

Ministry of Science and Higher Education of the Russian Federation



Federal State Budgetary Educational Institution of Higher Education
Perm National Research Polytechnic University



APPROVED BY

Pro-rector for Academic Affairs

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03 / 2021

ACADEMIC COURSE WORKING PROGRAM

Academic course: Enterprise Economic Security

(Name)

Form of education: Full-time

(Full-time /full-time - correspondence/correspondence)

Level of higher education: Master's program

(Bachelor's program/specialist program/Master's program)

Workload in hours (in credits): 144 (4)

(Hours (CU))

Training program (degree): 38.04.01 Economics

(Code and denomination of degree)

Direction: Oil and Gas Enterprise Economics and Management

(Title of curriculum)

Perm 2021

1. General Provisions

1.1. Goals and Objectives of the Course

The goal of the course is to familiarize students with the conceptual foundations of the enterprise economic security of different branches and production complexes; to form a complex of knowledge, abilities and skills in the field of enterprise economics and security management; management culture development.

The objectives of the course are:

- to know the ways and means of managing the production systems security;
- to be able to use methods, tools, and theoretical positions of economics to identify threats and hazards for production systems and to develop measures to prevent them; to find management and economic solutions in the field of security;
- to master the skills of reasoned measures for ensuring production systems security, economic effectiveness evaluation of measures introduced to ensure enterprise economic security.

1.2. Prescribed Objects of the Course

- concepts of hazard, threat, risk, and security;
- methods for probability calculations and economic occurrence of hazards, the economic consequences of hazards, threats and risks of various kinds;
- production and activity security management models.

1.3. Starting Conditions

Unstipulated

2. Planned Results of the Course Training

Competence	Indicator's Index	Planned Results of the Course Training (to know, to be able to, to master)	Indicator of Attaining Competence which the planned results of training are correlated with	Means of Assessment
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PC-2.5	IA-1.PC-2.5	To know the application features of the methods and economic sciences theories at expert and analytical works in the field of economic security; development methods of management and technical solutions for making a specific enterprise security system	Knows the methods of ranking, documenting and risk assessment of investment projects in oil and gas enterprises, and risk management tools	Topic discussion
PC-2.5	IA-2.PC-2.5	To be able to assess various types of hazards, threats and risks, and to develop measures to prevent them	Is able to assess and manage the risks of investment projects in oil and gas enterprises	Computation and graphic work
PC-2.5	IA-3.PC-2.5	To master the skills of basic methods for determining the probability of hazards, threats and risks, identifying the sources of hazards, threats and risks	Has mastered the skills to develop risk management measures in the oil and gas industry investment project	Interview

3. Full time and forms of academic work

Form of academic work	Hours in all	Distribution in hours according to semesters	
		Number of semester	
		1	
1. Holding classes (including results monitoring) in the form:	44	44	
1.1. Contact classwork, including:			
- lectures (L)		18	18
- laboratory work (LW)			
- practice, seminars and/or other seminar-type work (PW)		20	20
- control of self-work (CSW)		6	6
- test			
1.2. Students' self-work (SSW)	100	100	
2. Intermediate attestation			
Exam			
Grading test	9	9	
Test (Credit)			
Course Project (CP)			
Course Work (CW)			
Workload in hours	144	144	

4. Course contents

Name of the units with the course outline	Full time of classroom activity in hours according to the forms			Full time of extracurricular work in hours according to the forms
	L	LW	PW	SSW
Semester I				
Concept of hazard and its types	6	0	6	34
<p>Topic 1. Concept of hazard. Concept of hazard. Hazards and their classification. Sources of hazard and their types. Types of hazard sources by origin. Characteristics of man-made hazards. Probability of hazard.</p> <p>Topic 2. Concept and types of threats. Concept of threats. Types of threats and their classification. Types of threats by impacts. Sources of threats. Characteristics of threats sources by type of activity. The probability of threats.</p> <p>Topic 3. Information sources for hazard and threat assessment. Set of information sources for hazard and threat assessment. Internal sources of information. External sources of information. Characteristics of information obtaining and processing.</p>				
The concept of security	6	0	6	34
<p>Topic 4. The concept of economic security and its legislative regulation. General concept of economic security. Subjects and objects of economic security. Concept of industrial safety. Federal Law of the Russian Federation "About safety". Enterprise security management service. Economic security management measures.</p> <p>Topic 5. Types of security. Types of security and their features. Classification of security types. Types of risks and their classification. Security management based on risk assessment.</p> <p>Topic 6. Calculation of economic hazard and threats probability. Identification of hazard and threats sources by types. Assessment of their occurrence probability. Impact assessment of hazard and threats probability for each type. Assessment of overall damage from hazards and threats probability.</p>				
Management of economic and industrial security	6	0	8	32
<p>Topic 7. Economic effectiveness evaluation of economic, engineering and management measures in the field of production and business security. Modern methods for economic evaluation of management and engineering activities. Methods and</p>				

tools for economic evaluation. Methods for effectiveness evaluation of engineering and management activities. Topic 8. Planning measures for economic security. Development of measures ensuring the enterprise economic security as a whole and for each part. Costing of activities. Cost-effectiveness calculation of introduced engineering and management measures. Topic 9. Building a system of economic and industrial security. Development of regulatory, economic, engineering and technical documentation for making informed management and technical solutions to ensure the economic security of production and business. Calculation of total efficiency from a set of measures to ensure the enterprise economic security.				
Total with regard to 1st semester	18	0	20	100
Total with regard to the course	18	0	20	100

Topics of exemplary practical work

Sl. №	Topic of practical (seminar) work
1.	Analysis of man-made hazards sources. Assessment of man-made hazards probability. Assessment of damage from man-made hazards.
2.	Characteristics of threats sources by type of activity. Probability of threat occurrence by type of activity.
3.	Technical and economic data generated, analysed and compiled for informed economic, engineering and management solutions on economic security.
4.	The concept of security and its types.
5.	Risk assessment and planning of engineering risk reduction.
6.	Economic effectiveness evaluation of industrial and business security measures.
7.	Assessment of total damage from hazards and threats.
8.	Cost-effectiveness calculation of the implemented measures.
9.	Economic reasoning calculation of engineering and technical measures and management solutions on the establishment of production and business economic security systems.
10.	Establishing enterprise security management service.

5. Organizational and Pedagogical Conditions

5.1. Educational Technologies Used for Competences Formation

Holding lectures in the discipline is based on the active method of training in the process of which students are not passive but active participants of the lesson answering questions of the teacher. Teacher's questions are aimed at activating the process of learning material as well as at the development of logical thinking. The questions stimulating associative thinking and connecting new material with the previous one are formulated by the teacher in advance.

Practical lessons are held by realization of the method based on active training: problem areas are determined, groups are formed. The following aims are pursued in the process of practical education: use of definite disciplines knowledge and creative methods in solving problems and decision-making; students' skill-building of teamwork, interpersonal communication and development of leadership skills; consolidation of the basic theoretical knowledge.

Practical lessons are based on an interactive learning method in which students communicate not only with the teacher but also with each other. At the same time, students' activity in the learning process dominates. The teacher's place in interactive classes is reduced to orienting students' activities to achievement of the goals of studies.

Interactive lectures, group discussions, role-playing games, training sessions, and analysis of situations and simulation models are used in academic studies

5.2. Students' Manual for the Course Study

Learning the course, it is advisable for students to implement the following recommendations:

1. Learning of the discipline should be done systematically.
2. After learning one of the course units with the help of the text-book or lecture notes it is recommended to reproduce the basic terms, definitions, notions of the unit from memory.
3. Special attention should be paid to the reports on practical studies and individual complex tasks for self-work.
4. The topics list for individual study is given by the teacher at the lectures. The teacher also provides students with literary sources (first of all, new ones in the periodical scientific literature) for a more detailed understanding of the issues presented at the lectures.

6. List of Teaching Materials and Information Supply for Students' Self work in the Discipline

6.1. Paper-based courseware

Sl.№	Bibliographic entry (author, title, mode of publication, place, publishing house, year of publication, number of pages)	Number of copies in the library
1. Basic literature		
1	Lamberova, N. A. Introduction to Energy Economics and Energy Security : tutorial / N. A. Lamberova. - Kazan : Kazan National Research Technological University, 2017. - 136 c. - ISBN 978-5-7882-2379-7. - Text : Electronic // Electronic Library System IPR BOOKS : [Site]. - URL: http://wwwwww.iprbookshop.ru/94958.html	
2. Additional literature		
2.1. Educational and scientific literature		
2	Bulletin Social-Economic and Humanitarian Research / International Standard Number of Electronic Network Edition, № 2658-5561. - Voronezh, 2018	
3	Markuszewskaya, L. P. English for Masters in Economics : Training Manual / L. P. Markuszewska, N. V. Nikiforova, N. G. Lukyanenko. - St. Petersburg, 2011. - 211 c. - ISBN 2227-8397	
2.2. Standardized and Technical literature		
3. Students' manual in mastering discipline		
4. Teaching and learning materials for students' self-work		

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6.2. Electronic Courseware

Kind of literature	Name of training tool	Reference to information resource	Accessibility of EBN (Internet/local net; authorized free access)

6.3. License and Free Distributed Software used in the Course Educational Process

Type of Software	Software branding
Operating systems	MS Windows XP (подп. Azure Dev Tools for Teaching till 27.02.2022)
Operating systems	Windows 10 (подп. Azure Dev Tools for Teaching)
Project, research, development, design, modeling and implementation management systems	IBM Software Architect (IBM Academic Initiative Program)

6.4. Modern Professional Databases and Inquiry Systems Used in the Course Educational Process

Branding	Reference to information resource
Elsevier "Freedom Collection" Database	https://www.elsevier.com/
Scopus Database	https://www.scopus.com
Web of Science Database	http://www.webofscience.com/
Scientific Library of Perm National Research Polytechnic University	http://lib.pstu.ru/
Lan' Electronic library system	https://edanbook.com/
IPR books Electronic library system	http://www.iprbookshop.ru/
Information resources of the ConsultantPlus Network	http://www.consultant.ru/
Electronic Dissertation Library of the Russian State Library	http://www.diss.rsl.ru/

7. Logistics of the Course Educational Process

Type of classes	Name of the necessary basic equipment	Number of units
Lecture	Computer equipment and projector	1
Practicals	Computer equipment and projector	1

8. Fund of the Course Evaluating Tools

Described in a separate document

FUND OF ESTIMATING TOOLS

For students' midterm assessment in the discipline
“Enterprise economic security”
Supplement to the Academic Course Working Program

Training program	38.04.01 Economics
Direction (specialization) of educational program	38.04.01.58 Oil and Gas Enterprise Economics and Management 38.04.01.61 Digital economy and machine building enterprise management
Graduate qualification	Master's program
Graduate academic chair	Economics and Management of Industrial Production
Form of study	Full-time studies

Year (-s): 1

Semester (-s): 1

Workload:

in credits: 4 CU
in hours: 144 h

The form of midterm assessment:

Exam - 1 semester

Fund of estimating tools for midterm assessment of students' learning the subject "Enterprise economic security" is the part (supplement) to the academic course working program. Fund of estimating tools for midterm assessment of students' learning the discipline has been developed in accordance with the general part of the fund of estimating tools for midterm assessment of the basic educational program which determines the system of the midterm assessment results and criteria of putting marks. Fund of estimating tools for midterm assessment of students' learning the subject determines the forms and procedures of monitoring results and midterm assessment of the subject leaning by the students.

1. List of controlled results of studying discipline, objects of assessment and forms of control.

According to the Academic Course Working Program mastering course content is planned during one semester (the first semester of curriculum) and is divided into three educational modules. Classroom activities, lectures and practical work as well as students' self-work are provided for every module. In the frames of mastering course content such competences as *to know, to be able, to master* pointed out in the ACWP are formed. These competences act as the controlled results of learning the discipline (Table 1.1).

Monitoring of the acquired knowledge, abilities and skills is made in the frames of continuous assessment, progress check and formative assessment in the process of studying theoretical material, reports on laboratory works and during examination. Types of control is given in Table 1.1

Table 1.1. List of controlled results of learning the discipline

Controlled results of learning the discipline (KAS)	Type of control					
	Continuous assessment		Progress check		Formative assessment	
	D	AC	LW R/P WR	T/C W	GT	Ex
Acquired knowledge						
K.1 Knows the application peculiarities of economic science methods and theories in expert and analytical works in the field of economic security; methods of management and technical solutions for establishing a security system of a certain enterprise				IC		TQ
Acquired abilities						
A.1 Is able to assess different types of hazards, threats and risks, and to develop activities to prevent the occurrence of hazards, threats and risks				CW		PT
Mastered skills						
S.1 Has mastered the skills of basic methods for determining the probability of hazards, threats and risks, identification of hazards, threats and risks sources				CT		CT

IC - interim control (control work, case-task); CT – case-task (individual task); /CW – progress check (control work); TQ – theoretical question; PT – practical task; CT – complex task of exam.

Final assessment of the learned discipline results is the midterm assessment which is made in the form of test taking into consideration the results of the running and progress check.

2. Types of control, standard control tasks and scales of learning results assessment

Continuous assessment of the academic performance is aimed at maximum effectiveness of the educational process, at monitoring students' specified competencies formation process, at increase of learning motivation and provides the assessment of mastering the discipline. In accordance with the regulations concerning the continuous assessment of the academic performance and midterm assessment of students taught by the educational programs of Higher education – programs of the Bachelor's Course, Specialists' and Master's Course the next types of students' academic performance continuous assessment and its periodicity is stipulated in PNRPU:

- acceptance test, check of the student's original preparedness and his correspondence with the demands for the given discipline learning;
- continuous assessment of mastering the material (the level of mastering the component "to know" defined by the competence) at every group studies and monitoring of lectures attendance;
- interim and progress check of students' mastering the components "to know" and "to be able" of the defined competences by computer-based or written testing, control discussions, control works (individual home tasks), reports on laboratory works, reviews, essays, etc.

Discipline progress check is conducted on the next week after learning the discipline module, while the interim control is made at every monitoring during the discipline module study;

- interim assessment, summarizing of the current students' performance at least once a semester in all disciplines for every training program (specialty), course, group;
- retained knowledge control.

2.1. Continuous assessment of education

Continuous assessment of learning is made in the form of discussion or selective recitation on every topic. According to the four-point system the results of assessment are put into the teachers' note-book and are considered in the form of integral marks in the process of the midterm assessment.

2.2. Progress check

For the complex assessment of the acquired knowledge, abilities and skills (Table 1.1) it is made the progress check in the form of report on practical work and midterm control works (after learning every discipline module).

2.2.1. Presentation of practical work

It is planned 9 practicals all in all. Standard topics of practicals are given in ACWP.

Essays presentation on practical work is made by the student individually or by the group of students. Standard scale and criteria of assessment are given in the general part of FET of the educational program.

2.2.2. Midterm control work

According to ACWP 2 midterm control works (CW) are planned to be realized after learning the educational modules of the discipline by the students. The first CW is realized on module 1 “General concepts of security, hazards and threats”, the second CW on module 2 “The concept of security”.

Standard tasks of the first CW:

1. The concept of hazards.
2. Sources of hazards.
3. Classification of hazards.
4. Classification of hazards by origin
5. Types of threats by impacts.
6. Features of threats sources by activity.
7. Probability of threats.
8. Features of internal information sources for hazard probability assessment.
9. Features of external information sources for hazard probability assessment.
10. Features of obtaining information for assessment of hazard probability.
11. Features of information processing for assessment of hazard probability.

Standard tasks of the second CW:

1. General concept of economic security.
2. Subjects of economic security.
3. Objects of economic security.
4. Concept of industrial security.
5. Enterprise security management service.
6. Economic security management measures.
7. Classification of security types.
8. Types of risks and their classification.
9. Risk-based security management.
10. Evaluation of danger and threats occurrence consequences of each type.
11. Evaluation of total damage from hazards and threats.

Standard scale and criteria of the results of the midterm control work assessment are given in the general part of FET of the educational program.

2.3. Midterm assessment (final control)

Admission for midterm assessment is made according to the results of continuous assessment and progress check. Preconditions for admittance are successful reports of all practical works and positive integral estimation with respect to the results of continuous assessment and progress check.

According to ACWP, midterm assessment is made in the form of a test in writing using cards. Every card includes 2 theoretical questions (TQ) aimed at control of the acquired knowledge, 1 practical task (PT) aimed at mastered abilities.

The card is formed so that the included questions and practical tasks could estimate the level of maturity of **all** declared competences. A form of the test-paper is given in the general part of FET of the educational program.

2.3.1. Standard questions and tasks the discipline testing

Standard questions for the acquired knowledge control:

1. Types of threats by impacts.
2. Methods and tools for economic evaluation.

3. Methods for effectiveness evaluation of engineering, technical and management measures.

4. Features of regulatory documentation for making informed management and technical solutions to ensure production and business economic security.

5. Features of economic documentation for making informed management and technical solutions to ensure production and business economic security.

6. Features of engineering and technical documentation for making informed management and technical solutions to ensure production and business economic security.

7. Management solutions to establish a system of production and business economic security.

Standard questions and practical tasks for the mastered abilities control:

1. Evaluate probability of hazards.

2. Evaluate the probability of threats.

3. Evaluate the degree of risk.

4. Evaluate the damage from man-made hazards.

5. Planning of engineering and technical measures to reduce risks.

6. Calculate cost-effectiveness of implemented measures.

7. Give the economic reasoning for the engineering and technical complex measures to establish a system of production and business economic security.

Standard complex tasks for the acquired skills control:

1. Calculate the probability of a hazard.

2. Calculate total damage from hazards and threats.

3. Analyse modern economic evaluation methods of management, engineering and technical measures.

4. Calculate the total efficiency of measures to ensure the enterprise economic security.

5. Make a set of regulatory, economic, engineering and technical documents for informed management and technical solutions to ensure the production and business economic security.

A list of standard tasks and case-studies for knowledge and abilities check is given in Appendix 1. *Full list of theoretical questions and practical tasks in the form of an approved set of examination cards is represented at the graduate academic chair.*

2.3.2. Scales of test assessment of educational achievements

Evaluation of discipline achievements in the form of maturity level of the components *to know, to be able, to master* of the declared competences is made according to the four-point assessment scale by selected control during exam.

Standard scale and criteria of estimating educational achievements in the process of exam for the components *to know, to be able, to master* are given in the general part of FET of educational program.

3. Assessment criteria for components and competences level of maturity

3.1. Assessment of competences components level of maturity

While estimating the level of competences maturity by selective control in the process of exam it is considered that *the mark obtained for the components of the examined competence is combined with the corresponding component of all competences formed in the frames of the given academic course.*

Standard scale and criteria while estimating the level of components of competences maturity are given in the general part of FET of educational program.

3.2. Assessment of competences level of maturity

General assessment of maturity level of all competences is made by aggregation of marks obtained by the student for each component of the formed competences taking into account the results of continuous assessment and progress check in the form of integral mark according to the four-point scale. All control results are put into the assessment sheet by the teacher according to the results of midterm attestation.

The form of the assessment sheet and requirements for its completion are given in the general part of FET of the educational program.

While making the final assessment of the midterm attestation in the form of exam standard criteria given in the general part of FET of the educational program are used.

Appendix 1.

Standard situation tasks and case-studies for the mastered abilities control and acquired skills control

Task № (case-study analysis)

Controlled results of the studies: A.2, S.2

Task. Read the text of suggested case-study carefully and answer the questions of the task.

Assessment criteria for situation tasks

Mark “excellent” is put if the student summarizes and evaluates intentionally the sense of the present situation with arguments for own point of view, is able to analyze, deduce and propose right ways of solving the resulting situation.

Mark “good” is put if the student understands the sense of the situation, structures their logically own answer, but permits insignificant inaccuracies during definition of ways of solving.

Mark “satisfactory” is put if the student orients in the sense of the resulting situation, but needs leading questions, is not able to analyze and propose ways of solving the situation incorrectly.

Mark “unsatisfactory” is put if the student does not orient and does not understand the sense of the present situation, cannot propose the ways of its solving, makes significant mistakes.

Situation 1. In the article by Sharokhina S.V., Kislinsky M.V. and Pudovkina O.E. "Economic security of enterprises as a factor in ensuring economic stability"* several versions of the term "economic security" were proposed. Analyze them. Specify the advantages and disadvantages of each definition. Choose the most correct and accurate definition (or propose your definition).

*Sharokhina S.V., Kislinskaya M.V., Pudovkina O.E. Economic security of enterprises as a factor in ensuring economic stability//Online journal "SCIENCE" Volume 9, No. 5 (2017) <https://naukovedenie.ru/PDF/56EVN517.pdf> (free access).

Online journal "Science" ISSN2223-5167 [https://naukovedenie.ru/Volume 9, No. 5 \(2017\) https://naukovedenie.ru/vol9-5.php](https://naukovedenie.ru/Volume%209,%20No.5%20(2017).php)

URL of the article: <https://naukovedenie.ru/PDF/56EVN517.ydf>

Situation 2. In the article by Lesnyak V.V.* there proposed a methodology for assessing the effectiveness of management solutions taken in the enterprise economic security. The methodology was developed by using adaptive engineering tools and involves establishing a system of economic security indicators. Analyze the proposed evaluation methodology and indicator system. Show the strengths and weaknesses of the methodology. Evaluate its applicability to the given enterprise.

**Lesnyak V.V. Management solutions in the system of organization economic security//Problems of the modern economy, N 1 (65), 2018. Access mode: <http://www.m-economy.ru/art.php?nArtId=6266>.*

Situation 3. In the article by Malyutina T.K.* there assessed international sanctions as a threat to the enterprises economic security. Analyze the author's arguments. Confirm or refute the author's conclusions. Prove your opinion.

**Malyutina, T.D. Sanctions as a threat to the economic security of metal rolling enterprises//Innovative development of the economy. 2018. № 1 (43). C. 384-393. Access Mode: https://elibrary.ru/download/elibrary_32768717_17886483.pdf*

Situation 4. In the article by Tokar E.V., Igolkina T.N. and Firsova A.A.* anti-crisis management was considered as a factor of enterprise economic security. Analyze the author's arguments. Confirm or refute the author's conclusions.

**Tokar E.V., Igolkina T.N., Firsova A.A. Anti-crisis management as a factor of enterprise economic security//Bulletin of Belgorod University of Cooperation, Economics and Law. 2018. № 2 (69). C. 20-30. Access mode: https://elibrary.ru/download/elibrary_32610802_14672982.pdf*