

Syllabus
ECO3012E Economics of the Digital Economy
Prof. Dr. Martin Leroch
Summer Semester 2024

Level	Bachelor	
ECTS-Credits	3	
Students Contact Hours	2 (2x45 minutes)	
Workload	90 hours, 30 hours within class and 60 hours for self-study	
Prerequisites	Proof of level B2 in English; Basic understanding of microeconomics, proven by having passed the exam in "Introduction and Microeconomics"	
Time	Friday, 11:30-13:00	
Room	W3.2.02	
Start date	March 22, 2024	
Lecturer	Name	Prof. Dr. Martin Leroch
	Office	W4.01.04
	Virtual Office	Internet Office Martin Leroch
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Short Description

An increasing share of our economy is based on digital goods and services, which constitute the core of what is termed digital economy. This course will introduce the economics of the digital economy. The digital economy is characterized by transient market behavior, feedback mechanisms, international impact, many stakeholders, and technological dependence.

The main aim is for students to understand the logic of the structures of the digital economy, i.e. understand why these structures lead to certain outcomes - such as large market power of some companies or non-monetary pricing. We will also touch upon ethical and legal aspects associated with the digital economy.

Wherever adequate, we will use recent legal rulings or other recent developments and case studies as motivating or illustrating examples. Occasionally, we will also refer to behavioral insights to understand why consumers (or users) might behave differently in the digital domain as compared to the physical domain.

Outline of the Course (subject to change)

1. Introduction to the digital economy
 - Digitization of the economy
 - The digital economy ecosystem
2. Fundamentals of digital economics I
 - Multi-sided platforms
 - Network effects and positive feedbacks
3. Fundamentals of digital economics II
 - Path dependence
 - Lock-in and switching costs
 - Formation of monopolies in the digital economy
 - The “long tail”
4. Digital markets
 - Stakeholders and relationships in digital markets
 - The layered internet model
 - Competition, cooperation, and coopetition
5. Digital business, strategy, and innovation
 - Digital innovations
 - Business models
 - Strategic positioning
6. Advanced digital economics
 - Estimating the value of networks
 - Modeling of digital markets
7. Some legal developments
 - Digital Markets Act
 - Digital Services Act
8. Ethical challenges in the digital economy
 - Challenges for society
 - Challenges for ethics
9. Summary

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

Program Intended Learning Outcomes	Course Intended Learning Outcomes	Assessment Method
After completion of the program the students will be able...	After completion of the course the students will be able...	Choose the Assessment Method 1 100% Individual
1 Expert Knowledge		
1.1 ...to demonstrate their distinguished and sound competencies in General Business Administration.	... to apply concepts of business models to the digital economy and understand distinguishing features of the digital economy.	X
1.2 ...to demonstrate their distinguished and sound competencies in Economics.	... to understand the structural peculiarities of the digital economy and the consequences for market structures and market outcomes.	X
2 Digital Skills		
2.4 ...to handle the professional use of digital technologies in a responsible manner.	... understand the consequences and ethical implications of many business models and behaviors in the digital economy.	X
3 Critical Thinking and Analytical Competence		
3.1 ...to implement adequate methods in a competent manner and to apply them to complex problems.	... apply adequate economic models and concepts to identify structural incentives and develop expedient solutions.	X
3.2 ...to critically reflect and interpret findings and to develop comprehensive solutions for complex problems.	... understand and analyze the structural incentives underlying the digital economy and how these need to be altered to achieve different outcomes.	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 identify ethically desirable states and behaviours, and how to achieve these via adequate incentive structures.	X
5 Communication and Collaboration Skills		
6 Internationalization		
6.1 ...to understand and explain business challenges in an international context.	... to understand the logic underlying global efforts to regulate the digital economy and how this logic is shaping international legal codes such as the Digital Markets Act of the European Union.	X

Teaching and Learning Approach

The course mainly consists of interactive lectures. We will introduce case studies and business practices which will serve as basis for discussion and the application of the theories introduced in class.

Literature

Main text:

Øverby, Harald and Jan A. Audestad (2018), *Digital Economics: How Information and Communication Technology is Shaping Markets, Businesses, and Innovation*, Scotts Valley: CreateSpace.

Additional background:

Belleflamme, Paul and Martin Peitz (2015), *Industrial Organization: Markets and Strategies*, Cambridge: Cambridge University Press, chapters 20-23.

Further literature recommendations will be made in class.

Assessment

Exam

Rules of Conduct for Online Teaching (if necessary)

[Link to the Rules of Conduct for Online Teaching](#)