English courses of the Doctoral School in Economics

		Course
Theoretical courses (90-102 credit points)	**Common compulsory, general courses** (54 credit points)	Microeconomics
		Basics of Research Methodology
		Theories in Economics
		Introduction to Quantitative Research
		Communication of Science
		Macroeconomics
		Multivariate (Advanced) Statistics
		Introduction to Qualitative Research
		Publication Seminar
	Programme-specific compulsory courses (30 credit points)	**Programme of Economic Policy and Globalization**
		Economic Policy
		Globalization
		Monetary and Fiscal Policy
		Econometrics
		Industrial policy and Innovation
		Programme of Ecological Economics
		Ecological Economics I.
		Ecological Economics II.
		Ecology and Planetary Health
		Values of Nature in Decision Making
		Technology and Sustainability
	Elective courses (6-18 credit points)	Methods in Territorial Analysis
		Modern Monetary Theory and Praxis
		Advanced Writing in Social Research
		Science with Societal Impact
		Advanced Qualitative Research
		Competitiveness in the EU

Course name: Microeconomics

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)
The course builds on students' existing knowledge of microeconomics and explores advanced topics that are generally not covered in intermediate courses. The primary aim is to enable students to apply microeconomic tools and methods to issues related to their own research projects, thereby strengthening the connection between theory and practice.

Topics
- Consumers' decision-making
- Firms' behavior
- Market failures
- Applications of microeconomic models to students' research fields

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The students
- understand advanced concepts of consumer and firm behaviour,
- are familiar with the main types and causes of market failures,
- recognise the potential of microeconomic modelling in applied research,
- know how to link microeconomic theory with their own field of study.

b) Skills
The students
- apply microeconomic methods to analyse concrete research problems,
- critically evaluate consumer and firm decision-making processes,
- present and defend their own research ideas using microeconomic concepts,
- integrate theoretical models into empirical research.

c) Attitudes
The students
- are open to interdisciplinary applications of microeconomics,
- show commitment to integrating theoretical insights into their research,
- adopt a critical but constructive approach when discussing peers' work.

d) Autonomy and Responsibility
The students
- independently prepare and present a research-related microeconomic analysis,
- take responsibility for their own learning and active participation in class discussions,
- provide professional feedback on peers' presentations,

- demonstrate autonomy in connecting microeconomic theory to their own research agenda.

3. Compulsory / Recommended Readings

There is no single compulsory textbook. Course materials are provided in the form of lecture videos and slides. Students are expected to complement these with literature related to their own research topic. Suggested references may be provided individually depending on research areas.

Course name: Basics of Research Methodology

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (Objectives and Topics)

The aim of the course is to provide a comprehensive overview of the basics and expectations of social science research, which are essential for conducting successful scientific work. During the course, students will become familiar with the different phases of research. Furthermore, the course aims to support students in writing academic papers (especially research plans and doctoral dissertations), in learning the rules of academic writing, and in presenting research results in a structured and effective manner.

Topics:
- Basics and expectations of scientific inquiry
- Defining research problem, objective, and question
- Conceptualization: collecting and processing literature (characteristic mapping)
- Operationalization: conditions of data collection and analysis
- Writing research results: research plan and doctoral dissertation
- Policy implications and ethical issues of research

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student...
- Has comprehensive knowledge of social science research methodology, its key concepts, processes, theories, and debates.
- Knows the entire research process from problem definition and formulation of questions, through conceptualization and operationalization, to data collection, analysis, and presentation of results.
- Is familiar with the rules and practices of academic writing, academic publishing, and doctoral dissertation preparation.
- Knows the ethical and policy aspects of research, as well as its social responsibilities.
- Is able to process, organize, and critically interpret international literature.

b) Skills
The student...
- Is able to independently identify research problems, formulate research objectives and questions.
- Can select and apply the methodological tools needed for research.
- Is capable of preparing a research plan, implementing it, and presenting the results in a structured and academically rigorous way.
- Applies and critically evaluates the literature, and is able to synthesize new relationships.
- Can recognize unforeseen methodological problems and develop academically rigorous solutions.
- Is able to apply interdisciplinary approaches and design new research projects.
- Communicates research results appropriately to both professional and lay audiences.

c) Attitude
The student...

- Is open to scientific innovations and methodological novelties.
- Approaches all stages of the research process with a critical and reflective attitude.
- Is committed to scientific objectivity, research ethics, and high-quality academic work.
- Strives for continuous self-improvement and professional development.
- Values the importance of cooperation in scientific communities and the sharing of knowledge.
- Demonstrates persistence, responsibility, and thoroughness in their work.

d) Autonomy and Responsibility
The student...

- Is able to independently design, implement, and evaluate research projects.
- Takes responsibility for the scientific and social consequences of their research.
- Independently and proactively solves complex methodological and research problems.
- Can take on leadership roles in research communities and collaborate effectively in international academic networks.
- Can participate as a discussion partner in theoretical and practical debates in the field.
- Contributes to the development of new methodological solutions and research directions.

3. Required/Recommended Readings

Required:

Babbie, E. (2009): The Practice of Social Research. Balassi Kiadó, Budapest (Chapters 1-5 and 18-19).

Recommended:

Dunleavy P. (2003): Authoring a PhD. How to plan, draft, write and finish a doctoral thesis or dissertation. Palgrave, New York.

Corbetta, P. (2003): Social research. SAGE, London.

Ghauri, P. – Gronhaug, K. (2011): Research Methodology in Business Studies. Akadémiai Kiadó, Budapest.

Gosling, P. – Noordam, B. (2011): Mastering Your PhD - Survival and Success in the Doctoral Years and Beyond. Springer, Berlin.

Walliman, N. (2006): Social research methods. SAGE, London.

Course name: Theories in Economics

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students know the scope and methods of their scientific area. This course offers an overview on the debates about the subject and appropriate methodology of economics.

The course is based on an anthology which presents the most important authors and basic texts in this field. This textbook provides some historical perspective because students have to realize how fundamental issues accompany the history of economic thought without final solution.

Topics:

1. Classical discussion
John Stuart Mill: On the Definition and Method of Political Economy
2. Positivist views
Milton Friedman: The Methodology of Positive Economics
3. Ideology and normative economics
Joseph Schumpeter: Science and Ideology
Robert H. Frank: Why Is Cost-Benefit Analysis So Controversial?
4. Methodological problems of macroeconomics
Kevin D. Hoover: Econometrics as Observation. The Lucas Critique and the Nature of Econometric Inference
Kevin D. Hoover: Does Macroeconomics Need Microfoundations?
5. Institutional approaches
Geoffrey M. Hodgson: What Is the Essence of Institutional Economics?

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- knows and understands the possible interpretations of the subject of economics
- knows and understands the applicable research methods, their philosophical background and dilemmas,
- understands and can interpret English literature.

b) Skills
The student is able to
- recognize which research method can be applied to his/her own dissertation topic,
- formulate his/her methodological procedure,
- master the terminology related to methodology to be used in international journals.

c) Attitude
The student
- is characterized by a firm professional commitment and acceptance of the need for persistent work,
- is open to methodological diversity,
- is committed to adhering to scientific ethics and professional standards in his/her research.

d) Autonomy and responsibility
The student
- is able to independently plan and implement scientific investigations based on given criteria,
- takes responsibility for his/her own learning process and professional development: actively participates in the learning process in the classroom and outside of class.

3. Mandatory reading:

Daniel M. Hausman (ed.): The Philosophy of Economics Cambridge: Cambridge University Press 3rd edition, 2008

Name of the course: Introduction to Quantitative Research

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is to develop statistical literacy. In the case of a specific problem:

- To recognize when statistics can be applied
- To know which statistical tools can be used, and where to find them
- To correctly interpret and apply the obtained results

Topics:

1. Introduction to quantitative research
    - The role of quantitative research in economics
    - The process of data collection
    - Data types, data quality
    - Sampling techniques, planning sample size
    - Estimation and hypothesis testing
    - Use of statistical data sources in empirical research
    - Use of visualization techniques
2. Use of statistical methods
    - Using SPSS software
    - Comparison of expected values with t-tests
    - Nonparametric tests
    - Crosstabs analysis
    - Analysis of variance
    - Bivariate correlation and regression analysis

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge

The student:

- Knows and understands the principles and methods of managing, organizing, and operating business processes, the methodology of analyzing business processes, and the methodological foundations of decision-preparation and decision-support.
- Possesses basic methods of information collection, mathematical and statistical analysis.
- Knows and understands the concepts of inferential statistics and descriptive statistics, and the differences between them.
- Knows the FAE, EV, and R sampling procedures.

- Knows and understands the concepts of random sampling and representativeness, understands when inferential statistics can and cannot be applied.
- Knows and understands the difference between point estimation and interval estimation
- Knows the steps of hypothesis testing, the essence of its decision-making mechanism, and the considerations for selecting procedures applicable to solving a given problem.
- Knows the types of relationships between variables and understands the differences between the procedures.
- Understands the difference between relationship analysis and causal analysis (e.g. correlation and regression).

b) Skills

The student is able to:

- Apply learned theories and methods to uncover, systematize, and analyze facts and basic relationships, formulate independent conclusions and critical remarks, prepare decision-preparation proposals, and make decisions in routine and partly unfamiliar domestic and international contexts.
- Apply techniques for solving economic problems, considering their conditions and limitations.
- Create and manage data tables using Excel and SPSS for the dataset under study.
- Provide point and interval estimates for the expected value of a population in the case of large samples.
- Formulate hypotheses and test them using appropriate techniques.
- Describe relationships between variables using diagrams, coefficients, and hypothesis testing.
- For the discussed topics (estimation, hypothesis testing for expected value, relationship analysis, and regression analysis), the student is able to:
    - select the appropriate procedure for analysis
    - examine the conditions for applying the selected analysis method
    - perform the selected analysis using computer software
    - correctly interpret the key information from computer outputs

c) Attitude

The student:

- Is receptive to new information, new professional knowledge, and methodologies, and open to new tasks and responsibilities that require independence and cooperation.
- Is open to the statistical application of ICT tools.
- Has a positive attitude toward conducting and using statistical analyses and surveys.

d) Autonomy and Responsibility

The student:

- Takes responsibility for analyses, conclusions, and decisions.
- Acts ethically at every stage of statistical activity.

3. Compulsory / Recommended Readings

Compulsory:

- Field, A. (2013): Discovering Statistics Using IBM SPSS Statistics. Sage Publications, London.
- Ryan, T. P. (2013): Sample Size Determination and Power. John Wiley & Sons, New Jersey.
- Floyd, J. F. Jr. (2014): Survey Research Methods. Sage Publications, Los Angeles.
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Recommended:

- Daniel, J. D. (2016): Applied Univariate, Bivariate, and Multivariate Statistics. John Wiley & Sons, New Jersey (Chapters 1–4).

Course name: Communication of Science

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course

"You don't really understand something unless you can explain it to your grandmother." Although no one knows whether this quotation can truly be attributed to Albert Einstein, it reflects the core idea of science communication. Scientific discoveries are so complex in our day that the average person feels more and more separated and distanced not only from the research findings, but also from the scientists and scientific institutions themselves. Science communication is an art and means to communicate complex scholarly matters to the general public.

Topics

- Overview and relevance of science communication
- Required skills for successful science communication and their development
- Topicality and timing of science communication
- Storytelling
- Verbal and non-verbal communication, non-verbal communication channels
- Engagement and personalization in oral communication
- Review and analysis of good examples (e.g., TEDx)
- Science communication and the press
- Rules of a press release

Requirements and assessment

- Participation in class
- Writing a short summary of the student research plan designed for lay audiences (peer review and analysis in class)
- Creation and presentation of a science communication piece in the form of a pecha kucha (recorded and analyzed in class)
- Creation of a press release

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge

The student will possess an understanding of the theoretical foundations, key methods, and fundamental principles of engaging and addressing a lay audience in science communication.

The student will have a detailed understanding of the conceptual systems and terminology that define science communication, such as storytelling, public speaking, and the selection of appropriate communication channels.

The student will have a knowledge necessary for planning and executing science communication projects, as well as for analyzing both effective and ineffective examples.

b) Skills

The student will be able to creatively analyze scientific information and synthesize complex research findings into a new perspective that is both understandable and relevant to a lay audience.

The student will be able to apply the tools of personal communication, non-verbal cues, and visual communication to effectively convey scientific content.

The student will be able to develop new, creative communication formats (e.g., Pecha Kucha, press releases) to present scientific content in an innovative way for the general public.

The student will be able to create a summary of their own scientific research plan for a lay audience and present it in a compelling manner.

The student will be able to identify and manage unforeseen challenges in science communication (e.g., public misconceptions, misinformation).

c) Attitudes

The student is committed to the responsible and ethical communication of scientific findings to a lay audience and represents the importance of dialogue between science and society.

The student is characterized by an open-mindedness and interest that allows for the continuous monitoring of science communication trends and a receptiveness to new communication tools.

The student is characterized by persistence and professional dedication to the effective, understandable, and impactful realization of science communication.

d) Autonomy and Responsibility

The student is able to autonomously and creatively design and implement a science communication project (e.g., a press release, a presentation).

The student is capable of collaborating at a high level with other professionals (e.g., researchers, journalists) to achieve common communication goals.

The student responsibly upholds the ethical questions of science communication and is able to maintain accurate and responsible information in the face of misinformation.

Mandatory readings and supportive materials

- Andrade, B. B. (2025). The Art of Storytelling in Science: A Personal Journey. Journal of Medical Education and Curricular Development, 12. https://doi.org/10.1177/23821205251318188
- Kohler S and Dietrich TC (2021) Potentials and Limitations of Educational Videos on YouTube for Science Communication. Frontiers in Communication 6:581302. doi: 10.3389/fcomm.2021.581302
- Steven J. Cooke, Austin J. Gallagher, Natalie M. Sopinka, Vivian M. Nguyen, Rachel A. Skubel, Neil Hammerschlag, Sarah Boon, Nathan Young, and Andy J. Danylchuk. 2017. Considerations for effective science communication. FACETS. 2: 233-248. https://doi.org/10.1139/facets-2016-0055
- TEDx - https://www.youtube.com/@TEDx
- FameLab - https://www.youtube.com/@famelab
- Rice University 90 Second Thesis Competition - https://www.youtube.com/@ricegradschool
- Toastmasters International - https://www.youtube.com/@toastmasters
- Popular science journals (e.g., Nautilus, Popular Science, Scientific American, New Scientist, ScienceNews)

Course name: Macroeconomics

Number of classes (per week)**:** 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (objectives and topics)

Aims and objectives of the course
- This class provides an introduction into selected topics in economic growth.
- Delving into the topics will also teach students the basics of macroeconomic modelling.

Students are required to complete an empirical research project, comparing the growth histories of a group of countries, using the tools and data learned during the course.

Topics:
1. Stylized facts about economic development
2. Data sources and methodological issues
3. The role of capital accumulation in economic development, Solow-model
4. Explaining cross-country income differences with the Solow-model
5. The role of new ideas in economic development

2. Learning objectives (core competencies to be mastered)
a) knowledge
Students will
- learn the basic models in economic growth,
- understand their predictions,
- know how the most important measures are constructed,
- understand how to test the models using real-world data.

b) skills
Students will be able to
- predict how changes in the economic environment affect growth,
- systematically analyze a large data set of variables related to economic growth.

c) attitude
Students will
- be able to disentangle the concepts of transitional dynamics from long-run growth, making them a more thoughtful reader of economic news,
- know how to read critically new research on economic development.

d) autonomy and responsibilities
Students will
- have a solid background for studying newer models of economic growth,
- understand how a careful study of this topic should be designed.

3. Reading list

Mandatory:

Jones, Ch. and Vollrath, D. (2013): Introduction to Economic Growth, 3rd edition, W. W. Northon., Chapters 1-4, 6, 11

Recommended:

Jones, C. (2005): Growth and Ideas, Handbook of Economic Growth
Barro, R. J. and Sala-i-Martin, X. (2004): Economic Growth, 2nd edition, MIT Press
Romer, D. (2018): Advanced Macroeconomics, 6th edition, McGraw-Hill

Course name: Multivariate Statistics

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is to develop statistical literacy, focusing on the application of multivariate statistical methods to business and economic problems.
In the case of a specific problem:
- To recognize when statistics can be applied
- To know which multivariate statistical method can be used, and where to find it
- To correctly interpret and apply the obtained results

Topics:
- Multivariate regression
- Principal Component Analysis (PCA), Factor Analysis
- Cluster Analysis
- PLS (Partial Least Squares) models, Path Analysis

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge

The student:
- Has in-depth knowledge of the theoretical foundations and application areas of multivariate linear and nonlinear regression models.
- Understands the theoretical background, methodology, and application areas of Principal Component Analysis (PCA) and Factor Analysis.
- Knows the different methods of Cluster Analysis (e.g. hierarchical, K-means) and their application areas (e.g. market segmentation, typology creation).
- Understands the theoretical foundations, methodology, and application areas of PLS (Partial Least Squares) Path Analysis (e.g. modeling complex relationships).
- Knows the methods of estimating and evaluating model parameters (e.g. maximum likelihood, bootstrap).
- Is familiar with the limitations and conditions of applying models.
- Understands the relationships, similarities, and differences between models (e.g. the relationship between PCA and Factor Analysis).

b) Skills

The student is able to:
- Develop and apply multivariate linear and nonlinear regression models on real data.
- Perform Principal Component Analysis and Factor Analysis, and interpret the results.
- Apply different Cluster Analysis methods and evaluate the results.
- Perform PLS Path Analysis and interpret the results.
- Use software necessary for applying the models effectively.

c) Attitude

The student:

- Is open to applying different multivariate data analysis methods.
- Maintains a critical perspective when interpreting model results.
- Is committed to the ethical and responsible application of models.
- Is aware of the limitations and conditions of applying models.
- Recognizes the importance of data-driven decision making.
- Approaches the application of models in a creative and innovative way.
- Strives for accuracy and detail in interpreting results.

d) Autonomy and Responsibility

The student:

- Is able to independently select the appropriate multivariate data analysis method for solving given problems.
- Is responsible for interpreting and presenting model results.
- Is capable of making professional decisions based on model results.
- Is able to independently identify the limitations and conditions of applying models.
- Is able to adhere to ethical standards related to the application of models.

3. Compulsory / Recommended Readings

Compulsory:

- Field, A. (2013): Discovering Statistics Using IBM SPSS Statistics. Sage Publications, London.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2014): A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM). Sage Publications, London.

Recommended:

- Daniel, J. D. (2016): Applied Univariate, Bivariate, and Multivariate Statistics. John Wiley & Sons, New Jersey.

Course name: Introduction to Qualitative Research

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students

- understand the core epistemological and ontological assumptions behind qualitative research approaches, and
- gain an overview about qualitative research techniques and their application in social research processes.

Topics:

- Epistemology, ontology, and qualitative research
- Quality in qualitative research
- The interview method – planning and carrying out qualitative interviews
- Introduction to qualitative text analysis
- Applying NVivo to carry out qualitative text analysis

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- has the research methodology skills necessary for independent research in the given field of science/specialization and the knowledge necessary for publishing in professional journals.

b) Skills
The student
- is able to plan and implement new projects, conduct research in the given field of science, and develop new techniques and approaches.

c) Attitude
The student
- has the interest and learning ability that enable her to identify and solve research problems in her field that are currently unclear and unpredictable.

d) Autonomy and responsibility
The student
- is able to participate in the formulation of theoretical and practical questions in a leading role and with a high level of cooperation;
- takes responsibility for raising and answering new ethical questions related to the theoretical and practical issues of her profession.

3. Mandatory literature

Brinkmann, S. - Kvale, S. (2015): *InterViews. Learning the Craft of Qualitative Research Interviewing*. Third Edition, Sage, Los Angeles- London-New Delhi-Singapore-Washington DC.

Yilmaz, Kaya. 2013. „Comparison of Quantitative and Qualitative Research Traditions: Epistemological, Theoretical, and Methodological Differences". *European Journal of Education* 48(2):311–25. doi:10.1111/ejed.12014.

Coleman, Phil. 2022. „Validity and Reliability within Qualitative Research for the Caring Sciences". *International Journal of Caring Sciences* 14(3):2041–45.

Kallio, Hanna, Anna-Maija Pietilä, Martin Johnson, és Mari Kangasniemi. 2016. „Systematic Methodological Review: Developing a Framework for a Qualitative Semi-Structured Interview Guide". *Journal of Advanced Nursing* 72(12):2954–65. doi:10.1111/jan.13031.

Hennink, Monique M., Bonnie N. Kaiser, és Vincent C. Marconi. 2017. „Code Saturation Versus Meaning Saturation: How Many Interviews Are Enough?" *Qualitative Health Research* 27(4):591–608. doi:10.1177/1049732316665344.

Fereday, Jennifer, és Eimear Muir-Cochrane. 2006. „Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development". *International Journal of Qualitative Methods* 5(1):80–92. doi:10.1177/160940690600500107.

Titscher, S. – Meyer, M. – Wodak, R. – Vetter E. (2000): *Methods of Text and Discourse Analysis*. Sage Publications, London – Thousand Oaks – New Delhi.

Course name: Publication Seminar

Number of classes (per week): 1
Credits: 6
Type: seminar
Form of exam: practical grade

1. Description (goals, topics)

The aim of the course is that students

- get to know the basic/core knowledge necessary to publish in international scientific journals;
- gain skills and ability to publish in Scopus-indexed journals, from Q1 to Q4.

Topics:

Introduction, course requirements

- Publication requirements of the Doctoral School in Economics, current relevant scientific classifications, PhD dissertation as a monography
- Structure and content of scientific (journal) articles
- Focus of scientific (journal) articles and the PhD dissertation
- Conceptualization, operationalization, measurement – core but often neglected issues in high-quality scientific work
- Systematic literature review, qualitative, quantitative and "alternative" methodologies, journal articles and the PhD dissertation
- Examples of international journal publication processes

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- has the research methodology skills necessary for independent research in the given field of science/specialization and the knowledge necessary for publishing in professional journals.

b) Skills
The student
- is able to plan and implement new projects, conduct research in the given field of science, and develop new techniques and approaches.

c) Attitude
The student
- has the interest and learning ability that enable her to identify and solve research problems in her field that are currently unclear and unpredictable.

d) Autonomy and responsibility
The student
- is able to participate in the formulation of theoretical and practical questions in a leading role and with a high level of cooperation;

- builds and initiates new areas of knowledge with creative independence and initiative, and initiates new practical solutions.

3. Mandatory/recommended literature

Mandatory:

Babbie, Earl R. 2020. *The Practice of Social Research*. Cengage AU.
Xiao, Yu, és Maria Watson. 2019. „Guidance on Conducting a Systematic Literature Review". *Journal of Planning Education and Research* 39(1):93–112. doi:10.1177/0739456X17723971.
„Guidelines for authors":

- Elsevier: https://www.elsevier.com/researcher/author/submit-your-paper
- Springer: https://www.springer.com/gp/authors-editors/journal-author
- Taylor & Francis: https://authorservices.taylorandfrancis.com/data-sharing-policies/basic/
- Routledge: https://www.routledge.com/our-customers/authors/why-publish-with-us
- Sage Publications: https://us.sagepub.com/en-us/nam/resources-journal-authors-and-editors

Recommended:

Journal articles used by professors to demonstrate given publication processes (potentially changing from semester to semester)

Course name: Economic Policy

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The purpose of the course to discuss areas of economic policy where the state overruns its role as regulator. State sector including state owned enterprises can serve many traditional roles but is also bearing serous moral hazards. State sector is a major topic of development economics.

Topics:

- new versions the developmental state concept,
- the transformation of state ownership to private, especially in transition economies of East-Central Europe,
- international aid policy.

Students are evaluated according to their performance during the class. If necessary, an oral exam can be also organized.

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- knows and understands the processes of globalization and the general concepts of economic policy making
- knows and understands the applicable research methods, their theoretical background and dilemmas,
- understands and can interpret English language literature.

b) Skills
The course supports the student to
- to choose appropriate research method for his/her own dissertation topic,
- formulate his/her methodological procedure,
- master theory, terminology related to the thesis topic to be used in international journals.

c) Attitude
The student
- is characterized by a firm professional commitment and acceptance of the need for persistent work,
- is open to methodological diversity,
- is committed to adhering to scientific ethics and professional standards in his/her research.

d) Autonomy and responsibility
The student
- is able to independently plan and implement scientific investigations based on given criteria,

- takes responsibility for his/her own learning process and professional development: actively participates in the learning process in the classroom and outside of class.

3. Mandatory literature

VOSZKA, É. (2019): Crisis Management in Europe: Nationalizations and Privatizations CEU Press

NÖLKE, A. (2018): Dependent versus state-permeated capitalism: two basic options for emerging markets. *International Journal of management and Economics*. 54:4, 269-282.

STALLINGS,B./2016/: Innovation, inclusion and institutions: east Asian lesons for latin America? IN: FOXLEX,A. – STALLINGS,B.eds: *Innovation and Inclusion in Latin America: Strategies to Avoid the Midle Income Trap.*

Szanyi, M. (2019): Some Aspects of State Ownership in East-Central European Transition CEU Press

XU, G.-D./2015/: The institutional foundations of China's unbalanced economy. *Europe-Asia Studies,* vol.67.no.9., pp1351-1370.

NAUGHTON, B./2017/: Is China socialist? *Journal of Economic Perspectives,* vol.31.no.1, pp3-24.

EASTERLY, W./2009/: Can the West save Africa? *Journal of Economic Literature,* vol.47.no.2.,pp373-447.

EDWARDS, S./2016/: Economic development and the effectiveness of foreign aid: a historical perspective. *Kyklos,* vol.68.no.3., pp277 – 316.

DIAO,X.-Sh. –HARTTGEN,K.- McMILLAN,M./2017/: The changing structure of Africa's economies. *World Bank Economic Review,* vol.31.no.2.,pp385-411.

Course name: Monetary and Fiscal Policy

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (objectives and topics)

Aims and objectives of the course

1. This course introduces students to mainstream RBC and New Keynesian DSGE models describing business cycles, with a special emphasis on the role of monetary policy.
2. In class, we are going to discuss the main building blocks of standard macroeconomic models and solve the models using a computer. Students will hand in problem sets, which help them understand the material in detail.

Topics:
1. Introduction to business cycles. Mathematical tools
2. Simple models of consumption and investment
3. The basic New Keynesian Model
4. Monetary policy
5. Sticky prices
6. Fiscal policy

2. Learning objectives (core competencies to be mastered)
a) knowledge
Students will
- understand business cycle phenomena
- learn standard macroeconomic models describing business cycles.

b) skills
Students will be able to
- build theoretical macroeconomic models,
- derive the first-order conditions,
- numerically solve the models using a computer,
- bring the models to the data and evaluate the strengths and weaknesses of these models.

c) attitude
Students will
- understand and critically evaluate the literature on business cycle models.

d) autonomy and responsibilities
Students will
- have a solid background for studying business cycle models,
- understand how to carefully study monetary and fiscal policy.

3. Reading list

Mandatory:

- Galí, J. (2015): Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications, 2nd edition, Princeton University Press (or its 1st edition), Chapters 3-6.
- Romer, D. (2018): Advanced Macroeconomics, 5th edition, McGraw-Hill, (or any previous edition), Chapters 5, 8-9, 12-13.

Recommended:

- Adda, J. and Cooper, R. W. (2003): Dynamic Economics, MIT Press, Chapters 2, 6-8.

Course name: Econometrics

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The objective of the course is to

- familiarize students with statistical analysis procedures related to time series and panel data, the steps of estimating each econometric model, its main theories, input and diagnostic requirements,
- support students in conducting independent econometric studies on data related to their dissertation and describing their results in a scientific style.
- Part of the learning process is conducting an econometric study, during which students analyze the database necessary for writing a technical article and write the "theoretical model", "data and methodology", and "results" chapters.

Topics:

Topic 1: Exchange rates, regimes. Statistical properties, probability distributions for time series, and outliers.

Defines exchange rate regimes, highlights basic properties of time series, and discusses the identification of outliers and extreme data.

Topic 2: Exchange Rate Stability (ERS) and volatility of exchange rates: GARCH, GJR-GARCH, TGARCH models.

The theory of Exchange Rate Stability (ERS). Conditional variance: GARCH: model variants, information criteria for model selection, fitting, interpretation of the results, and parameters. Simulation with GARCH models.

Topic 3: Business cycles 1: H-P filter, B-N filter: GDP and output gap analysis.

Theory of business cycles. Trend and cyclical part. H-P filter and B-N filter. Exercise to identify business cycles. Exogenous shocks: dummy variables to represent external shocks (IMF, ESM loan programs), economic policy regime change (IMF Annual Report on Exchange Arrangements and Exchange Restrictions database: exchange rate regime and monetary policy goals), outliers (USA: NBER recessions, EU: European Commission business cycle clock databases)

Topic 4: Business cycles 2: Markov-switching models to detect economic boom, crisis, and slow-growing periods.

Recessions, crisis models. Markov-switching models: probability matrix, regimes. How to add additional variables? Exercise.

Topic 5: Interest rate modeling and forecasting with the Taylor rule: forecasting with OLS regression.

Objectives of monetary policy: exchange rate and inflation targeting. Taylor rule variants: with inertia, forward-looking, for open and small economies. General input and output requirements for regressions. Exercise.

Topic 6: Exchange rate modeling and forecasting with the VAR model.

Theoretical models for currency valuation: sovereign spread and inflation (International Fisher rule), central bank interventions (international reserves: FX and gold reserve),

anomalies (flight to safety, carry trade, dirty floating). VAR model fits (short-term, long-term identifications, residual diagnostics, lag-length calibration). VAR forecast.

Topic 7: Interest rate spread modeling: VECM model, Cointegration (Johansen test).

Interest rate spreads and CDS spreads, as well as their interaction with unconventional monetary policy and asset purchase programs. Panel regressions: FE, RE, and dynamic. Panel VAR and VECM models: cointegration. Steps to estimate a panel VECM model. Exercise on the data from the Eurozone.

Topic 8: Market networks, financial contagions, and divergences on currency markets.

Network effects: contagions and divergence. Correlation and variance. Measuring time-variant correlation: DCC-GARCH, copulas. Representing networks: minimum spanning tree graphs, network centralities: incidence, betweenness, closeness. Exercise: stock market and currency networks.

Topic 9: Variable selection: Bayesian Model Averaging. Quantile regression: when things are different under distress.

Practical example: selecting variables affecting the forint-euro exchange rate.

Topic 10. Treatment and reaction: Estimation of Difference-in-Difference (DiD) models.

Practical example: What was the impact of the introduction of QE in 2014 on the structure of central bank balance sheets?

Topic 11: Panel regressions, gravity models. Fixed and random effect models. Dynamic panel. Selection-bias: Heckman model.

Practical example: factors affecting public debt.

Topic 12: Panel Vector autoregression and panel VECM model. Panel cointegration test, model selection. Unit root test.

Practical example: sovereign premiums and country-specific CDS spreads in the Eurozone.

Topic 13: Missing values in time series and their treatment: list-wise deletion, expected value substitution, regression estimation (EM).

Practical example: distortion of the results of panel regression models due to missing data.

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) knowledge

The student

- knows and understands the key concepts of time series analysis and panel data analysis, and possesses the knowledge necessary to apply and interpret the econometric tools presented in articles published in contemporary, high-level international journals.
- clearly sees the steps of estimating econometric models,
- knows the various statistical procedures, research methods and the interpretation of the results obtained.

b) skills

The student is able

- to recognize erroneous results and to determine the necessary corrective steps,
- to examine and analyze real data econometrically,
- to recognize results that are consistent with or contradictory to the literature,
- to apply econometric methods in his own studies,
- to describe his own study results in a scientific style.

c) attitude

The student

- is open to the reception of econometric analysis, to the interdisciplinary approach,

- has the ability to learn new models, to recognize their connection to traditional models,
- is committed to scientific ethics and compliance with professional standards during his/her studies.

d) autonomy and responsibility

The student
- is able to independently plan and implement econometric studies based on given criteria,
- takes responsibility for his/her own learning process and professional development: actively and actively participates in the classroom and extracurricular learning process.

3. Compulsory / Recommended Readings

Compulsory:

Lecture notes (uploaded on the Coospace)

Recommended:

Alexander C. 2008: Market Risk Analysis: Practical Financial Econometrics. Wiley, ISBN: 978-0470998014

Cappeiello, L. – Engle, R. F. – Sheppard, K. (2006): Asymmetric Dynamics in the Correlations of Global Equity and Bond Returns. Journal of Financial Econometrics. 4. pp. 537-572.

Ghysels, E. and M. Marcellino (2018), Applied Economic Forecasting using Time Series Methods, Oxford University Press

Greene, W. H. (2003): Econometric Analysis. Prentice Hall, Pearson, New Jersey

Kiss, G. D., & Alipanah, S. (2024). Sovereign spread divergence owing to inflation and redenomination risk countered by unconventional monetary policy in the Eurozone. Economic Modelling, 131, 106613.

Kiss, G. D., Tanács, G. Z., Lippai-Makra, E., & Rácz, T. A. (2020). Last Resort: European Central Bank's Permanent Engagement in Tackling Foreign Exchange Liquidity Disruptions in the Euro Area Banking System. Financial and Economic Review, 19(4), 83-106.

LaSage, J. P. (1999): Applied Econometrics using MATLAB – Econometric Toolbox Maunal. University of Toledo http://www.spatial-econometrics.com/html/sbook.pdf, ISBN: nincs

Lütkepohl, H., & Krätzig, M. (Eds.). (2004). Applied time series econometrics. Cambridge university press.

Somosi, S., Kiss, G. D., & Alam, S. M. T. (2024). Examination of carbon dioxide emissions and renewables in Southeast Asian countries based on a panel vector autoregressive model. Journal of Cleaner Production, 436, 140174.

Wooldridge, J. M. (2002): Econometric Analysis of Cross Section and Panel Data. The MIT Press, Cambridge, pp. 563–564.

Wooldridge, J. M. (2014): Introduction to Econometrics. Cengage Learning, Andover, pp. 494–495.

Wooldridge, Jeffrey M.. 2010. “Econometric Analysis of Cross Section and Panel Data.” The MIT Press Cambridge, Massachusetts.

Course name: Industrial Policy and Innovation

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students have a comprehensive overview of industrial and innovation policies as important components of economic policy.

The course pays special attention to analysing recent developments and factors influencing the evolution of US and EU policies.

Topics:
1. Frameworks of industrial policies
Understanding the basic concepts
The main lines of theoretical and political debates – theoretical arguments and empirical evidence
Historical types of industrial policies in practice
Towards a New Industrial Policy?
A case study: the paradox of industrial policy in the United States

2. Industrial policy in the European Union
The institutional structure of the EU
Exclusive, shared, and supporting competencies in policies
Industry in the EU: state of the art
Geopolitical context
European industrial strategy

3. Innovation policies and practices
The main tenets of different schools of economics of innovation, policy rationales derived from these schools, policy governance systems, and major policy tools
Measurement of innovation: indicators, scoreboards, and their policy relevance
Innovation policies and performance in CEE and other EU countries

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- knows the basic theories and current trends of industrial policy,
- knows the main trends of industrial policy in the last decade in the European Union
- knows the main current trends and measurement methods of innovation policy
- knows the innovation performance of EU countries, especially Central and Eastern European countries.

b) Skills
The student is able to
- learn about industrial policy processes at the global and European level,
- evaluate innovation policy processes and innovation achievements,

- use the acquired knowledge if it is related to his/her doctoral research.

c) Attitude
The student
- is open and interested in understanding global and European economic processes,
- is open to innovative aspects in his research,
- is committed to adhering to scientific ethics and professional standards in his investigations.

d) Autonomy and responsibility
The student
- is able to independently plan and implement scientific investigations based on given criteria,
- takes responsibility for his/her own learning process and professional development: actively participates in the learning process in the classroom and outside of class.

3. Mandatory readings:

Aiginger, K. (2007): Industrial Policy: A Dying Breed or a Re-emerging Phoenix. Journal of Industry, Competition, and Trade, 7(3), 297–323.

Rodrik, D. (2008): Industrial Policy: Don't Ask Why, Ask How, Middle East Development Journal, Demo Issue 1–29.

Block, F. (2008): Swimming against the Current: The Rise of a Hidden Developmental State in the United States, Politics & Society, 36(2), 169–206.

Jean-Christophe Defraigne, Edoardo Traversa, Jan Wouters and Dimitri Zurstrassen: Introduction to EU Industrial Policy in the Multipolar Economy: past lessons, current challenges and future scenarios In: EU Industrial Policy in the Multipolar Economy Edited by Jean-Christophe Defraigne , Jan Wouters , Edoardo Traversa , and Dimitri Zurstrassen. Edward Elgar 2022.

Dosi, G., Nelson,R.R. (2010): Technical change and industrial dynamics as evolutionary processes, in: Hall, B.H., Rosenberg, N. (eds): Handbook of the economics of innovation, Amsterdam: North-Holland, 51–127.

Lundvall, B-Å., Borrás, S. (2005): Science, Technology, and Innovation Policy, in: Fagerberg, J., Mowery, D.C., Nelson, R.R. (eds): The Oxford Handbook of Innovation, Oxford: OUP, 599–631.

Smith, K. (2005): Measuring Innovation, in: Fagerberg, J., Mowery, D.C., Nelson, R.R. (eds): The Oxford Handbook of Innovation, Oxford: OUP, 148–177.

Course name: Ecological Economics I and II

Number of classes (per week): 1 + 1
Credits: 6 + 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students

- understand embeddedness of economic processes into society/culture and the natural environment; understand the physical and biological bases and limits of economic activities;
- are familiar with the inter- and transdisciplinary approach of ecological economics, the main questions and topics of ecological economics;
- are able to critically assess various approaches to sustainability transition and take part in scholarly discussions and engage with the communities around sustainability transition challenges.

Topics:

- The origins and fundamentals of ecological economics
- Addressing the environmental crisis: Orthodox versus heterodox economics
- The philosophical basis for advancing knowledge in ecological economics
- The basic concepts of ecological economics (throughput, social metabolism, strong sustainability, planetary health, planetary boundaries, limits)
- The problem of economic growth
- The importance of diversity in ecological economics
- Ecological economics as a policy science

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student

- Creatively understands the connections, theories, and conceptual systems and terminology that make up the given field or area of study.
- Possesses the research methodology knowledge necessary for independent research in a given field of science/specialization.

b) Skills
The student

- Able to plan and implement new projects, conduct research in a given field of science, and develop new techniques and approaches.
- Is able to construct and communicate new relationships that are significant from the perspective of their field of expertise, as well as comprehensive connections that are relevant from a personal and community perspective.

c) Attitude
The student

- Possesses the interest and learning ability that enables the identification and resolution of research problems in the field that are currently unclear and unpredictable.

d) Autonomy and responsibility
The student

- is able to participate in the formulation of theoretical and practical questions in a leading role and with a high level of cooperation;
- takes responsibility for raising and answering new ethical questions related to the theoretical and practical issues of her profession.

3. Mandatory/recommended literature

Mandatory:

Costanza, R. (2022).Addicted to growth: societal therapy for a sustainable wellbeing future. Routledge.

Daly, H. (2019). Some overlaps between the first and second thirty years of ecological economics. Ecological Economics,164: 106372. https://doi.org/10.1016/j.ecolecon.2019.106372

Daly, H. E., & Farley, J. (2011). Ecological economics: principles and applications. Island press

Kallis, G. (2019). Limits: Why Malthus was wrong and why environmentalists should care. Stanford University Press.

Spash, C. (2023): Foundations of social ecological economics. The fight for revolutionary change in economic thought. Manchester University Press, Manchester, UK.

Recommended

Costanza, R. (1989): What is Ecological Economics? Ecological Economics 1(1): 1–7.

Funtowitz, S. O. – Ravetz, J. R. (1993): Science for the post–normal age. Futures, 25(7): 739–755.

Liegey, V., Nelson, A., & Hickel, J. (2020). Exploring degrowth: A critical guide (Vol. 10). London: Pluto Press.

Polanyi, K. (2011): The great transformation. The Political and Economic Origins of Our Time. Beacon Press.

Røpke, I. (2005). Trends in the development of ecological economics from the late 1980s to the early 2000s. *Ecological economics*, *55*(2), 262-290.

Sen, A. K. (1999): Development as Freedom. Oxford University Press, Oxford – New York.

Schumacher, E. F. (1973). Small is beautiful: Economics as if people mattered. *London: Blond & Briggs*.

Course name: Ecology and Planetary Health

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. **Description (goals, topics)**

The aim of the course is that students

- gain an overview of the interconnectedness of Earth's ecological and social systems and the current trends in polycrisis
- get to know the ecosystem functions and services that enable humans and non-human species co-existence and well-being
- understands the theoretical and practical framework of planetary health examining how global environmental changes—such as climate change, biodiversity loss, land-use change, pollution, and resource scarcity—affect human health, equity, and sustainability
- develops a self-reflective attitude and resources for personal and collective resilience in the current polycrisis

Topics:

- Earth systems: finite and interconnected networks of energy and matter
- Biological diversity and ecosystem services framework
- Planetary health: concepts and framework
- Climate Change and Human Health
- Biodiversity and Ecosystem Services impacts on Human Health
- Food Systems and Nutrition
- Urbanization and Planetary Health
- Nature and Mental Health
- Air Pollution, Non-Communicable Diseases and Infectious Diseases in a Changing World
- Equity, Justice, Indigenous Perspectives
- Hope and Resilience in the Polycrisis

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student can
- describe the functions and services of ecosystems that support human and non-human health and well-being.
- explain the interconnectedness of Earth's ecological and social systems and how global environmental changes affect human health, equity, and sustainability.
- apply the planetary health framework to reflect on topics such as climate change, biodiversity loss, food systems etc.

b) Skills
The student is able to
- reflect on the links between environmental change, ecosystems, and human health.
- critically evaluate evidence and approaches for promoting planetary health and sustainability.

- communicate complex planetary health concepts effectively across academic and public contexts.

c) Attitude
The student
- develops a self-reflective and responsible attitude toward their role in ecological and social systems.
- values equity, justice, and indigenous perspectives in addressing planetary health challenges.
- cultivates hope and resilience in responding to the complexities of the current polycrisis.

d) Autonomy and responsibility
The student
- demonstrates responsibility for personal and collective actions that impact ecological and social systems.

3. Mandatory/recommended literature

Mandatory:

Whitmee, S., et al. (2015). Safeguarding human health in the Anthropocene epoch: Report of The Rockefeller Foundation–Lancet Commission on Planetary Health. *The Lancet*, 386(10007), 1973–2028. https://doi.org/10.1016/S0140-6736(15)60901-1

Myers, S. S., & Frumkin, H. (2020). Planetary health: Protecting nature to protect ourselves. Yale University Press.

Rockström, J., et al. (2009). Planetary boundaries: Exploring the safe operating space for humanity. *Ecology and Society,* 14(2), Article 32. https://doi.org/10.5751/ES-03180-140232

Watts, N., et al. (2023). The 2023 report of the Lancet Countdown on health and climate change: The imperative for a health-centred response in a world facing irreversible harms. *The Lancet,* 402(10416), 2346–2394. https://doi.org/10.1016/S0140-6736(23)01859-7

Recommended:

Rückle, Karolin, et al. "Determinants and relationships of climate change, climate change hazards, mental health, and well-being: a systematic review." *Frontiers in Psychiatry* 16 (2025): 1601871.

Course name: Values of nature in decision making

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students:
- understand the core knowledge and dilemmas related to social decision-making concerning the natural environment.

Topics:
1. The neoclassical approach and the natural environment: the process and essence of cost-benefit analysis (CBA)
2. Value of nature in neoclassical economics: total economic value, overview of methods for monetizing nature, areas of application for monetizing nature
3. Cost-based monetary valuation methods
4. Valuation methods based on demand curve estimation: travel cost method, hedonic prices, contingent valuation
5. Criticism of the neoclassical economic valuation toolkit
6. The response of ecological economics to the shortcomings and limitations of CBA, main features of ecological economic valuation methods
7. Alternatives to the neoclassical economic toolkit: multidimensional valuation, focus groups. qualitative participatory assessment, citizens' juries
8. Challenges of participatory methods
9. Diverse values of nature for sustainability: the IPBES approach.

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- Creatively understands the connections, theories, and conceptual systems and terminology that make up the given field or area of study.
- Possesses the research methodology knowledge necessary for independent research in a given field of science/specialization.

b) Skills
The student
- Able to creatively develop novel, previously unknown practical applications of theoretical issues.

c) Attitude
The student
- Represents and develops, in relation to their own subject area, those relationships which, due to the specific nature of the field, contribute to the process of human self-creation.

d) Autonomy and responsibility
The student

- With a leading role and a high level of cooperation, they are able to participate in the formulation of theoretical and practical issues.
- They are able to play an equal role as a discussion partner with experts in the field.

3. Mandatory/recommended literature

Mandatory

Arrow, K.J. - Cropper,M.L. - Eads, G.C. - Hahn, R.W. - Lave, L.B. - Noll, R.G. - Portney, P.R. - Russell, M. - Schmalensee, R. - Smith, V. K. – Stavins, R.N. (1996): Is There a Role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation? Science, 272, 221-222.

Hein, L. – van Koppen, K. – de Groot, R.S. – van Ireland, E.C. (2006): Spatial scales, stakeholders and the valuation of Ecosystem Services. Ecological Economics, 57, 209-228.

Limburg, K.E. - O'Neill, R.V. – Costanza, R. – Farber, S. (2002): Complex systems and valuation. Ecological Economics, 41, 409–420.

Martinez-Alier, J. – Munda, G. - O'Neill, J. (1998): Weak comparability of values as a foundation for ecological economics. Ecological Economics, 26, 277–286. Spash, C. – Hanley, N. (1995): Preferences, information and biodiversity preservation. Ecological Economics, 12, 191-208.

O'Neill, J. – Spash, C.L. (2000): Conceptions of Value in Environmental Decision-Making. Environmental Valuation in Europe. Policy Research Brief, Number 4.

Pascual, U., Balvanera, P., Díaz, S., Pataki, G., Roth, E., Stenseke, M., ... & Yagi, N. (2017). Valuing nature's contributions to people: the IPBES approach. Current opinion in environmental sustainability, 26, 7-16.

Pascual, U., Balvanera, P., Anderson, C. B., Chaplin-Kramer, R., Christie, M., González-Jiménez, D., ... & Zent, E. (2023). Diverse values of nature for sustainability. Nature, 620(7975), 813-823.

Recommended

Crosby, N. (1976): In search of the competent cititen. A research proposal.

Department for Communities and Local Government (2009): Multi-criteria analysis: a manual - http://eprints.lse.ac.uk/12761/1/Multi-criteria_Analysis.pdf

Hanley, N. – Spash, C.L. (1993): Cost-Benefit Analysis and the Environment. Edward Elgar, Cornwall., 26-40.

Munda, G. (2003): Multicriteria Assessment. International Society for Ecological Economics . Internet Encyclopaedia of Ecological Economics.

Steyaert, S. – Lisoir, H. (eds.) (2005): Participatory Methods Toolkit. A practitioner's manual. – http://www.kbs-frb.be/uploadedFiles/KBS-FRB/Files/EN/PUB_1540_Participatoty_toolkit_New_edition.pdf

Vatn, A. (2006): Institutions. Internet Encyclopedia of Ecological Economics. - http://www.ecoeco.org/education_encyclopedia.php

Vatn, A. (2009): An institutional analysis of methods for environmental appraisal. Ecological Economics, 68, 2207-2215.

Course name: Technology and sustainability

Number of classes (per week): 1
Credits: 6
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students

- understand the social and physical embeddedness of technologies and technological systems;
- understand the merits and limitations of current economic thinking about innovation and technological change;
- are able to critically assess innovations and related policy actions from the aspects of sustainability, human well-being, and transformative potential.

Topics:

- Possible interpretations of technology and innovation
- The social embeddedness of technology (critical assessment of the autonomy and the neutrality hypotheses)
- Technological change in "Spaceship Earth" (risk society, the limits of eco-modernization; innovation and human well-being)
- Towards an in innovation policy of ecological economics (transformative innovation policy; the transformative view of responsible innovation; technological change and degrowth)

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student

- possesses research-level knowledge on the ecological economics understanding of technological change and innovations.
- Creatively understands the connections, theories, conceptual systems and terminology, which is utilized by ecological economics to criticize dominant approach towards innovation and on which serves as a basis for proposing an alternative approach.

b) Skills
The student

- is able to apply the aforementioned theories and conceptual systems to assess innovation and related public policies.

c) Attitude
The student

- has the interest and learning ability that enable her to identify and solve research problems in her field that are currently unclear and unpredictable.

d) Autonomy and responsibility
The student
- is able to participate in the formulation of theoretical and practical questions in a leading role and with a high level of cooperation;
- takes responsibility for raising and answering new ethical questions related to the theoretical and practical issues of her profession.

3. Mandatory/recommended literature

Mandatory:

Bajmócy, Z., & Gébert, J. (2014). The outlines of innovation policy in the capability approach. Technology in Society, 38, 93-102.

Diercks, G., Larsen, H., & Steward, F. (2019). Transformative innovation policy: Addressing variety in an emerging policy paradigm. Research Policy, 48(4), 880-894.

Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. Research policy, 36(3), 399-417.

Feenberg, A. (2010). Ten paradoxes of technology. Techné: Research in Philosophy and Technology, 14(1), 3-15.

Oosterlaken, I. (2009): Design for development: a capability approach. Design Issues, 25, 4, pp. 91-102.

Parrique, T., Barth, J., Briens, F., Kerschner, C., Kraus-Polk, A., Kuokkanen, A., & Spangenberg, J. H. (2019). Decoupling debunked. Evidence and arguments against green growth as a sole strategy for sustainability. A study edited by the European Environment Bureau EEB.

Pel, B., Haxeltine, A., Avelino, F., Dumitru, A., Kemp, R., Bauler, T., ... & Jørgensen, M. S. (2020). Towards a theory of transformative social innovation: A relational framework and 12 propositions. Research Policy, 49(8), 104080.

Schot, J., & Steinmueller, W. E. (2018). Three frames for innovation policy: R&D, systems of innovation and transformative change. Research policy, 47(9), 1554-1567.

Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. Research Policy, 42(9), 1568-1580.

Vetter, A. (2018). The matrix of convivial technology–assessing technologies for degrowth. Journal of cleaner production, 197, 1778-1786.

Weber, K. M., & Rohracher, H. (2012). Legitimizing research, technology and innovation policies for transformative change: Combining insights from innovation systems and

multi-level perspective in a comprehensive ‘failures’ framework. Research Policy, 41(6), 1037-1047.

Vetter, A. (2018). The matrix of convivial technology–assessing technologies for degrowth. Journal of cleaner production, 197, 1778-1786.

Recommended

Beck U. (1992): Risk Society: Towards a New Modernity. London, New Delhi: Thousand Oaks, Sage Publication.

Callon, M. – Lascoumes, P. – Barthe, M. (2011): Acting in an uncertain world. An essay on technical democracy. The MIT Press, Cambridge, MA – London, UK.

Feenberg, A. (1999): Questioning technology. Routledge, London – New York.

Latour, B. (1993): We have never been modern. Harvard University Press, Cambridge, MA.

Course name: Territorial Analysis Methods

Number of classes (per week): 1
Credits: 3
Type: lecture
Form of exam: colloquium

1. Description (goals and topics)

Territorial analysis methods are essential in broadening the scope and sophistication of scholarly research. This course is designed to equip PhD students with advanced statistical tools and insights necessary for integrating spatial dimensions into their studies. By focusing on advanced territorial analysis techniques, students will gain the ability to enhance their research projects, making them more comprehensive and insightful. The curriculum encourages students to explore and correct inaccuracies in spatial data, conduct detailed territorial assessments, and interpret complex datasets effectively. By embedding these skills into their research repertoire, students will be able to produce richer, more nuanced scholarly work.

Topics

- Scientific and methodological foundations of territorial analysis
- Data types and statistical challenges, including MAUP and ecological fallacies
- Tools for regional analysis (maps, graphs, diagrams)
- Shift-share analysis of regional economic change
- Measuring territorial inequality (indicators and approaches)
- Analysis of relationships in territorial data across different measurement levels
- Advanced techniques in spatial analysis (multi-variable regression, spatial parameters)

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge

The student

- understands the scientific and methodological foundations of territorial analysis,
- is familiar with key statistical challenges such as MAUP and ecological fallacies,
- knows the main methods and tools of regional data analysis,
- recognizes the role of advanced statistical and spatial techniques in applied research.

b) Skills

The student

- analyses and interpret territorial datasets using statistical and spatial methods,
- applies tools such as shift-share analysis and inequality indicators to real-world cases,
- evaluates and corrects inaccuracies in territorial data,
- integrates multi-variable regression and spatial parameters into research design.

c) Attitudes

The student

- demonstrates openness to interdisciplinary applications of spatial analysis,
- engages critically with data quality issues and methodological challenges,
- shows commitment to the integration of advanced analytical tools into their own research.

d) Autonomy and Responsibility
The student
- independently conducts territorial analyses related to their own research topics,
- takes responsibility for methodological accuracy and clarity in their analyses,
- provides constructive feedback during class discussions and presentations,
- demonstrates autonomy in selecting appropriate territorial analysis tools for their projects.

3. Compulsory / Recommended Readings
There is no single compulsory textbook. Students are expected to rely on lecture materials and readings recommended during the course, supplemented with literature relevant to their own research.

Course name: Modern Monetary Theory and Praxis

Number of classes (per week): 1
Credits: 3
Type: lecture
Type of exam: colloquium

1. Description (objectives and topics)

Aims and objectives of the course

- The course presents the latest results of the monetary theory, based on the most relevant authors available on internet sources. It shows money creation in the modern economy, the exorbitant privilege of the monetary institutions by the monopoly of money creation. There are several theories which criticise the existing system.

Topics:

- division of the world monetary system between the dollar based and non-dollar based systems,
- modern theories on debt
- digitalization in monetary systems.

2. Learning objectives (core competencies to be mastered)

a) knowledge

Students will

- learn the modern monetary theories.
- understand the basic challenges in contemporary monetary policy.
-

b) skills

Students will be able to

- identify current monetary problems,
- systematically analyze monetary policies.

c) attitude

Students

- - is characterized by a firm professional commitment and acceptance of the need for persistent work,
- - is committed to adhering to scientific ethics and professional standards in his/her research.
- knows how to read critically new research on economic development.

d) autonomy and responsibilities

Students will

- have a solid background for studying newer monetary theories
- be able to independently plan and implement scientific investigations based on given criteria.

3. Mandatory literature

Huber, Joseph: Sovereign Money. Beyond Reserve Banking. Palgrave, Macmillan, 2017
Randal, Wray: Modern Monetary Theory, Springer, 2024
Turner, Adair: Between Debt and the Devil. Princeton University Press, 2015

Course name: Advanced Writing in Social Research

Number of classes (per week): 1
Credit: 3
Type: lecture
Form of exam: colloquium

1. Description (course aims and topics)

Aim of the course:
The practice based course Advanced Writing in Social Research aims to develop and expand the skills required to write extended pieces of writing in English and teaches participants to write in a language that is both effective and appropriate for academic texts. It takes students step by step through the process of producing an extended piece of academic writing, helping them to develop the writing and research skills necessary for the task. Students make use of the authentic source materials that accompany the course to produce their own piece of extended writing. They are then encouraged to use the strategies they have learnt to produce a second piece of writing, within their own field of study. The approach allows students to work independently, supported by detailed information and advice, as well as model answers. The course helps develop the practical skills students need to tackle extended essays and projects, and encourage the development of an independent approach to studying. The course is aimed at acquiring not only a correct usage of English language, but also to use effective and fitting English for a scientific text.

Topics:

- Academic English discourse
- Description and evaluation
- Structural features of academic English writing
- English for writing a research paper - stylistic features
- Parts of a research paper
- Abstract as a genre
- Using AI ethically and critically in academic research

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

Knowledge

- Possesses research methodological knowledge required for planning and carrying out research projects, with particular emphasis on information retrieval, source analysis, and responsible use of sources.
- Is familiar with the conventions of academic writing, including internationally accepted rules of citation, referencing, and compiling a bibliography.
- Understands the principles of avoiding plagiarism and the requirements of ethical research and publishing practices.

Skills

- Is able to independently design a research project: brainstorming, defining topics, setting a specific focus, and identifying relevant literature and sources.
- Is capable of critically evaluating sources and selecting the most appropriate information in line with the research objectives.

- Can integrate retrieved information into academic texts through paraphrasing, summarizing, and synthesizing while complying with conventions of academic writing.
- Demonstrates critical thinking and applies an analytical perspective when processing research material.
- Is able to present research results in written academic form as well as through an oral presentation, and discuss the work with tutors and peers.

Attitudes

- Approaches research problems with openness and curiosity, while demonstrating commitment to academic integrity and research ethics.
- Actively incorporates feedback into the research and text development process in order to improve quality.
- Displays perseverance, accuracy, and a long-term commitment to academic development.

Autonomy and Responsibility

- Can independently formulate research questions and carry out a project based on them.
- Takes responsibility for ensuring compliance with ethical standards and academic quality norms in writing and research.
- Engages in scholarly debates and academic discourse with independence and critical reflection.

3. Recommended Reading

Becker, H. S. (2007). *Writing for social scientists: How to start and finish your thesis, book, or article* (2nd ed.). University of Chicago Press.

Booth, W. C., Colomb, G. G., Williams, J. M., Bizup, J., & Fitzgerald, W. T. (2016). *The craft of research* (4th ed.). University of Chicago Press.

Graff, G., & Birkenstein, C. (2021). *They say / I say: The moves that matter in academic writing* (5th ed.). W. W. Norton & Company.

Hacker, D., & Sommers, N. (2021). *A writer's reference* (10th ed.). Bedford/St. Martin's.

Mewburn, I., Firth, K., & Lehmann, S. (2018). *How to fix your academic writing trouble*. Open University Press.

Silvia, P. J. (2007). *How to write a lot: A practical guide to productive academic writing*. APA LifeTools.

Sword, H. (2012). *Stylish academic writing*. Harvard University Press.

Course name: Science with Social Impact

Number of classes (per week): 1
Credits: 3
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is that students

- get to know the theoretical and practical concerns related to science-society and science-policy interfaces; and
- get to know those research approaches that explicitly connect scientific understanding with social and/or policy impact.

Topics:

- Introduction, course requirements & discussion: social impact of scientific research.
- Basics of the science–society relation (1). Changing regimes within science. Secluded research and the great divide of modernization. Science in the making. Post-normal science. Dilemmas about the validity and legitimacy of expert knowledge.
- Basics of the science–society relation (2). Why do I think politicians / societal actors should take my advice? From research to policy impact, from research to social impact – basic prerequisites. Strategies in a post-truth world?
- Societal role and social (dis)embeddedness and authenticity of universities, university community engagement
- The concept of service learning.
- Science shop. Research serving societal goals. The theory and practice of the science shop concept. Accessible reporting.
- Participatory action research. Access to knowledge as a question of social justice. Research with and for communities.

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- has the research methodology skills necessary for independent research in the given field of science/specialization and the knowledge necessary for publishing in professional journals.

b) Skills
The student
- is able to construct and communicate new relationships that are significant in terms of their field of expertise and relevant in terms of personal and community life.

c) Attitude
The student
- represents and further develops, in relation to their own topic, those relationships which, due to the specific nature of the field, contribute to the process of human self-creation.

d) Autonomy and responsibility
The student
- is able to participate in the formulation of theoretical and practical questions in a leading role and with a high level of cooperation;
- takes responsibility for raising and answering new ethical questions related to the theoretical and practical issues of her profession.

3. Mandatory/recommended literature

Mandatory:

Benneworth, Paul Stephen, Bojana Culum, Thomas Farnell, Frans Kaiser, Marco Seeber, Ninoslav Scukanec, Hans (J J.). Vossensteyn, és Donald F. Westerheijden. 2018. *Mapping and Critical Synthesis of Current State-of-the-Art on Community Engagement in Higher Education*. Institute for the Development of Education.

Rodríguez-Zurita, Denise, Maria Jaya-Montalvo, Jerry Moreira-Arboleda, Esther Raya-Diez, és Paul Carrión-Mero. 2025. „Sustainable Development through Service Learning and Community Engagement in Higher Education: A Systematic Literature Review". *International Journal of Sustainability in Higher Education* 26(1):158–201. doi:10.1108/IJSHE-10-2023-0461.

Urias, Eduardo, Floor Vogels, Seda Yalcin, Rosina Malagrida, Norbert Steinhaus, és Marjolein Zweekhorst. 2020. „A framework for Science Shop processes: Results of a modified Delphi study". *Futures* 123:102613. doi:10.1016/j.futures.2020.102613.

Bradbury-Huang, Hilary. 2010. „What Is Good Action Research?: Why the Resurgent Interest?" *Action Research* 8(1):93–109. doi:10.1177/1476750310362435.

Epstein, S. (1995). The construction of lay expertise: AIDS activism and the forging of credibility in the reform of clinical trials. Science, Technology, & Human Values, 20(4): 408-437.

Funtowitz, S. O. & Ravetz, J. R. (1993): Science for the Post–normal Age. Futures, 25(7): 739–755.

Knott, J., & Wildavsky, A. (1980). If Dissemination Is the Solution, What Is the Problem ? Knowledge, 1(4), 537–578.

Recommended:

Beck, U. (1992). Risk Society: Towards a New Modernity. SAGE Publication, London – Thousand Oaks – New Delhi.
Callon, M., Lascoumes, P. & Barthe, M. (2011). Acting in an uncertain world. An essay on technical democracy. The MIT Press, Cambridge, MA – London, UK.

Grau, F.X. – Goddard, J. – Hall, B.L. – Hazelkorn, E. – Tandon, R. (eds) (2017): Higher Education in the World 6. Towards a Socially Responsible University: Balancing the Global with the Local. GUNI, Girona.
Latour, B. (1993) We have never been modern. Harvard University Press, Cambridge, MA.
Mulder, H. – De Bok, C. (2006): Science shops as university-community interfaces: an interactive approach in science communication. At the human scale: International practices in science communication, Science Press, Beijing.
Reason, P., Bradbury, H. (2001): Handbook of action research. Sage, Thousand OaksSmith, L., Bratini, L., Chambers, D-A., Jensen, R.V. & Romero, L. (2010): Between idealism and reality: Meeting the challenges of participatory action research. Action Research, 8(4), 407–425.
Young, J. C., Watt, A .D., van den Hove, S. & the SPIRAL project team (2013). Effective interfaces between science, policy and society: the SPIRAL project handbook. http://planbleu.org/sites/default/files/upload/files/SPIRAL_handbook.pdf
Coghlan, David, és Mary Brydon-Miller. 2014. *The SAGE Encyclopedia of Action Research*. SAGE.

Course name: Advanced Qualitative Research

Number of classes (per week): 1
Credits: 3
Type: lecture
Form of exam: colloquium

1. Description (goals, topics)

The aim of the course is

- to offer students an in-depth view of diverse qualitative methods and to provide them with the theoretical and practical knowledge of their usage.
- to offer students a solid understanding of the ethical background of qualitative methods

Topics:

- The need for advanced qualitative research
- Qualitative research and vulnerable groups
- Ethical background and scientific criteria of qualitative research
- Text analysis
- Netnography
- Foresight methods
- Participatory research
- Art-based research methods
- Design thinking
- Enquiring non-human existence
- Qualitative research planning

2. Learning outcomes to be achieved in the course (core competencies to be acquired)

a) Knowledge
The student
- has the research methodology skills necessary for independent research with particular regard to vulnerable groups.

b) Skills
The student
- can apply knowledge of qualitative methods during empirical research and can expand their knowledge.

c) Attitude
The student
- is motivated, patient, and attentive enough to apply qualitative methods in a new context.

d) Autonomy and responsibility
The student
- can plan qualitative empirical research and conduct it through further independent study;

- can develop an ethical research process and take responsibility for the participants' well-being during the research.

3. Mandatory/recommended literature

Mandatory:

Brinkmann, S. – Kvale, S. (2015): InterViews. Learning the Craft of Qualitative Research Interviewing. SAGE Publications, Washington, DC.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). The Sage handbook of qualitative research. Sage Publications, Washington, DC.

Recommended:

Bradbury-Huang, Hilary (2010): „What Is Good Action Research?: Why the Resurgent Interest?" *Action Research* 8(1):93–109. doi:10.1177/1476750310362435.

Liedtka, J., Salzman, R., & Azer, D. (2017): Design thinking for the greater good: Innovation in the social sector. Columbia University Press.

McNiff, S. (2008): Art-based research. Handbook of the arts in qualitative research: Perspectives, methodologies, examples, and issues, 29-40.

Sipos, R., Zuo, A., Mou, P., Kiss, D., Dutra, N., Kuijpers, E., ... & Ceccon, A. (2025): Welcome to Planet B: co-designing transdisciplinary research questions to uncover super wicked problems. Innovation: The European Journal of Social Science Research, 1-25. https://doi.org/10.1080/13511610.2024.2447849

Castree, N., & Braun, B. (Ed.) (2001). Social nature: theory, practice and politics. Basil Blackwell Ltd.

Course name: Competitiveness in the European Union

Number of classes (per week): 1
Credits: 3
Type: lecture
Form of exam: colloquium

1. Description (objectives and topics)

Aim of the course is that the students

- gain insight into the development of the concept of countries' competitiveness in economic theory, from the Ricardian model of comparative advantages to the economics behind the World Economic Forum's Global Competitiveness Index
- become capable of interpreting the concept of competitiveness for the European Union as well
- become aware of the importance of competitiveness and its implications for the EU-level strategies, schemes and policies

Topics:

- The concept of competitiveness: firms, countries, regional integrations.
- Drivers of competitiveness, competitive strategies.
- The role of human capital and technology in competitiveness.
- The role of institutions in competitiveness.
- Measuring competitiveness.
- The European integration process and its role in European competitiveness.
- Effects of the latest financial and economic crisis on the European economy.
- Crisis exit strategies, recovery, resilience, fragility.
- The EU's challenge: the internal competitiveness gap.
- Convergence vs. divergence; core & periphery in the EU.

2. Learning outcomes to be achieved in the subject (core competencies to be acquired)

a) Knowledge

The student

- knows the concept of countries' competitiveness in economic theory
- knows the basics of international economics and its implications for countries' competitiveness
- knows the basics of European economic integration
- knows the most recent competitiveness-related challenges of the EU

b) Skills

The student

- is capable of comprehensive reading of high-level official and professional texts in relation to competitiveness of countries and of the EU
- is able to individually conduct a theoretically well-founded competitiveness analysis
- understands the importance of competitiveness in the economic policy strategies of countries and of the EU
- is capable of furthering economic research in the field of competitiveness interpreted in the complex sense

c) Attitude

The student

- is open to economic theories beyond the mainstream
- appreciates long term oriented economic policies and the knowledge behind their making
- values the role of human capital in economic performance
- values the role of institutions in economic performance
- is committed to develop as a professional and a scholar in the field of economics

d) Autonomy and responsibility

The student

- thinks responsibly of economic governance and of the role of economic science in it
- shows intellectual sophistication and creativity with respect to the matter of macro level competitiveness
- appreciates and pursues recovery and resilience-building efforts, especially in times of crisis
- exhibits objectivity in relation to the competitiveness of countries and of the EU
- improves in order to lead research in the field

3. Compulsory / Recommended Readings

Compulsory readings:

De Grauwe, Paul (ed.) (2010): *Dimensions of Competitiveness*. Cambridge, MA – London, UK: The MIT Press. ISBN 9780262013963.

EIB (2016): *Restoring EU competitiveness*. 2016 updated version. Luxembourg: European Investment Bank.

European Commission (2014): *Helping Firms Grow: European Competitiveness Report 2014*. SWD(2014)6319, Luxembourg: Publications Office of the European Union.

Draghi, Mario (ed.) (2024): *The Future of European Competitiveness: A Competitiveness Strategy for Europe*. Part A. Luxembourg: Publications Office of the European Union.

Recommended readings:

Acemoglu, Daron – Robinson, James A. (2012): *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. New York: Crown Publishing.

Aghion, Philippe – Howitt, Peter (1998): *Endogenous Growth Theory*. Cambridge, MA: MIT Press.

Barro, Robert J. – Sala-i-Martin, Xavier I. (2004): *Economic Growth*. Cambridge, MA – London, UK: The MIT Press.

Benhabib, Jess – Spiegel, Mark M. (1994): The role of human capital in economic development: Evidence from aggregate cross-country data. *Journal of Monetary Economics*, 34 (2): 143–174.

Draghi, Mario (ed.) (2024): *The Future of European Competitiveness: A Competitiveness Strategy for Europe*. Part B. Luxembourg: Publications Office of the European Union.

Dunning, John H. (1995): Think Again Professor Krugman: Competitiveness Does Matter. *The International Executive*, 37 (4): 315-324.

Grant, Robert M. (1996): Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17 (Winter Special Issue), 109-122.

Hanushek, Eric A. – Woessmann, Ludger (2010): *The Knowledge Capital of Nations*. CESifo Book Series, Cambridge, MA – London, UK: The MIT Press.
Johnson, Bjørn (2011): The Learning Economy as a Phase in Economic Development: Conradictions and Institutional Responses. In: Augusto, Lopez-Carlos (ed.): *The Innovation for Development Report 2000–2011: Innovation as the Driver of Productivity and Economic Growth*. Houndmills – Basingstoke – Hampshire – New York: Palgrave Macmillan, pp. 109-120.
Kaldor, Nicholas (1985): *Economics without Equilibrium*. Armonk, NY: M. E. Sharpe.
Nelson, Richard R. – Phelps, Edmund (1966): Investment in humans, technology diffusion and economic growth. *American Economic Review* 56 (2): 69–75.
OECD (2012): *New Sources of Growth: Knowledge-Based Capital Driving Investment and Productivity in the 21st Century*. Paris: OECD.
Rodrik, Dani (2007): *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton, NJ – Oxford, UK: Princeton University Press.
Romer, Paul M. (1986): Increasing Returns and Long Run Growth. *Journal of Political Economy*, 94 (5): 1002–1037.
Romer, Paul M. (1990): Endogenous technological change. *Journal of Political Economy*, 99 (5): 71–102.
Samuelson, Paul (1948): International Trade and the Equalisation of Factor Prices. *The Economic Journal*, 58 (230): 163–184.
Samuelson, Paul – Nordhaus, William (2009): *Economics*. 19th edition. New York: McGraw-Hill.
Schultz, Theodore W. (1961): Investment in Human Capital. *The American Economic Review*, 51 (1961): 1–17.
Schultz, Theodore W. (1979): The Economics of Being Poor. Lecture to the memory of Alfred Nobel, 8 December. https://www.nobelprize.org/prizes/economic-sciences/1979/schultz/lecture/
Solow, Robert M. (1957): Technical Change and the Aggregate Production Function. *The Review of Economics and Statistic*s, 39 (3): 312-320.
Solow, Robert M. (1987): Growth Theory and After. Lecture to the memory of Alfred Nobel, 8, December. https://www.nobelprize.org/prizes/economic-sciences/1987/solow/lecture/