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**Federal State Autonomous Educational establishment of higher education
RUDN-University
Engineering Academy**

PROGRAMM

Management of business operations of hi-tech industries

The program track 27.04.05 Innovations Study

Educational program of higher education

Innovation management

1. The aim

The goals and objectives of the discipline are to gain knowledge, skills and experience in the field of managing the operations of science-intensive industries, characterizing the stages of the formation of competencies and ensuring the achievement of the planned results of mastering the educational program.

2. Requirements to the outcome of the course:

The following competences are formed in the study process.

Table 2.1. A list of formed competences

A code of a competence	A competence	Indicators of achieving a competence
GPC-4	Able to develop criteria for evaluating management systems in the field of innovation based on modern mathematical methods, develop and implement management decisions to improve their effectiveness	GPC-4.1. develops criteria for evaluating the effectiveness of innovation management
GPC-7	Able to select reasonably and justify structural, algorithmic, technological and software solutions for managing innovative processes and projects; put them into practice in enterprise innovative systems, industrial and regional innovative systems	GPC-7.1. shows knowledge of technological and software solutions for managing innovation processes
PC-2	Able to find (choose) optimal solutions when creating new science-intensive products, considering the requirements of quality, cost, deadlines, competitiveness and environmental safety	GPC-2.1 shows the knowledge of assessing the quality, cost and competitiveness of an innovative product or service
PC-3	Able to develop a plan and program for organizing innovative activities of a research and production unit, to carry out a feasibility study of innovative projects and programs	PC-3.2 develops a plan and program for organizing innovation activities

3. Place of the course in the structure of GEP: Part, formed by educational relations participants - the first block of EP HE.

Table 3.1. A list of EP HE components, bringing forward planned results achievement

A code of a competence	A competence	Preceding courses	Following courses
GPC-4	Able to develop criteria for evaluating management systems in the field of innovation based on modern mathematical methods, develop and implement management decisions to improve their effectiveness		Design of automated control systems Organizational and managerial practice Preparation for passing and passing the state exam Fulfillment, preparation for the defense procedure and defense of the final qualifying work
GPC-7	Able to select reasonably and justify structural, algorithmic, technological and software solutions for managing innovative processes and projects; put them into practice in enterprise innovative systems, industrial and regional		Design of automated control systems; Programming technologies for innovative industries; Digital technologies for innovative production; Workshop on the application of Earth remote sensing data and geographic information systems

	innovative systems		Organizational and managerial practice Preparation for passing and passing the state exam Fulfillment, preparation for the defense procedure and defense of the final qualifying work
PC-2	Able to find (choose) optimal solutions when creating new science-intensive products, considering the requirements of quality, cost, deadlines, competitiveness and environmental safety	Assessment of innovative-investment projects effectiveness/International sci-tech cooperation	Strategic controlling in an innovative enterprise Economics of high-tech industries Marketing of innovative products Supply chain management in an innovative enterprise Introductory practice Organizational and managerial practice (U) 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
PC-3	Able to develop a plan and program for organizing innovative activities of a research and production unit, to carry out a feasibility study of innovative projects and programs	Programming technologies for innovative industries Digital technologies for innovative production	Big data processing Operational Controlling at an Innovative Enterprise Digital technologies for innovative production Strategic controlling in an innovative enterprise Introductory practice Organizational and managerial practice (U) 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

4. Workload of the course and forms of study work

General workload of the course 3.

Table 4.1. Form of study work of EP HE

Form of study work	Total hours	Semester
		1
Class hours (total)	36	36
Including:		
Lectures (Lc)	18	18
Laboratory classes (LC)		
Seminars (S)	18	18

Autonomous work (AW), hr	45	45
Control (exam), acad.hours	27	27
In total	hr	108
	credits	3

5. Content of the course

Table 5.1. Content of the course

Наименование раздела дисциплины	Содержание раздела (темы)	Виды учебной работы
Section 1 Fundamentals of Operational Management	Introduction to Operations Management Operational function in the organization Enterprise Management System Organization management through business processes and procedures	L,S, AW
Section 2 Applied Operations Management	The concept of "Six Sigma" (Six Sigma) Lean management and project management (Lean Manufacturing concept) Operating strategies High tech production management	L,S, AW

L- lectures, S - seminars, AW - autonomous work

6. Technical Support Requirements

Table 6.1. Technical Support Requirements

A type of a classroom	Technical Support Requirements	Special equipment, software
For lectures	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations	-
For seminars	Audience 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 autonomous work	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 the EIS	-

6. Study-methodical and information sources:

Main literature:

- 1) Иванова Т.Б., Журавлева Е.А. New Approaches to Operations Management. (Новые подходы к операционному менеджменту): учебное пособие / М.: Изд-во РУДН. 2012. 91 с. ISBN 978-5-209-03658-6: 90.00
- 2) Веснин В.Р. Теория организации: учебник / М.: Проспект. 2016. 272 с. ISBN 978-5-392-20248-5
- 3) Ильдеменов С.В., Ильдеменов А.С., Лобов С.В. Операционный менеджмент: учебник / М.: Инфра-М. 2009. 337 с. ISBN 978-5-16-002265-9: 179.85
- 4) Чейз Р.Б., Эквилайн Н.Д., Якобс Р.Ф. Производственный и операционный менеджмент: перевод с англ. / 8-е изд. М.: Вильямс. 2003. 704 с. ISBN 5-8459-0157-X: 256.40.

Additional literature:

- 1) Хаустов А.П., Редина М.М. Операционный менеджмент в нефтегазовом комплексе: учебное пособие / М.: Изд-во РУДН. 2008. 255 с. ISBN 978-5-209-03040-9: 0.00
- 2) Федорова Л.А., Заволокина Л.И. Учебно-методический комплекс по дисциплине "Экономика труда в наукоемких отраслях промышленности" для студентов бакалавриата профиля "Управление предприятиями наукоемких отраслей" по направлению 38.03.02 "Менеджмент" /

М.: Изд-во РУДН. 2019. 38 с. ISBN 978-5-209-09497-5

3) Кулябов Д.С., Королькова А.В. Введение в формальные методы описания бизнес-процессов: учебное пособие / М.: Изд-во РУДН. 2008. 202 с.

4) Кокс Д., Джейкоб Д., Бергланд С. Новая цель: Как объединить бережливое производство, шесть сигм и теорию ограничений: перевод с англ. / М.: Манн, Иванов и Фербер. 2015. 430 с. Библиотека Сбербанка. Т. 32. ISBN 978-5-91657-447-0: 754.00

5) Шумаев В.А., Сазонов А.А. Управление логистическими потоками на основе японских технологий: методика применения инструментов Канбан / Менеджмент в России и за рубежом. 2014. № 1. С. 68-74.

Internet resources:

- 1) <http://www.businessstest.ru/> business tests
- 2) <http://www.smartcat.ru/Personnel/> electronic library of educational literature
- 3) Electronic library systems:
 - 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»
- 4) Data bases and browsers:
 - electronic fund of regulatory and technical documentation <http://docs.cntd.ru/>
 - search system Yandex <https://www.yandex.ru/>
 - search system Google <https://www.google.ru/>
 - reference database SCOPUS <http://www.elsevierscience.ru/products/scopus/>
- 5) Sites:
 - <https://www.mos.ru/mka/>
 - <http://www.minstroyrf.ru/>

7. Assessment system

Materials for assessing the level of mastering the educational material of the discipline (assessment materials), including a list of competencies indicating the stages of their formation, a description of indicators and criteria for assessing competencies at various stages of their formation, a description of assessment scales, standard control tasks or other materials necessary for assessment knowledge, abilities, skills and (or) experience of activity, characterizing the stages of the formation of competencies in the process of mastering the educational program, the methodological materials defining the procedures for assessing knowledge, skills, skills and (or) experience of the activity, characterizing the stages of the formation of competencies, are developed in full and are available for students on the discipline page in the TUIS RUDN University.

Educational designer:

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