainable development - between global and local perspectives

### Module 3: Introduction to analysis and visualization of spatial data acquired from databases and satellite images

*The module provides introduction to the process of spatial data acquisition, analysis and visualization. The focus is given into the two kinds of data sources: satellite imagery as a source of raster data and spatial databases with vector data. There are covered theoretical foundations, but the emphasis is put on the practice with use of GIS software of different kinds.*

**Courses:** 3

**ECTS:** varying: 3, 5 or 7 ECTS each

**Dates:** October - December

**Course Options:**

- Data acquisition and display
- Data processing and visualization
- Change detection analysis and thematic mapping



## 7. Complementary course (all universities)

### **Urban Regulations and Political Memory: Towards understanding Spatio-Temporal aspects of Urban Development PLUS (UNREAD)**

(Online + on-site) (Lead: University of Warsaw)

*Key topics of the course are driving forces of urban changes, the development of smart cities and interdisciplinary methodologies of urban studies. The project concerns change in the conditions of the urban development of smart cities in Poland, Italy, Czechia and Germany, according to three dimensions: past (history), present (law) and future (geography), emphasizing an integrated and interdisciplinary approach in order to understand the complexity of new urban centres in which real estate development must coexist with the protection of the environment and with the history and heritage of the local community. <https://unreadplus.wpia.uw.edu.pl/>*

**Courses:** 1

**ECTS:** 5 (Online course), + 3 (On-site conference)

**Dates:** October – December, conference in March