

Syllabus
BREM3001E Markets and the Economics of Natural Resources
Marco Rudolf
Summer Semester 2024

Level	Bachelor	
Credits	5 ECTS	
Student Contact Hours	4 (45 minutes)	
Workload	150 hours, 60 hours within class and 90 hours for self-study	
Prerequisites	semester 1 and 2 completed (not more than 10 credits missing)	
Time	Monday, 13:45-15:15 and 15:30-17:00	
Room	W1.3.04	
Start Date	18.03.2024	
Lecturer(s)	Name	Marco Rudolf
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	Virtual Office	By appointment
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Summary

In general, we discuss why we have to care about natural resources essential to production from the business, the economic and the environmental perspective. In the course you will learn how important resource markets are functioning and how our topics are related to findings from resource economics. We aim at understanding the prerequisites for the formation of resource markets, as well as developments (e.g. prices or volatility, market failures) on important resource markets.

Outline of the Course

1. Introduction
2. Review of Basic Economic Concepts
3. Economic View on Natural Resources
4. Market Deficits and Natural Resources
5. Introduction to specific Natural Resources and their Markets
6. Specific Resource Markets and Market instruments
7. Student presentations on chosen topics concerning the economics of Natural Resources

Course Intended Learning Outcomes and their Contribution to Program Intended Learning Outcomes / Program Goals

Program Intended Learning Outcomes		Course Intended Learning Outcomes	Assessment Methods		
After completion of the program the students will be able...		After completion of the course the students will be able...	Participation in Class	Presentation	Essay
			20%	50%	30%
			Individual	Collective	Collective
1 Expert Knowledge					
1.1	...to demonstrate their distinguished and sound competencies in General Business Administration.	... to understand the role and importance of developments on resource markets as a framework condition for enterprises.		x	x
1.2	...to demonstrate their distinguished and sound competencies in Economics.	... to understand resource economics and their implications for developments on resource markets as well as effects of such developments on enterprises and the macroeconomy in general,		x	x
1.3	...to have command of legal methodology for case solutions on basis of claims.	... to understand trading instruments on resource markets, and non-market based approaches to manage natural resources.		x	x
1.4	...to solve business problems based on profound data research skills and by applying quantitative methods.	... to assess developments on resource markets quantitatively and applying general statistic methods to resources.		x	x
2 Digital Skills					
3 Critical Thinking and Analytical Competence					
3.1	...to implement adequate methods in a competent manner and to apply them to complex problems.	...to identify causes / consequences and benefits / risks of developments on resource markets and availability of resources.	x	x	x
3.2	...to critically reflect and interpret findings and to develop comprehensive solutions for complex problems.	... to discuss analytical findings related to business and economic topics on causes / consequences and benefits / risks of developments on resource markets and availability of resources.	x	x	x
4 Ethical Awareness					
	...to develop sound strategies in the areas of ethics, sustainable development and social responsibility and are able to apply them to typical economic decision-making problems.	...to interpret analytical findings with respect to their consequences from the business perspective and the perspectives of different economic actors, identifying relevant trade-offs.	x	x	x
5 Communication and Collaboration Skills					
5.1	...to express complex issues effectively in writing.	... to structurally approach questions regarding natural resource markets and critically discuss possible solutions.			x

5.2	...to demonstrate their oral communication skills in presentations.	... to present the findings of their research projects in form of short presentations and a scientific poster.		x	
5.3	...to work successfully in a team by performing practical tasks.	... to collaborate on a chosen research project in the resource context.	x	x	x
6 Internationalization					
6.1	...to understand and explain business challenges in an international context.	...to understand relevant instruments available on international re-source and financial markets.	x	x	x
6.2	...to successfully demonstrate awareness of cross-cultural differences.	... to recognise different cultural interests in natural resource issues and take them into account in their analyses.	x	x	x

Teaching and Learning Approach

The course is organized as an interactive lecture in which you are expected to actively take part in form of group works, discussions and short presentations (non-graded). You are invited to bring your own areas of interest in the field of resource economics to the course.

We will use theoretical models and quantitative analyses to understand concrete problems in the resource economics context. Over the course you will pick a resource problem of your choice and analyse this problem using the theoretical knowledge developed in class.

Assessment

The assessment will be based on a short essay introducing your chosen resource problem (30%), a poster presentation at the end of the semester (50%), and your active participation in class during the semester (20%).

Possible topics that you can chose from (list will be extended)

- Market for natural gas: Trading and price developments following upon the Russian attack on Ukraine.
- How to establish a new resource market? The case of green hydrogen
- Markets for CO₂: The European Emission Trading System
- Markets for renewable resources (e.g. avocado in Mexico or water in Chile) and inequality: who has access when growing demands lead to increased resource scarcity?
- ...
- Propose your own topic

Literature and Course Materials

Basic literature:

Baker, R. P. (2010): *The Trade Lifecycle: Behind the Scenes of the Trading Process* (Wiley Finance)

Clark, E. et al. (2001): *International Commodity Trading: Physical and Derivative Markets* (Wiley Trade Series)

Conrad, J. (2011): *Resource Economics*. Cambridge University Press

OECD (2012): *Sustainable Materials Management: Making Better Use of Resources*, Paris

Perman, R. et al. (2011): *Natural Resource and Environmental Economics*, Pearson.

More detailed information about the literature for every chapter will be given during the lecture.