Federal State Autonomous Educational Institution of Higher Education
«Peoples' Friendship University of Russia»

Engineering Academy
(Name of the main educational unit (OUP) – developer OP VO)

WORKING PROGRAM OF THE DISCIPLINE

Economy of hi-tech production branches
(name of the discipline)

According to the direction of preparation

27.04.05 Innovation
(code and name of the direction of training)

The development of the discipline is carried out within the framework of the implementation of the main professional educational program of higher education (OP VO)

Innovation Management
(name (orientation/profile) OP VO)

Form of education: **Full-time**

2023 г.

1. THE PURPOSE OF MASTERING THE DISCIPLINE

The purpose of mastering the discipline is to gain knowledge, skills and experience in the field of digital technologies for innovative production, characterizing the stages of the formation of competencies and ensuring the achievement of the planned results of mastering the educational program.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

Mastering the discipline is aimed at developing the following competencies (parts of competencies) among students:

Table 2.1. The list of competencies formed by students in the course of mastering the discipline (the results of mastering the discipline)

Competency code	Name of competence	Competence achievement indicators (within this discipline)
OPC-3	Able to independently solve control problems in technical systems based on the latest achievements of science and technology.	GPC-3.2 Demonstrates the basic principles for solving control problems in technical systems.
PC-2	The ability to find (choose) the best solutions when creating new science-intensive products, taking into account the requirements of quality, cost, deadlines, competitiveness and environmental safety.	PC-2.1 Demonstrates knowledge of assessing the quality, cost and competitiveness of an innovative product or service.

3. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF OP VO

The discipline refers to the part formed by the participants in educational relations, block 1 of the EP VO.

As part of the EP VO, students also master other disciplines and undergo internships that contribute to the achievement of the planned results of mastering the discipline.

Table 3.1. The list of components of the EP HE that contribute to the achievement of the planned results of the development of the discipline

Competency code	Name of competence	Previous disciplines, practices*	Subsequent disciplines, practices*
OPC-3	Able to independently solve control problems in technical systems based on the latest achievements of science and technology	Economics of high-tech industries	Preparation for passing and passing the state exam Implementation, preparation for the defense procedure and defense of the final qualification work
PC-2	The ability to find (choose) the best solutions when creating new science-intensive products, taking into account the requirements of quality, cost, deadlines, competitiveness and environmental safety	Operational management of science-intensive industries Strategic controlling in an innovative enterprise Marketing of innovative products Supply chain management in an innovative enterprise Оценка effectiveness of innovation and investment projects / International scientific and technical cooperation Introductory practice	Organizational and managerial practice (P) Undergraduate practice Preparation for passing and passing the state exam Implementation, preparation for the defense procedure and defense of the final qualification work

		Organizational and managerial practice (U)	

*- in accordance with the matrix of competencies and OP VO

4. VOLUME OF DISCIPLINE AND TYPES OF EDUCATIONAL WORK

The total complexity of the discipline is 5 credit units.

Table 4.1. Types of educational work by periods of mastering the OP VO

Type of study work		Total, Academic hour	Semester
			3
Contact work, aacademic hour		36	36
Including:			
Lecture (Lec)		18	18
Laboratory works (LW)			
Practical / Seminar classes (SC)		18	18
Independent work of a student (IS), academic		117	117
Control (test with assessment), academic		27	27
The total complexity of the discipline	Academic hours	180	180
	Credit Units	5	5

5. CONTENT OF THE DISCIPLINE

Table 5.1. The content of the discipline by type of educational work

Name of the discipline section	Contents of the section (topic)	Types of educational work
Section 1 Introduction to the discipline "Economics of high-tech industries"	Topic 1.1. The term "high-tech", modern approaches to its understanding Topic 1.2. Classification of knowledge-intensive industries Topic 1.3. Innovation process as an object of control. Innovation process: concept, structure, content of work in high-tech industries	LEC, SM, IW
Section 2 Innovations as the content of a science-intensive industry and a factor in economic growth	Topic 2.1. Preliminary analysis of innovations and preparation of a pricing business plan. Macroeconomic prerequisites for innovation Topic 2.2. Product selection and competitive strategy. Evaluation of sales markets. Assessment of competitors. Product life cycle Topic 2.3. Analysis of trends in the development of science-intensive industries. Place of the enterprise in the science-intensive industry	LEC, SM, IW
Section 3 The structure of the high-tech sector of the Russian economy	Topic 3.1. Features of market relations of high-tech firms Topic 3.2. Supply, demand and price patterns	LEC, SM, IW
Section 4 Macroeconomic factors and trends influencing the development strategy of high-tech enterprises	Topic 4.1. Factors influencing the development strategy of high-tech enterprises Topic 4.2. Possibilities of economic science and successful management practices of high-tech enterprises	LEC, SM, IW
Section 5 System of dynamic optimization of economic and technological development of a high-tech enterprise	Topic 5.1. The concept and patterns of development of the economic and technological complex of firms Topic 5.2. The origin of firms and their development. High-tech production personnel	LEC, SM, IW

* LEC - lecture, LR - laboratory work, SM - seminars; IW - independent work

6. LOGISTICS AND TECHNICAL SUPPORT OF THE DISCIPLINE

Table 6.1. Logistics of discipline

Types of Auditorium	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations	-
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations	-
For independent work of students	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to EIOS	-

7. EDUCATIONAL-METHODOLOGICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

Main literature:

1) Научно-практический журнал Экономика высокотехнологичных производств Института современной экономики и инновационного развития Института экономики РАН 2020-2021 гг.

2) Мельников Р.М. Экономическая оценка инвестиций / Электронный ресурс. http://e.lanbook.com/book/54912

3) Полянская О.А., Дикая З.А. Экономическая оценка инвестиций: учебное пособие / СПб.: СПбГЛТУ. 2012. 44 с. Электронный ресурс. http://e.lanbook.com/book/45597

4) Стёпочкина Е.А. Экономическая оценка инвестиций: учебное пособие / Саратов: Электронный ресурс. http://www.iprbookshop.ru/29291

5) Дударева О.В. Экономическая оценка инвестиций: Учебное пособие: практикум / Воронеж: ГОУВПО "Воронежский государственный технический университет". Электронный ресурс. http://catalog.vorstu.ru

6) Турманидзе Т.У. Анализ и оценка эффективности инвестиций (2-е издание): учебник для студентов вузов, обучающихся по экономическим специальностям / М.: ЮНИТИ-ДАНА. 2019. 247 с. Электронный ресурс. http://www.iprbookshop.ru/59291

7) Кудешова С.Г. Особенности современного этапа развития рынка высокотехнологичной продукции. Актуальные вопросы в научной работе и образовательной деятельности: сборник научных трудов по материалам международной научно-практической конференции 31.01.2013: Часть 2. Тамбов. 2013. с.90-91.

Дополнительная литература:

1) Голубева Т.В. Экономика производства высокотехнологичной продукции: учебное пособие / Самара: Изд-во Самарского университета. 2017. Электронный ресурс. on-line.-ISBN= 978-5-7883-1199-9

2) Уманский А.М. Диссертация «Управление экономическим развитием высокотехнологических отраслей промышленности» / ФГБОУВО Санкт-Петербургский государственный экономический университет. 2021.

Ресурсы информационно-телекоммуникационной сети «Интернет»:

1) Электронно-библиотечная система (ЭБС) РУДН и сторонние ЭБС, к которым студенты университета имеют доступ на основании заключенных договоров:

- ЭБС РУДН http://lib.rudn.ru/MegaPro/Web
- ЭБС «Университетская библиотека онлайн» http://www.biblioclub.ru
- ЭБС «Юрайт» http://www.biblio-online.ru
- ЭБС «Консультант студента» www.studentlibrary.ru

– ЭБС «Лань» http://e.lanbook.com/
– ЭБС «Троицкий мост»

2) Базы данных и поисковые системы:

– электронный фонд правовой и нормативно-технической документации http://docs.cntd.ru/
– поисковая система Яндекс https://www.yandex.ru/
– поисковая система Google https://www.google.ru/
– реферативная база данных SCOPUS http://www.elsevierscience.ru/products/scopus/
– научная электронная библиотека eLIBRARY https://www.elibrary.ru/

3) Сайты профильных министерств и ведомств:

– https://www.mos.ru/mka/
– http://www.minstroyrf.ru/

Educational and teaching materials for independent work of students in the course of mastering the discipline:*

1) A course of lectures on the discipline.

** - all educational and teaching materials for independent work of students are placed in accordance with the current procedure on the discipline page in the telecommunication educational information system (TEIS) of RUDN*

8. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF FORMATION OF COMPETENCES IN THE DISCIPLINE

Evaluation materials and a point-rating system* for assessing the level of formation of competencies (parts of competencies) based on the results of mastering the discipline are presented in the Appendix to this Work Program of the discipline.

* - OM and BRS are formed on the basis of the requirements of the relevant local normative act of RUDN University

Educational designer:

Associate Professor, Ph.D E. A. Kovaleva

Director of innovation management in industries department O.E. Samusenko

Head of EP HE:
Associate Professor, Ph.D Yu. A. Nazarova