COURSE DESCRIPTION CARD - SYLLABUS

Course name
ECONOMIC CONDITIONS OF SCIENCE [S5SD1>EUN]

Course

Proposed by Discipline
–

Year/Semester
1/1

Level of study
Doctoral School

Course offered in
English

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
4

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

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Lecturers

Prerequisites

Knowledge: Basic knowledge of statistics and the current state of macroeconomic indicators in the PhD student's country. Skills: the ability to independently obtain statistical data and find indicators of the state of the economy in various types of sources (specialized databases of international organizations - OECD, World Bank etc., internet sources). The ability to use Excel and Statistica programs. Social competencies: the ability to work in a team. Ability to work in a multi-cultural environment. Communication skills (in English).

Course objective

The aim of the course is to familiarize the Ph.D. students with the current economic conditions of science, commercialization of research results, and the role of science in Knowledge Based Economy.

Course-related learning outcomes

Knowledge:
A PhD student who graduated from doctoral school knows and understands:
1. the world knowledge including theoretical basis, general and selected specific problems in the disciplines of the doctoral school to a degree permitting revision of the currently valid paradigms [P8S_WG/SzD_W01],
2. fundamental dilemmas of contemporary civilization, [P8S_WK/SzD_W05],
3. economic, legal, ethical and other important conditions of research work. [P8S_WK/SzD_W06].

Skills:
A PhD student who graduated from doctoral school can:
1. critically analyze and evaluate of research work results, expert opinions and other works of creative character, and evaluate their contribution to the development of knowledge, [P8S_UW/SzD_U02],
2. communicate on the subject of specialization to a degree permitting active participation in international scientific community, [P8S_UK/SzD_U04],
3. participate in scientific discussions/discourse. [P8S_UK/SzD_U07].

Social competencies:
A PhD student who graduated from doctoral school is ready to:
1. critically assess the achievements within a given scientific discipline, [P8S_KK/SzD_K01]
2. think and act in the business-like way, [P8S_KO/SzD_K04]
3. maintain and develop the ethos of research and creative communities, including:
- conducting independent scientific activity,
- respecting the principle of public ownership of the results of scientific activities, including the principles of intellectual property protection. [P8S_KR/SzD_K07]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes regarding knowledge:
Method for verification of learning outcomes - essay on chosen subject connected with the course.
Assessment criteria - assessment of work in terms of oryginality and methodoligal correctness (grade scale from 2.0 till 5.0). 60% of final grade

Learning outcomes regarding skills:
Method for verification of learning outcomes - essay on chosen subject connected with the course
Assessment criteria - assessment of work in terms of the ability to correctly prepare footnotes and bibliography (grade scale from 2.0 till 5.0). 30% of final grade

Learning outcomes regarding competencies:
Method for verification of learning outcomes - participation and activity in lectures
Assessment criteria - assessment of work in terms of demonstrated social skills (cooperation with the teacher and other university employees). 10% of final grade

Programme content

The content of the course includes issues regarding the role of science in knowledge-based economy and the possibilities of commercializing the results of scientific research and using them in creating innovations.

Course topics

1. The role of science in Knowledge Based Economy.
2. The science impact on country’s Socio-Economic Development.
3. Commercialization of research results – different models.
4. Science and innovations.

Teaching methods

Lecture: multimedia presentation including illustrations and examples.

Bibliography

Basic
1. Martin, B. R. (2007). Assessing the impact of basic research on society and the economy. In Rethinking the impact of basic research on society and the economy (WF-EST International Conference, 11 May 2007), Vienna.
2. OECD (2019). Reference framework for assessing the scientific and socio-economic impact of research infrastructures: OECD science, technology and industry. OECD policy papers, 65. 15. OECD (2020).
3. What is impact assessment? https://www.oecd.org.

Additional
1. Salter, A. J., & Martin, B. R. (2001). The economic benefits of publicly funded basic research: a critical review. Research policy, 303, 509–532. https://doi.org/10.1016/S0048-7333(00)00091-3.
2. Schumpeter, J.A. (1934). The theory of economic development. Cambridge, MA: Harvard University Press. A Contribution to the Theory of Economic Growth. 21.
3. Martin, B. R., & Irvine, J. (1983). Assessing basic research: Some partial indicators of scientific progress in radio astronomy. Research policy, 12, 61–90. https://doi.org/10.1016/0048-7333(83)90005-7.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	4	0,00
Doctoral student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation)	21	1,00