Course title:	Creativity and innovation management
Course title in Polish:	Kreatywność i zarządzenie innowacją
Course for discipline:	Forestry

Semester:	4	**Status of course:**	faculty	**Language:**	english
Academic year:		**Catalog number:**			

Coordinator of course:	Marcin Zbiec
Lecturer od course:	Marcin Zbiec
Executing unit:	INDM
Ordering unit:	Doctoral School SGGW
Assumptions, goals and description of the course:	Course deals with preparation of PhD student for development of innovative bio-based products and services. Topics covered are theory and history of innovation, idea generation, methods of innovating, innovation funnel, open and closed innovation, innovation challenges, basics of innovation management.
Didactic form, number of hours:	10
Teaching methods:	Problem lecture, workshop
Limit of people in the group:	10

Learning outcomes

KNOWLEDGE - the graduate knows and understands:	**SKILLS - the graduate is able to:**	**COMPETENCES - the graduate is ready to:**
To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	Critically evaluate the achievments in the field/discipline represented
Major general development trends in the field/discipline		Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect
		Support the ethos of scientific circles and conduct independent research

The method of verification of learning outcomes:	Exercises and final project
Form of documentation of achieved learning outcomes:	Grading of consequent task on workshops, final project
Elements and weights of the final grade:	exercises - 50%, final project 50%
Place of the course:	Building 34, computer lab or online

Basic and supplementary literature

Stokes, D. E. (1997). Pasteur's quadrant : basic science and technological innovation. Washington: Brookings Institution Press; Paetz, P. (2014). Disruption by Design. Berkeley: Apress Berkeley, CA.; Kuhn, T. S. (1962). The Structure of Scientific Revolutions. Chicago: University of Chicago Press.; Jan Auernhammer, B. R. (2021). The origin and evolution of Stanford University's design thinking: From product design to design thinking in innovation management. Journal of Product Innovation Management - Special Issue: Design Thinking and Innovation Management: Matches, Mismatches and Future Avenues (Part 1), Volume38, Issue6.
Kerymova, N. (2016, 7 16). Design Thinking: From Service Prototypes To Service Roleplay. Retrieved from StartUs magazine, European Startup Daily: https://magazine.startus.cc/design-thinking-prototypes-to-roleplay/

Comments:	

Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:	30

Leraning outcomes reference to the second degree characteristics of the National Qualification Framework (level 8) covering doctoral competences:

Symbol:	**Learning outcomes:**	**8 level NQF**
SD1_KW01	To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	P8S_WG
SD1_KW02	Major general development trends in the field/discipline	P8S_WG
SD1_KU05	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	P8S_UW
SD1_KK01	Critically evaluate the achievments in the field/discipline represented	P8S_KK
SD1_KK03	Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect	P8S_KK
SD1_KK08	Support the ethos of scientific circles and conduct independent research	P8S_KR