DESCRIPTION OF TRAINING PROGRAMME

FOT THE DOCTORAL SCHOOLAT THE KAZIMIERZ WIELKI UNIVERSITY

INFORMATION ON COURSE	
Course	**Commercialisation of research results**
Type of classes	basicclasses
Academicyear	**2021/2022**
Class instructor	**Dariusz Mikołajewski, PhD Eng. Assoc. Prof. MBA EMBA DBA**
Number of hours	**15**
Forme of classes	**lab**
Pass rules	**credit with grade**
Language of lecture	**English**
Framework learning outcomes (8 PRK)	• knows and understands basic principles of knowledge transfer to the economic and social spheres and commercialization of results of scientific activity and know-how related to these results • is able to transfer research results to the economic and social spheres • is ready to think and act in an entrepreneurial way • knows and understands the economic, legal, ethical and other relevant conditions of scientific activity

DETAILED DESCRIPTION OF CLASSES	
Particular learning outcomes	**Methods of verifications of learning outcomes**
Knowledge: W1: Has knowledge of issues related to transfer of knowledge from academia to industry. W2: It knows how to obtain sources of financing projects of innovative character. W3: Defines the criteria of project success and commercialization project management success. W4: Names and describes basic areas and elements of project management. W5: Identifies and describes project team management problems. Skills: U1: Knows the basics of project methodologies (PMI, Agile), can plan, schedule and budget a project and account for it. U2: Is able to prepare a sample path of commercialisation of research results in his/her scientific discipline. U3: Monitors, analyses and evaluates the environment and project stakeholders, takes conclusions into account in project plans. U4: Develops, presents and justifies a preliminary plan of a commercialisation project. U5: Identifies, qualitatively assesses and plans responses to risks in the commercialisation project. U6: Incorporates client quality expectations into the project plan, acts in accordance with quality principles. Social Competencies: K1: Acts and thinks in a systemic, creative and entrepreneurial. K2: Is able to communicate within the university, regional and national innovation ecosystem. K3: Is oriented towards real needs, goals and results. K4: Is ready to act in the conditions of uncertainty and risks. K5: Is open to ideas, dialogue and search for consensus.	W1-W5 Task 1 U1-U6 and K1-K5 Assessment project

PROGRAM CONTENT IMPLEMENTED DURNING CLASSES

This is a subject in which doctoral students will learn how to implement their own ideas for the commercialization of research results. The aim of the course is to indicate the key areas in the commercialization process, which may determine the success or failure of the venture (project). Doctoral students will learn where to look for ideas, how to assess whether there is a chance of success of the planned project, what to pay special attention to when planning and implementing innovation, where to look for capital for start-up and development, how to protect your idea against intellectual property theft, what strategy to choose for market implementation. The practical part will discuss how to prepare a commercialization plan for the planned project and present the necessary analyses that should be carried out before the researcher decides to carry out commissioned research, commercialize research results by granting licenses or establish their own innovative spin-off company.

1. introduction to the class: the place and tasks of commercialization of research results at a broad-profile university
2. Commercialization of scientific research results in the light of the Act 2.0 and university regulations.
3 National and regional smart specialisations. Regional innovation ecosystem.
4. innovation ecosystem of UKW.
5 Project management basics (PMI, Prince2, Agile/Scrum).
6. Lean Canvas.
7. Commissioned research.
8. Early stage funding: pre-implementation grants, vouchers, innovation vouchers, NCBiR grants and others
9. Intellectual property protection. Contemporary threats to intellectual property.
10. Valuation of intellectual property.
11.Comparative analysis of commercialization profitability by means of licensing and spin-off creation.
12. Cooperation agreements and consortia.
13. Searching for an investor.
14. Elevator pitch - presentation of solutions.
15. Self-project.

Didactic methods and educational techniques	Course lecture Methods of administration: Conversational lecture Exploratory methods: Project method Practical part: Exploratory methods: Problem method Exploratory methods: Project method Exploratory methods: Situational method
Evaluation criteria	Pass criteria: preparation (50%) and presentation (50%) of the project in the following layout: commercialization plan (strategy and planned business model; marketing - analysis of the market, the needs of buyers, pricing policy, promotion of the idea; risk; cost analysis and sales forecast; team and its competencies; necessary resources - material, financial, human, intangible; plans for implementation, development, maintenance and diffusion, action schedule).
The form and conditions of passing (the form of verification of learning outcomes)	Individual project on the commercialization of research results in the field of doctoral student's discipline Correct completion is sufficient for credit: - Lean canvas, - Cost estimate according to the calculation layout, - Presentation according to the layout from the investment committee (max 10 slides).
Literature	• Szycher M. Commercialization Secrets for Scientists and Engineers. CrC press 2017. • Liou D. J. From Concept To Commercialization: A Strategic Approach for Bringing Everyday Ideas to Market. CreateSpace Independent Publishing Platform 2011. • Touhill C. J., Touhill G. J., O'Riordan T. A. Commercialization of Innovative Technologies: Bringing Good Ideas to the Marketplace, Wiley 2008.