

1. Field of study	Econophysics
2. Faculty	Faculty of Science and Technology
3. Academic year of entry	2019/2020 (winter term), 2020/2021 (winter term)
4. Level of qualifications/degree	first-cycle studies
5. Degree profile	general academic
6. Mode of study	full-time

Code of the learning outcome of the programme	Learning outcomes The graduate:	Codes of the second-order PRK characteristics to which the learning outcome of the programme is related
KNOWLEDGE		
KEF_W01	understands the civilisational importance of economics, physics and econophysics as an interdisciplinary science related to the application of physics methods in economics	2018_P6S_WK
KEF_W02	understands well the role and the importance of the description of economic phenomena within the framework of econophysics	2018_P6S_WK
KEF_W03	knows the basic concepts and theorems of algebra and mathematical analysis	2018_P6S_WG
KEF_W04	knows and understands the basic concepts from selected branches of classical physics, including mechanics, optics, electricity and magnetism, thermodynamics and statistical physics	2018_P6S_WG
KEF_W05	knows the basic concepts and issues of game theory	2018_P6S_WG
KEF_W06	knows the basic concepts and laws of economics and finance, the structure and functioning of financial markets and instruments	2018_P6S_WG
KEF_W07	knows the critical phenomena in natural, economic and social sciences and selected methods of their description	2018_P6S_WG
KEF_W08	knows the basics of financial accounting, financial analysis, business operating principles and macroeconomics	2018_P6S_WG
KEF_W09	is familiar with various numerical methods useful in the analysis of data and the elaboration of study results	2018_P6S_WG
KEF_W10	knows the construction and functioning of basic scientific apparatus	2018_P6S_WK
KEF_W11	knows and understands the basic concepts and principles of industrial property and copyright protection	2018_P6S_WK
KEF_W12	knows and understands legal, economic and ethical aspects of research and economic activities	2018_P6S_WK
KEF_W13	has a general knowledge of the selected scientific methods and knows the issues characteristic of the discipline of science not related to the programme	2018_P6S_WK
SKILLS		
KEF_U01	is able to apply stochastic process theory methods to describe and model random phenomena in some natural and economic processes	2018_P6S_UW
KEF_U02	is able to estimate the change in the value of money over time and is able to assess basic financial instruments	2018_P6S_UW
KEF_U03	can describe basic physical phenomena in nature, formulate problems and use the methodology of (experimental and theoretical) physical research to solve them	2018_P6S_UW
KEF_U04	is able to clearly present correct economic reasoning, collect and generalise facts and formulate theorems in speech and in writing	2018_P6S_UK
KEF_U05	is able to use the calculus of probability, is able to correctly estimate the probabilities of the occurrence of a specific event	2018_P6S_UW
KEF_U06	can use at least one software package for data analysis and statistical calculations at a basic level	2018_P6S_UW
KEF_U07	is able to use computational techniques and software to support the work of the econophysicist and understands their limitations	2018_P6S_UW

KEF_U08	is able to conduct the analysis of risk and its sources, assess the risk, use the manners to protect themselves from financial and economic risk by the use of hedging and derivative instruments	2018_P6S_UW
KEF_U09	is able to manage projects based on one of the world's leading methodologies	2018_P6S_UO, 2018_P6S_UW
KEF_U10	is able to apply game theory methods to search for optimal economic solutions and to make decisions	2018_P6S_UW
KEF_U11	can use physical models to analyse market data	2018_P6S_UW
KEF_U12	has the ability to develop the results of experiments, statistical interference and the analysis of surveys and polls	2018_P6S_UW
KEF_U13	can use a mathematical apparatus to solve practical tasks	2018_P6S_UW
KEF_U14	is able to present their ideas in the form of a multimedia presentation, conduct a discussion and actively participate in it	2018_P6S_UK
KEF_U15	is able to analyse and present basic phenomena of crisis on financial markets and factors influencing them	2018_P6S_UK
KEF_U16	is able to analyse observations by searching for regularities and describe them in the form of cause-and-effect and quantitative models	2018_P6S_UW
KEF_U17	has a sufficient command of English (B2 level) to read the specialist literature and IT tools	2018_P6S_UK
KEF_U18	has the ability to self-learn, e.g. to improve professional competence	2018_P6S_UO, 2018_P6S_UU
KEF_U19	has English language skills at the intermediate level in accordance with the requirements (B2/CEFR)	2018_P6S_UK
KEF_U20	has the ability to pose and analyse problems based on the acquired content from the discipline of science not related to the programme	2018_P6S_UO
KEF_U21	has the ability to understand and create various types of written and oral texts requiring systemic knowledge of the language in relation to its grammatical structures, lexis and phonetics; communicates in a foreign language using different communication channels and techniques to the extent appropriate for the specific area of knowledge	2018_P6S_UK
SOCIAL COMPETENCES		
KEF_K01	knows the limitations of their own knowledge and understands the need for further education	2018_P6S_KK
KEF_K02	is able to precisely formulate questions in order to deepen their own understanding of a given topic or to find the missing elements of reasoning	2018_P6S_KK
KEF_K03	is able to work in a team; understands the need for systematic work on all long-term projects	2018_P6S_UO
KEF_K04	understands and appreciates the importance of intellectual honesty in their own and other's actions; acts ethically	2018_P6S_KR
KEF_K05	understands the need to improve professional and personal competences	2018_P6S_KK
KEF_K06	is able to formulate opinions on basic econophysical issues	2018_P6S_KK
KEF_K07	is able to communicate using various techniques in a professional environment of economists, financiers and scientists	2018_P6S_KK
KEF_K08	understands social aspects of applying the acquired knowledge, skills and the related responsibility	2018_P6S_KO
KEF_K09	knows and understands the basic principles of functioning of financial institutions and social risks related to these activities	2018_P6S_KO
KEF_K10	can think and act in terms of entrepreneurship (costs, economic effects, profit and loss account, profitability)	2018_P6S_KO
KEF_K11	understands the need for an interdisciplinary approach to solving problems, integrating knowledge from different disciplines and practising self-education to deepen the acquired knowledge	2018_P6S_KK