

Yanka Kupala State University of Grodno (YKSUG)

Commercialization of Research Results

Faculty: Mathematics and Informatics	Amount of student effort (hours): 210
Department: Advanced Programming Technologies	Class contact time (hours): 42
Level: MA, Year 1	Term period(s): Sem. 1
Language of instruction: Russian/English	Course status: Mandatory core
Course leader: Svyatoslav Statkevich	Entry requirements: At least 30 ECTS studies of the first degree in the field of economic theory, economic and mathematical methods of management in organizations, innovation management
ECTS: 6	Contact: sstat@grsu.by

Course outline:

The training course "Commercialization of Research Results" is included in the list of academic disciplines for choice for the preparation of students of the specialty 1-40 80 01 "Computer Engineering" in the second year of study.

The study of this discipline contributes to the formation of students' skills in the practical solution of the problems of commercialization of innovations, improvement of knowledge and competencies in the field of organizing and conducting innovative business, management of research results.

Mastering the discipline involves an introduction to the management of scientific research. Students become familiar with the tools and methods of managing of scientific research at all stages of commercialization of project.

Thus, students have, firstly, the theoretical development of knowledge in the field of management of scientific research, the acquisition of systematic knowledge about the laws, rules and procedures in the studied area. Second, the study of applied products, used to improve quality and efficiency in practice.

Learning Objectives:

- acquiring knowledge about the laws, rules and procedures of the studied area;
- developing students' skills for practical solution of the problems of commercialization of innovations;
- improving knowledge and competencies in the field of organizing and conducting innovative business;
- study of legal mechanisms for the protection of intellectual property;
- familiarization with the tools and methods of managing research work at all stages of the commercialization of the project;

- formation and development of business planning skills by research work, determination of optimal resources, budgets and their preparation;
- formation of practical skills when using methods of valuation of innovative technology, license fees.

Learning Outcomes:

Remembering	Understanding	Applying	Analysing	Evaluating	Creating
Learning outcome		Assessment criteria			
<i>The student will be able to</i>		<i>The student can</i>			
1. apply economic terminology, vocabulary and basic economic categories		1. define the characteristics of the terms "market" and "product"			
		2. describe the content of business idea and market analysis			
		3. understand the business plan for the project and its financing			
		4. understand the meaning of intellectual property			
2. know the typology of innovations, features of the design of innovations, methods of commercialization of innovations		1. name at least 3 of typology of innovations: basic and improving innovations			
		2. use methods for creating innovative projects			
		3. understand the methodology for creating innovative projects			
		4. use methods of commercialization of innovative projects			
3. use in practice methods of applied research and business process management		1. define characteristics of general scientific research methods			
		2. applying of general scientific research methods			
		3. define characteristics of applied research methods			
		4. applying of applied research methods			
4. to assess the risks of an innovative project		1. understand the methods of risk assessment of innovative projects			
		2. determine the factors influencing innovative projects			
		3. use qualitative methods for assessing the risks of innovative projects			
		4. use quantitative methods for assessing the risks of innovative projects			
		5. implement the application of specific methods in practice			
		6. create plan to minimize the risks of an innovative project			

Course methodology:

Lectures, practical and seminars, individual and teamwork provide the foundation of this course.

Teaching and learning strategies:

The variety of formats used in the class includes project work, discussion, presentations and lectures. The teaching methodology is concerned with ingraining theoretical knowledge through practical experience. Teaching methods and delivery will include a combination of lectures, demonstrations, critiques, individual and group tasks, student presentations and in-class work.

Problem-based learning, service learning, group learning, just-in-time teaching are used. Problem-based learning (PBL) is a learning method in which complex, real-life problems are used as a means of helping students learn concepts and principles, rather than directly presenting facts and concepts. Community-based learning (service learning) provides context for building academic and work-readiness skills. Working in small groups provides learners with opportunities to articulate ideas and understandings, uncover assumptions and misconceptions, and negotiate with others to create products or reach consensus. Group activities enable students to discover deeper meaning in the content and improve thinking skills. Just-in-time teaching actively involves students in the learning process through a two-step series of learning activities. In the first step, students complete a focused set of activities outside of class and submit their work to the instructor. In the second step, the lecturer collects the students' responses and identifies areas of understanding and misunderstanding to adjust the next lesson so that students can receive specific "just-in-time" feedback on those particular areas.

Assessment

Assessment Task 1: Models and forms of the process of commercialization of research results

Intent: Get an analytical overview of the forms and models of the commercialization of research results

Objective(s): task addresses the following learning outcomes: 1, 2

Type: analytical document, presentation

Groupwork: Teamwork

Weight:30%

Assessment criteria: 1, 2

Assessment Task 2: Methods of applied research and business process management

Intent: Studying the application of business planning methods related to of the commercialization of research results

Objective(s): task addresses the following learning outcomes: 2, 3

Type: analytical document, presentation

Groupwork: Teamwork

Weight:40%

Assessment criteria: 1.1, 1.2, 2.3, 2.4, 3

Assessment Task 3: Assessment of risks which arising in the process of commercialization of scientific results

Intent: application of qualitative and quantitative methods for assessing the risks of innovative projects.

Objective(s): task addresses the following learning outcomes: 4.

Type: analytical document, presentation

Groupwork: Teamwork

Weight: 45%

Assessment criteria: 1.3, 1.4, 3, 4.

Course Assessment Criteria

To pass the course and gets credit, a student must achieve an overall mark of 70% or more. Learning outcomes are assessed according to following levels of performance: satisfactory, good, excellent.

Base literature

1. Brusakova I. A. Teoreticheskaya innovatika: uchebnik i praktikum dlya bakalavriata i magistratury, 2018. Izdatel'stvo: YUrajt (Брусакова И. А. Теоретическая инноватика: учебник и практикум для бакалавриата и магистратуры, 2018. Издательство: Юрайт).
2. Kravchenko I. Osnovy izobretatel'stva i patentovedeniya. Uchebnoe posobie, 2017. Izdatel'stvo: KnoRus (Кравченко И. Основы изобретательства и патентоведения. Учебное пособие, 2017. Издательство: КноРус).
3. Ruzakova O, Dogovory o sozdanii rezul'tatov intellektual'noj deyatel'nosti i rasporyazhenii iskl'yuchitel'nymi pravami. Uchebno-prakticheskoe posobie dlya magistrov, 2018. Izdatel'stvo: Prospekt (Рузакова О, Договоры о создании результатов интеллектуальной деятельности и распоряжении исключительными правами. Учебно-практическое пособие для магистров, 2018. Издательство: Проспект).
4. Rahmatulina R., Sviridova E., Aktual'nye problemy prava intellektual'noj sobstvennosti: uchebnoe posobie, 2018, Izdatel'stvo: Prometej (Рахматулина Р., Свиридова Е., Актуальные проблемы права интеллектуальной собственности: учебное пособие, 2018, Издательство: Прометей).
5. Spiridonova, E. A. Upravlenie innovatsiyami: uchebnik i praktikum dlya bakalavriata i magistratury, 2018. Izdatel'stvo YUrajt (Спиридонова, Е. А. Управление инновациями: учебник и практикум для бакалавриата и магистратуры, 2018. Издательство Юрайт.)

Additional literature

1. Aplin T. Copyright Law in the Digital Society. The Challenges of Multimedia, Hard Publishing, 2005.
2. Bentley L., Sherman B., Intellectual Property, Oxford University Press, 2004.
3. Burrell R., Coleman A. Copyright Exceptions. The Digital Impact, Cambridge University Press, 2006.
4. Derclaye E. The Legal protection of Databases, Edward Elgar, 2008.
5. Efroni Z. Access-Right. The Future of Digital Copyright Law, Oxford University Press, 2011.