



MODULE DESCRIPTION

Module code	full-time studies:	Z-ZIP1-E-509b
	part-time studies:	Z-ZIPN1-E-509b
Module name	Technology Transfer	
Module name in Polish	Transfer technologii	
Valid from academic year	2023/2024	

MODULE PLACEMENT IN THE SYLLABUS

Field of study	MANAGEMENT AND PRODUCTION ENGINEERING
Level of education	1st degree
Studies profile	General
Form and method of conducting classes	Full-time and Part-time
Specialisation	All
Unit conducting the module	Department of Production Engineering
Module co-ordinator	Aneta Masternak-Janus, PhD
Approved by:	Dariusz Bojczuk, PhD, DSc

MODULE OVERVIEW

Type of subject / group of subjects	Major
Module status	Non-compulsory
Language of conducting classes	English
Module placement in the syllabus - semester	Semesetr V
Initial requirements	No requirements
Examination (YES/NO)	NO
Number of ECTS credit points	1

Method of conducting classes		Lecture	Classes	Laboratory	Project	Other
Per semester	full-time studies:	15				
	part-time studies:	9				

TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS

Category	Symbol	Learning outcomes	Assignations to the directional learning outcomes
Knowledge	W01	The student knows and understands the basic concepts of technology transfer, innovation, entrepreneurship and commercialization of research results.	ZIP1_W18
	W02	The student has knowledge about the importance of the transfer of new technologies for the development of the enterprise, knows examples of good practices of domestic and international technology transfer, and also has advanced knowledge about the operation of government and regional institutions supporting TT.	ZIP1_W13 ZIP1_W18
	W03	The student has advanced knowledge of how to carry out the technology transfer process, including the sources of technology acquisition and financing.	ZIP1_W13 ZIP1_W18
Skills	U01	The student demonstrates the ability to suggest appropriate targeted actions in the aspect of technology transfer in order to increase enterprise competitiveness.	ZIP1_U01
Social competences	K01	The student recognizes the need to constantly replenish knowledge in order to raise his/her professional qualifications in connection with the changing market conditions on a national and international scale	ZIP1_K01
	K02	The student is ready to think and act in a creative manner; he is ready to correctly identify and resolve dilemmas related to the technology transfer process.	ZIP1_K05

TEACHING CONTENTS

Method of conducting classes	Teaching contents
Lecture	<p>Basic concepts: technology, technique, innovation, entrepreneurship, commercialization of research results, technology transfer, technological base. The essence of technology transfer. The importance of technology transfer in the development of an enterprise.</p> <p>Mechanisms and forms of technology transfer. Technology transfer stages. Technology market. Selected examples of successful technology transfers in Poland and in the world.</p> <p>Sources of technology acquisition - selection of the right option (advantages and disadvantages, benefits and risks, costs). R&D in technology transfer. Investments in R&D in Poland and the EU. Assessment and selection of the right technology. Technology selection criteria and the necessity to implement, adapt and absorb technology.</p> <p>Centers of innovation and technology transfer: technology parks, technology incubators, technology transfer centers. Centers supporting international technology transfer. Main governmental and national institutions supporting technology transfer in Poland and selected EU countries.</p> <p>Technology transfer systems in Poland and selected EU countries.</p> <p>Technology financing. Sources of funding. Acquiring private equity / venture capital. Financial programs supporting TT in Poland and in the world.</p>

METHODS OF ASSESSING TEACHING RESULTS

Symbol	Methods of checking the learning outcomes (select X)					
	Oral exam	Written exam	Test	Project	Statement	Other
W01			X			
W02			X			
W03			X			
U01			X			X
K01			X			X
K02			X			X

FORM AND CONDITIONS OF PASSING

Form of classes	Form of credit	Passing conditions
Lecture	Credit with grade	Obtaining at least 50% of the points in the colloquium in the form of a test on the content provided during the lectures or presenting a final report on a given topic.

STUDENT WORKLOAD

Balance of ECTS points												
No.	Type of student's activity	Student's workload										Unit
		full-time					part-time					
1.	Participation in the activities	Lc	C	Lb	P	O	Lc	C	Lb	P	O	h
		15					9					
2.	Other (consultation, exam)	2					2					h
3.	Number of hours of a student's as- sisted work	17					11					h
4.	Number of ECTS credit points which are allocated for assisted work	0,7					0,4					ECTS
5.	Number of hours of a student's un- assisted work	8					14					h
6.	Number of ECTS credit points which a student receives for unassisted work	0,3					0,6					ECTS
7.	Work input connected with practical classes	0					0					h
8.	Number of ECTS credit points which a student receives for practical classes	0,0					0,0					ECTS
9.	Total number of hours of a stu- dent's work	25					25					h
10.	Punkty ECTS za modul <i>1 ECTS=25 hours</i>	1										ECTS

LITERATURE

- Guerrero M., Urbano D. (eds.) (2021), *Technology Transfer and Entrepreneurial Innovations Policies Across Continents*, Springer Cham.
- Liu S., Fang Z., Shi X., Guo B., (2010), *Theory of science and technology transfer and application*, Taylor and Francis Group (Available online: [https://ftp.idu.ac.id/wp-content/uploads/ebook/ip/BUKU %20TRANSFER% 20TEKNOLOGI/document%20%2821%29.pdf](https://ftp.idu.ac.id/wp-content/uploads/ebook/ip/BUKU%20TRANSFER%20TEKNOLOGI/document%20%2821%29.pdf))
- Mietzner D., Schultz Ch. (eds) (2021), *New Perspectives in Technology Transfer. Theories, Concepts, and Practices in an Age of Complexity*, Springer Cham.