

Specialisation: Economy, climate change and sustainability



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- Era of **Anthropocene** □ humanity and global economy significant factors on biological, geological and atmospheric processes on earth
- Economic system is **embedded in ecosystems**: no economic activity without nature
- Production and consumption: inevitably connected to the use of natural resources and consequently a range of **environmental impacts** (most notably, climate change) as well as **social issues** (e.g. inequality in exposure to climate change impacts)
- Enormous challenges to economies, to businesses, to politicians, to consumers as well as to civil society □ **rapid and far-reaching transitions** in the use of energy, materials, land, urban structures and infrastructure, as well as industrial production systems

About this specialisation

- Introduction to the **interrelations** of socio-economic and natural systems
- Understanding the **socio-economic drivers**
- **Strategies** and practices of policy makers and business that address the challenges and seize the **opportunities** from a transformation towards a climate-friendly and resource-efficient economy
- **Tools and methods** to analyse the economy's contribution to environmental problems and to investigate **options to transform the economy** towards a more sustainable future

- **Our expertises:** empirical assessments of natural resource use and climate impacts, ecological macro-economics and political economy, environmental governance, business models of resource efficiency and circular economy, behaviour and lifestyle changes

Overview of four courses

- **Economy and Environment:**

- Economy and Environment I:
Climate Change, Policy and Justice
- Economy and Environment II:
Ecological Macroeconomics

- **Sustainable Resource Management:**

- Transforming the economy towards sustainability I:
Why? - Concepts and trends of natural resource use
- Transforming the economy towards sustainability II:
How? - Actors and solutions for sustainable resource use

Schedule of courses

- BBE specialisation can only be started in winter semester
- German elective courses can also start in summer semester
- Current schedule:
 - Winter semester:
 - Economy and Environment (German)
 - Sustainable Resource Management (English)
 - Summer semester:
 - Economy and Environment (English)
 - Sustainable Resource Management (German)
- Potential future schedule:
 - Offering all courses in both German and English each semester from WS 22/23

Economy and Environment I: Climate Change, Policy and Justice

Climate Change and How We Talk About It

- Introduction to Climate Change
- Climate Change Communication

Growth and Wellbeing

- Sustainable Development and Indicators
- (De)Growth and Decoupling

Climate and Environmental Policy

- Carbon Pricing
- EU Climate Policy and Emission Trading System (ETS)

Climate and Environmental Justice

- Human Right, Health and Equity Implications of the Climate Crisis
- Socioeconomic Disparities in Environmental Quality

Economy and Environment II: Ecological Macroeconomics

Fossil fuels and the economy; Decoupling?

- Energy mix; Oil, oil-prices, and macroeconomics
- Coupling of economic growth and environmental impact; Energy rebound effects

Work and human welfare

- Definitions of (sustainable) work; Working Time Reduction
- Welfare states and environmental states

Nature and Capitalism

- Sociometabolic regimes; nature, capitalism, domination and control
- Commodification of nature; Regulation theory

Actors, social movements and change

- Trade unions and workers movements
- Current environmental and social movements

Transforming the economy towards sustainability I: Why? - Concepts and trends of natural resource use

Natural resource use: concepts and trends

- Societal metabolism / Territorial vs. footprint perspectives
- Empirical trends of resource extraction, trade and consumption

Socio-economic aspects of natural resource use

- Decoupling economic growth from natural resource use
- Rebound effects of resource efficiency

Earth observation science for sustainable resource use

- Satellite-based data, indicators and modelling
- Applications of remote sensing to monitor climate change and resource use impacts

Globalisation and international trade

- Structure of the global economy, supply chains, transport emissions
- Options for more sustainable globalisation patterns

Transforming the economy towards sustainability II: How? - Actors and solutions for sustainable resource use

Economic actors

- Sustainable entrepreneurs
- Sustainability reporting
- Field trip to company with sustainability agenda
- Simulation games

Political actors

- Resource use policy instruments, e.g. circular economy
- Policy concepts on various levels (UN / EU / Austria)
- Guest lecture

Individuals and Civil Society

- Options to reduce individual footprints
- Civil society as an actor



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