WROCŁAW UNIVERSITY OF TECHNOLOGY – PHD STUDIES

FACULTY OF Fundamental Problems of Technology

SUBJECT CARD

Course name in Polish **Zaawansowane Metody Badania Półprzewodników**

Course name in English **Advanced Methods of Semiconductor Investigations**

Course language **Polish**

University-wide general course type:
1) ~~basic course (mathematics, physics, chemistry, other)~~
2) ~~humanity course~~
3) ~~managerial skills~~
4) ~~English language~~
5) ~~other modern language~~

Departmental course developing professional skills:
1) ~~specialized course~~
2) ~~interdisciplinary course~~
3) seminar (~~interdisciplinary~~, specialized, ~~departmental~~)

Type of course (~~obligatory~~, optional)

Educational effects according to ZW 26/2017: P8S_WG, P8S_UK, P8S_KK

Subject code: **FTP9011**

*delete as applicable

	Lecture	Laboratory	Seminar
Number of hours of organized classes in University (ZZU)			15
Number of hours of total student workload (CNPS)			30
Form of crediting	Exam **	Exam / crediting with grade*	Oral presentation
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			

*delete as applicable **In case of didactic courses also inspections and evaluation classes

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Knowledge from solid state physics, quantum mechanics, semiconductor physics, nanostructures physics

SUBJECT OBJECTIVES	
C1	The aim of the course is to introduce students to the new concepts of the optical properties of solids and the methods and techniques used in semiconductor physic and nanostructures

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SUBJECT EDUCATIONAL EFFECTS

Relating to knowledge:

PEK_W01 – able to use the concepts relevant for spectroscopy solid, discuss and spectroscopic methods to characterize current directions of development

Relating to skills:

PEK_U01 – able to prepare and present oral presentation and multimedia in the language on the implementation of research and lead a discussion regarding the above presentation

Relating to social competences:

PEK_K01 – student is aware of the role of cooperation, including international, in the conduct of research and analysis of the results obtained

Form of classes – seminar		Number of hours
Sem 1	Presentation of results of current scientific research	15
	Total hours	**15**

TEACHING TOOLS USED	
N1	Preparing presentation - consultation
N2	Presentation, discussion
N3	Participation in the discussion

EVALUATION OF ACHIEVED SUBJECT EDUCATIONAL EFFECTS		
Evaluation: F – forming (partial) C – concluding	Educational effect number	Way of evaluating achievement of educational effects
F1	PEK_W01, PEK_U01, PEK_K01	evaluation of presentations and participate in discussions
P = F1		

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PRIMARY AND SECONDARY LITERATURE
PRIMARY LITERATURE: [1] Laboratory of Optical Spectrosocpy, J.Misiewicz, G.Sęk, A.Podhorodecki, materiały elektroniczne (2011). [2] Optyka struktur półprzewodnikowych, J. Misiewicz, P. Podemski, Oficyna Wydawnicza, Politechniki Wrocławskiej (2008). [3] David Ball, The basics of Spectroscopy. [4] John J. Quinn, Kyung Soo Yi, "Solid State Physics: Principles And Modern Applications", Springer (2009).

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)
Prof. dr hab. inż. Jan Misiewicz, jan.misiewicz@pwr.edu.pl