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**Federal State Autonomous Educational Institution of Higher Education
"Peoples' Friendship University of Russia named after Patrice Lumumba"**

Academy of Engineering

(name of the main educational unit (MEU) that developed the educational program of higher education)

WORKING PROGRAM OF THE DISCIPLINE

FUNDAMENTALS OF ENGINEERING ECONOMICS AND MANAGEMENT

(name of discipline/module)

Recommended for the field of study/specialty:

27.03.04 CONTROL IN TECHNICAL SYSTEMS

(code and name of the training area/specialty)

The discipline is mastered within the framework of the implementation of the main professional educational program of higher education (EP HE):

DATA SCIENCE AND SPACE SYSTEMS

(name (profile/specialization) of the educational institution of higher education)

1. THE GOAL OF MASTERING THE DISCIPLINE

The course "Fundamentals of Engineering Economics and Management" is part of the bachelor's program "Data Science and Space Systems" in the direction 27.03.04 "Control in Technical Systems" and is studied in the 3rd semester of the 2nd year. The course is implemented by the Department of Innovative Management in Industrial Sectors. The course consists of 8 sections and 8 topics and is aimed at studying the basics of organizing economic activity and management at an industrial enterprise.

The purpose of mastering the discipline is to obtain knowledge, skills and abilities in the studied area, characterizing the stages of formation of competencies and ensuring the achievement of the planned results of mastering the educational program of higher education

2. REQUIREMENTS TO THE RESULTS OF MASTERING THE DISCIPLINE

Mastering the discipline "Fundamentals of Engineering Economics and Management" is aimed at developing the following competencies (parts of competencies) in students:

Table 2.1. List of competencies developed in students while mastering the discipline (results of mastering the discipline)

Cipher	Competence	Indicators of Competence Achievement (within the framework of this discipline)
UC-10	Able to make informed economic decisions in various areas of life	UC-10.1 Understands the basic principles of the functioning of the economy and economic development, the goals of the form of state participation in the economy; UC-10.2 Applies methods of personal economic and financial planning to achieve current and long-term financial goals; UC-10.3 Uses financial instruments to manage personal finances (personal budget), controls own economic and financial risks;
UC-6	Able to manage their time, build and implement a trajectory of self-development based on the principles of lifelong education	UC-6.1 Controls the amount of time spent on specific activities; UC-6.2 Develops tools and methods for time management when completing specific tasks, projects, and goals; UC-6.3 Analyzes his resources and their limits (personal, situational, time, etc.) for the successful completion of the assigned task; UC-6.4 Finds and uses sources of additional information to improve the level of general and professional knowledge; UC-6.5 Analyzes the main opportunities and tools of continuous education in relation to one's own interests and needs, taking into account conditions, resources, personal capabilities, stages of career growth, time perspective for the development of activities and the requirements of the labor market; UC-6.6 Defines the tasks of self-development, goals and priorities of professional growth; UC-6.7 Distributes tasks into long-, medium- and short-term ones with justification of their relevance and analysis of resources for their implementation;

3. PLACE OF THE DISCIPLINE IN THE STRUCTURE OF THE EDUCATIONAL EDUCATION

Discipline "Fundamentals of Engineering Economics and Management" refers to the mandatory part of block 1 "Disciplines (modules)" of the educational program of higher education.

As part of the higher education program, students also master other disciplines and/or practices that contribute to the achievement of the planned results of mastering the discipline "Fundamentals of Engineering Economics and Management".

Table 3.1. List of components of the educational program of higher education that contribute to the achievement of the planned results of mastering the discipline

Cipher	Name of competence	Previous courses/modules, practices*	Subsequent disciplines/modules, practices*
UC-10	Able to make informed economic decisions in various areas of life	History of Russia;	Research work / Scientific research work; Undergraduate Training; Jurisprudence;
UC-6	Able to manage their time, build and implement a trajectory of self-development based on the principles of lifelong education	Physical Education; History of Russia; Introduction to the Specialty;	Research work / Scientific research work; Technological Training; Undergraduate Training; Physical Education; Psychology and Pedagogy; Philosophy; Fundamentals of Artificial Intelligence;

* - filled in in accordance with the competency matrix and the SUP EP HE

** - elective disciplines/practices

4. SCOPE OF THE DISCIPLINE AND TYPES OF STUDY WORK

The total workload of the discipline “Fundamentals of Engineering Economics and Management” is “2” credit units.

Table 4.1. Types of educational work by periods of mastering the educational program of higher education for full-time education.

Type of academic work	TOTAL,ac.h.		Semester(s)
			3
<i>Contact work, academic hours</i>	18		18
Lectures (LC)	18		18
Laboratory work (LW)	0		0
Practical/seminar classes (SC)	0		0
<i>Independent work of students, academic hours</i>	54		54
<i>Control (exam/test with assessment), academic hours</i>	0		0
General complexity of the discipline	ac.h.	72	72
	credit.ed.	2	2

5. CONTENT OF THE DISCIPLINE

Table 5.1. Contents of the discipline (module) by types of academic work

Section number	Name of the discipline section	Section Contents (Topics)		Type of academic work*
Section 1	Enterprise	1.1	Mission, goal. Entrepreneurial activity, principles of its construction taking into account the efficiency of production	OK
Section 2	Financial results	2.1	Production costs and cost price. Reporting. Profitability. Liquidity. Taxes. Commercial activities. Pricing policy	OK
Section 3	Innovative and investment activities	3.1	Evaluation. Projects. Portfolio. Risks and ways to minimize them	OK
Section 4	Economic relations with other institutions	4.1	External and internal environment of the enterprise. Exchanges. Banks	OK
Section 5	Modern management	5.1	Essence. Characteristic features. Management cycle	OK
Section 6	Motivation of activity	6.1	Needs. Stimulation. Theories of motivation content: Alderfer, Maslow, Herzberg, McClelland. Theories of motivation process	OK
Section 7	Management communication	7.1	Communication. Organizational culture. Conflict and stress management. Business communication	OK
Section 8	Management	8.1	Authority. Partnership. Leadership. Comparative Analysis of Situational Leadership Concepts	OK

* - filled in only for FULL-TIME education: LK – lectures; LR – laboratory work; SC – practical/seminar classes.

6. LOGISTIC AND TECHNICAL SUPPORT OF DISCIPLINE

Table 6.1. Material and technical support of the discipline

Audience type	Equipping the auditorium	Specialized educational/laboratory equipment, software and materials for mastering the discipline (if necessary)
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means for multimedia presentations.	
For independent work	A classroom for independent work of students (can be used for conducting seminars and consultations), equipped with a set of specialized furniture and computers with access to the Electronic Information System.	

* - the audience for independent work of students MUST be indicated!

7. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

Main literature:

1. OtvarUCHina, N. S. Strategic management: textbook and practical training for universities / N. S. OtvarUCHina, V. R. Vesnin. - Moscow: Yurait Publishing House, 2023. - 336 p. - (Higher education). - ISBN 978-5-534-02841-6. — Text: electronic // Educational platform Urait [site]. — URL: <https://urait.ru/bcode/512182>

2. Vikhansky O.S. Management: a textbook for students / O.S. Vikhansky, A.I. Naumov - M.: Master: INFRA-M, 2020. - 576 p. <http://znanium.com/catalog/product/1064558>
3. Kabushkin N.I. Fundamentals of Management: a textbook for university students / N.I. Kabushkin. - M.: New knowledge, 2019. - 336 p. <https://studfile.net/preview/1099029>
4. Kochetov, V.V. Engineering Economics [Electronic resource]: textbook / V.V. Kochetov, A.A. Kolobov, I.N. Omelchenko. - Electronic data - Moscow: Bauman Moscow State Technical University. N.E. Bauman, 2011. - 655 p. <https://e.lanbook.com/book/106624>
5. Economy, organization and management of the enterprise. N.L. Zaitsev. Textbook. - M: INFRA – M, 2007. <https://znanium.ru/read?id=194677>

Further reading:

1. Economics of the enterprise: Textbook / Edited by prof. O.I. Volkov. – M: INFRA – M, 2015. https://e.lanbook.com/book/70605?category_pk=1043
2. Gusarova, I. A. Economics of the enterprise: a textbook / I. A. Gusarova, Yu. V. Panteleeva, K. V. Nikolaeva. - 2nd ed., revised. and additional. - Kazan: KNITU, 2022. - 100 p. - ISBN 978-5-7882-3196-9. — Text: electronic // Lan: electronic library system. — URL: <https://e.lanbook.com/book/330779>

Resources of the information and telecommunications network "Internet":

1. RUDN University EBS and third-party EBSs to which university students have access on the basis of concluded agreements

- Electronic library system of RUDN - ELS

RUDN <http://lib.rudn.ru/MegaPro/Web>

- Electronic library system "University library online" <http://www.biblioclub.ru>
- EBS Yurait <http://www.biblio-online.ru>
- Electronic Library System "Student Consultant" www.studentlibrary.ru
- Electronic library system "Troitsky Bridge"

2. Databases and search engines

- electronic fund of legal and normative-technical

documentation <http://docs.cntd.ru/>

- Yandex search engine <https://www.yandex.ru/>
- search engine Google <https://www.google.ru/>
- abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

Educational and methodological materials for independent work of students in mastering a discipline/module:*

1. Lecture course on the subject “Fundamentals of Engineering Economics and Management”.

* - all educational and methodological materials for independent work of students are posted in accordance with the current procedure on the discipline page in TUIS!

DEVELOPER:

Associate Professor of the
Department of Innovation
Management in Industrial Sectors

Position, Department

Signature

Andreeva Larisa Olegovna

Surname I.O.

**HEAD OF THE
DEPARTMENT:**

Head of the Department of
Innovation Management in
Industrial Sectors

Position of the Department

Signature

Samusenko Oleg
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Head of the Department of
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