

FACULTY OF ELECTRICAL  
ENGINEERING**SUBJECT CARD**

Name in Polish: **Filozofia nauki i techniki**  
 Name in English: **Philosophy of science and technology**  
 Main field of study (if applicable): **Electrical Engineering**  
 Specialization (if applicable):  
 Level and form of studies: **1st level, full-time**  
 Kind of subject: **optional / university-wide**  
 Subject code: **FLH051511**  
 Group of courses: **NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):	15				
Number of hours of total student workload (CNPS):	30				
Form of crediting:	crediting with grade				
For group of courses mark (X) final course:					
Number of ECTS points:	1				
including number of ECTS points for practical (P) classes :					
including number of ECTS points for direct teacher-student contact (BK) classes:	0.70				

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

- Humanistic knowledge at the level of secondary education.

**SUBJECT OBJECTIVES**

- C1. To acquaint students with the basic concepts of the theory of knowledge with particular emphasis on methods of reasoning  
 C2. Introduce students to the problem of creativity in the development of scientific knowledge.  
 C3. Performance considerations of engineer's activity and to present the issue of social responsibility in science and technology.

**SUBJECT LEARNING OUTCOMES***relating to knowledge:*

- PEU\_W01 The student gains knowledge of the basic methods of inference (deduction, induction and abduction).  
 PEU\_W02 The student has knowledge that is essential to understanding and interpreting social and philosophical considerations of engineer's activity.

*relating to skills:**relating to social competences:*

- PEU\_K01 The student is aware of the importance of understanding non-technical aspects and of engineer's activity, its consequences and responsibility for undertaken decisions.

**PROGRAMME CONTENT**

Form of classes - lecture		Number of hours:
Lec 1	What is the science and technology? The basic concepts and principles of the philosophy of science and philosophy of technology.	2
Lec 2	The main criteria of scientific knowledge.	1
Lec 3	The tradition of doing science from the point of view of the theory	1
Lec 4	The tradition of doing science from the point of view of the experiment.	1
Lec 5	The basic methods of inference - induction.	1
Lec 6	The basic methods of inference - deduction.	1
Lec 7	The basic methods of inference - abduction.	1
Lec 8	The main objectives and functions of science and technology from the point of view of classical philosophy of science.	2
Lec 9	The main aims and functions of science and technology from the point of view of the sociology of scientific knowledge.	1
Lec 10	The concept of science laboratory.	2
Lec 11	The problem of social responsibility of science and technology.	2
Total hours:		<b>15</b>

**TEACHING TOOLS USED**

- N1. Multimedia presentation
- N2. Lecture
- N3. Interactive lecture

**EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT**

<b>Evaluation</b> <i>F – forming (during semester)</i> <i>P – concluding (at semester end)</i>	<b>Educational effect number</b>	<b>Way of evaluating educational effect achievement</b>
F1(w)	PEU_W01 PEU_W02 PEU_K01	Passing test, active participation in lectures
P(w)	P=F1	

**PRIMARY AND SECONDARY LITERATURE****PRIMARY LITERATURE:**

- [1] E. Agazzi, Dobro, zło i nauka. Etyczny wymiar działalności naukowo-technicznej, Warszawa 1997;
- [2] S. Blackburn, Oksfordzki słownik filozoficzny, Warszawa 2004;
- [3] A. Chalmers, Czym jest to, co zwiemy nauką, Wrocław 1997;
- [4] R. M. Chisholm, Teoria poznania, 1994;
- [5] Ch. Frankfort- Nachmiast, D. Nachmiast, Metody badawcze w naukach społecznych, Poznań 2001;
- [6] A. Grobler, Metodologia nauk, Kraków 2004;
- [7] M. Heidegger, Budować, mieszkać, myśleć, Warszawa 1977;
- [8] T. Kuhn, Dwa bieguny, Warszawa 1985;
- [9] B. Latour, Polityka natury, Warszawa 2009;
- [10] K.R. Popper, Wiedza obiektywna, Warszawa 1992;
- [11] J. Woleński, Epistemologia, Warszawa 2005.

**SECONDARY LITERATURE:**

- [1] D. Sobczyńska, P. Zeidler, Nowy eksperymentalizm. Teoretycyzm. Reprezentacja, Poznań 1994,
- [2] P. Zeidler, Spór o status poznawczy teorii, Poznań 1992.

**SUBJECT SUPERVISOR**

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