

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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### ACADEMIC COURSE WORKING PROGRAM

**Academic course:** Financial Planning and Budgeting

(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  
**industry**

(Title of curriculum)

# 1. General Provisions

## 1.1. Goals and Objectives of the Course

Discipline is aimed at the formation of students' knowledge, abilities and skills in budgeting and financial planning in a sectoral enterprise considering information flow ordering, distribution of responsibilities in the decision-making, monitoring divisions activities (responsibility centers), and the reconciliation of strategic, tactical and operational levels of the planning to ensure the ability to conduct a high-quality assessment of procurement activity for corporate needs and to manage the efficiency of investment projects at sectoral enterprises.

Objectives of the Course:

1. formation of knowledge about cost and analytical centers; financial structure; fixed and flexible budgets; methods of analysis of deviations; the sequence of the comprehensive (master) budget preparation; direct and indirect methods of cash flow analysis; structures of a cash flow (operating, investment and financial); the impact of a credit policy on the formation of a cash budget; internal control systems for budget execution;
2. formation of the ability to calculate a flexible budget; to analyse deviations; to analyse cash assets using direct and indirect methods; to plan cash flows, commodity stocks and supplies, and accounts receivable;
3. formation of skills to choose the budgeting technology depending on the financial structure of an enterprise; to draw up an operating and financial budget; to choose the way to optimize the financial budget.

## 1.2. Prescribed Objects of the Course

cost centers and responsibility centers; financial structure; budget forms and the budgeting procedure; main objectives and functions of budgeting; financial modeling and optimization

## 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 the skills)	Indicator of Attaining Competence which the planned results of training are correlated with	Means of Assessment
PC-2.3.	AI-1 PC-2.3	To know principles and methods of financial planning of resource requirements and sectoral enterprise investments projects implementation and quality assurance stages.	Knows resources, implementation stages and quality assurance methods of oil-and-gas industries investments projects.	Grading test
PC-2.3.	AI-2 PC-2.3	To be able to evaluate necessary resources, determine the sequence and duration of operations, and to plan stages of a sectoral enterprise investments	Is able to evaluate necessary resources, determine the sequence and duration of operations, and to plan an oil-and-gas	Practice report

		project implementation as well as manage its quality and the investment project team, considering the restrictions set in the process of budgeting and financial planning.	industries investments project implementation stages as well as manage project's quality and team.	
<b>PC-2.3.</b>	<b>AI-3 PC-2.3</b>	<b>To master the skills</b> of applying knowledge concerning methods of budgeting and financial planning when defining operations, team composition, and quality assurance methods of a sectoral enterprise investments project as well as skill to identify the restrictions set for a project team in the process of budgeting and financial planning.	<b>Masters the skill</b> to define operations, team composition and an oil-and-gas industries investments project quality, and to manage an investments project team.	Practice report
<b>PC-2.7.</b>	<b>AI-1 PC-2.7</b>	<b>To know</b> peer-review methods of purchase requisitions peer-review in the procurement procedure and procurement activities when budgeting and financial planning for a sectoral enterprise.	<b>Knows</b> peer-review methods of purchase requisitions peer-review in the procurement procedure and procurement activities for oil-and-gas industries.	Grading test
<b>PC-2.7.</b>	<b>AI-2 PC-2.7</b>	<b>To be able to</b> conduct a peer-review of procurement procedure summarizing for a sectoral enterprise as well as to develop a methodological framework within the constraints of procurement activities considering budgeting and financial planning features.	<b>Is able to</b> conduct a peer-review of procurement procedure summarizing for oil-and-gas industries and to develop a methodological framework within the constraints of oil-and-gas industries procurement activities.	Practice report
<b>PC-2.7.</b>	<b>AI-3 PC-2.7</b>	<b>To master the skills</b> of document drafting and paperwork, based on the results of the expert analysis of documents, related to financial planning and budgeting in the form of an opinion at a sectoral enterprise.	<b>Masters the skills</b> of document drafting and paperwork, based on the results of the expert analysis of documents in the form of an opinion at an oil-and-gas industry.	Practice report

### 3. Full time and forms of academic work

Form of academic work	Hours in all	Distribution in hours according to semesters	
		Number of semester	
		3	
1. Holding classes (including results monitoring) in the form:	58	58	
1.1. Contact classwork, including:			
- lectures (L)	24	24	
- laboratory work (LW)			
- practice, seminars and/or other seminar-type work (PW)	28	28	
- control of self-work (CSW)	6	6	
- test			
1.2. Students' self-work (SSW)	86	86	
2. Interim/midterm assessment			
Exam			
Grading test	9	9	
Test (Credit)			
Course Project (CP)			
Course Work (CW)			
<b>Workload in hours</b>	<b>144</b>	<b>144</b>	

### 4. Course contents

Course units with brief contents	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
3 semester				
Fundamentals of budgeting	12	0	14	46
Topic 1. Introduction to budgeting: basic concepts, terms, and definitions; subject and objectives of the course; the place of course in the system of economic courses; the role of budgeting in the system of economic management.				
Topic 2. The concept of cost centers and responsibility centers: financial structure; cost centers and analytical centers of responsibility definition; organization and cost centers structure; organizational management structure and financial structure.				
Topic 3. Budgeting in the planning system: the fundamentals of planning; types of planning based on timing, purpose, and planning details; estimate planning (budgeting); budget functions; fixed and flexible budgets; analysis of deviations; budgetary control.				
Topic 4. Budgeting as a management technology: the				

<p>main stages of budgeting; analysis of the organizational management structure and financial structure; Budget - Management system formation; definition of budgeting technology; definition of budget forms; approval of budgeting procedure; division of responsibilities of the executive office; drawing up a slotting; automation of budgeting.</p> <p>Topic 5. A comprehensive (master) budget: a comprehensive (master) budget; purpose and sequence of its preparation; drawing up (calculating) cost estimates by cost centers and centers of responsibility; estimates of direct (single-element) costs; overhead planning; master budget, planning of income and expenses by responsibility centers; general plan of profit (loss); profit (income) margins calculation.</p>				
Production and sales budgeting	12	0	14	40
<p>Topic 6. Inventory items procurement management (hereinafter referred to as II): inventory management; ABC as a classification of inventories; the “optimal order size” model; II procurement budget formation, the impact on the enterprise cash flow and its modeling.</p> <p>Topic 7. Cash flow management in production and sales activities: cash management; cash budgeting process; disadvantages and advantages of direct and indirect analysis methods of cash flow; cash flow structure; operational, investment and financial cash flows; main components of receipts and payments transaction; budgeting of the enterprise cash flow and its modeling.</p> <p>Topic 8. Accounts receivable and accounts payable management at the stage of procurement and sales activities: management of accounts receivable turnover; accounting and classification of receivables; collection procedures of receivables; enterprise lending policy and its main substantive elements; terms of sale as a part of the enterprise lending policy; economic approaches to induce the customer to make payments on time offered by the supplier; the influence of credit policy on the cash budget formation and liquidity of business increasing.</p> <p>Topic 9. Internal management accounts in a budgeting system: system of internal control over budget execution; internal accounts content; forms of internal accounts by various centers of responsibility and management units; deviations of actual indicators by centers of responsibility from their standard values and their analysis as a means of control; economic stimulation of budget execution.</p>				
Total with regard to the semester	24	0	28	86

Total with regard to the course	24	0	28	86
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## Topics of exemplary practicals

Sl. №	Topic of practicals (seminars)
1	Acquisition of skills to design a financial structure based on a given organizational management structure.
2	Acquisition of skills to distribute costs according to the cost centers: by structural units and product types.
3	Acquisition of skills to calculate a flexible budget and to conduct deviations analysis.
4	Acquisition of skills to choose budgeting technologies depending on the financial structure of the enterprise.
5	Acquisition of skills to draw up an operating and financial budget.
6	Acquisition of skills to calculate the budget for the procurement of inventory items and to model the budget of the enterprise's cash.
7	Acquisition of skills to analyse cash flows using direct and indirect methods and plan cash flows.
8	Acquisition of skills to optimize accounts receivable and the enterprise cash budget
9	Acquisition of skills to draw up internal management accounts and to use modern information technologies for its formation.

## 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.

Practicals 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.

### 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.No	Bibliographic entry (author, title, mode of publication, place, publishing house, year of publication, number of pages )	Number of copies in the library
<b>1. Basic literature</b>		
1.	Garrison R. H., Noreen E. W. Managerial Accounting: Concepts for Planning, Control, Decision Making. 7th ed Burr Ridge, Illinois : Irwin, 1994. 912 p.	1
2.	Rozanova N. and all: Basic Points of Economic English. Macroeconomics: Language and Landscape. M.: UNITY, 2009. 503 p.	11
3	Proceedings of the International Conference "Progress and Planning in Industry" on Industrial Economics, Budapest, 14-17 April , 1970 / . Budapest : Akademiai Kiado, 1972. 417 p.	2
<b>2. Additional literature</b>		
<b>2.1. Educational and scientific literature</b>		
<b>2.2. Periodicals</b>		
<b>3. Students' manual in mastering discipline</b>		
<b>4. Teaching and learning materials for students' self-work</b>		

### 6.2. Electronic Courseware

Kind of literature	Name of training tool	Reference to information resource	Accessibility of EBN (Internet/local net; authorized free access)
Additional literature	Business Intelligence : The Savvy Manager's Guide / . New York : Elsevier, 2013.	URL: <a href="https://elib.pstu.ru/Record/RUPNRPUelib4249">https://elib.pstu.ru/Record/RUPNRPUelib4249</a>	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 (Azure Dev Tools for Teaching subscription till 27.02.2022)
Office applications	Microsoft Office Professional 2007. lic. 42661567
General purpose application software	Dr.Web Enterprise Security Suite, 3000

#### 6.4. Modern Professional Data Bases and Inquiry Systems Used in the Course Educational Process

Branding	Reference to information resource
Scopus Database	<a href="https://www.scopus.com/">https://www.scopus.com/</a>
Web of Science Database	<a href="http://www.webofscience.com/">http://www.webofscience.com/</a>
Scientific Library of Perm National Research Polytechnic University	<a href="http://lib.pstu.ru/">http://lib.pstu.ru/</a>
Lan 'electronic library system	<a href="https://e.lanbook.com/">https://e.lanbook.com/</a>
IPRbooks Electronic library system	<a href="http://www.iprbookshop.ru/">http://www.iprbookshop.ru/</a>
Information resources of Consultant+ web	<a href="http://www.consultant.ru/">http://www.consultant.ru/</a>
Digital library of dissertations of Russian State Library	<a href="http://www.diss.rsl.ru/">http://www.diss.rsl.ru/</a>

#### 7. Logistics of the Course Educational Process

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

#### 8. Fund of the Course Evaluating Tools

Described in a separate document



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**FUND OF ESTIMATING TOOLS**  
**For students' midterm assessment in the discipline**  
**Financial planning and budgeting**  
*Supplement to the Academic Course Working Program*

<b>Training program</b>	38.04.01 Economics
<b>Direction (specialization) of educational program</b>	<b>Economics and Engineering Industrial Management; Digital economic and mechanical engineering enterprises management</b>
<b>Graduate qualification</b>	Master's degree
<b>Graduate academic chair</b>	Economics and industrial production management
<b>Form of study</b>	Full-time studies

**Year (-s): 2 Semester (-s): 3**

**Workload:**

in credits: 4 CU

in hours: 144 h

**The form of midterm assessment:**

Test 3 semester

**Fund of estimating tools** for midterm assessment of students learning the subject Financial planning and budgeting discipline 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. The fund of estimating tools for midterm assessment of students learning the subject determines the forms and procedures of monitoring results and midterm assessment of 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 third semester of curriculum) and is divided into two educational modules. Classroom activities, lectures, and practicals 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 "Financial planning and budgeting" (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	PWR	CW		Test
<b>Acquired knowledge</b>					
K.1 Knows principles and methods of financial planning of resource requirements, sectoral enterprise investments projects implementation and quality assurance stages.	D1		CW1		TQ
K.2 Knows peer-review methods of purchase requisitions peer-review in the procurement procedure and procurement activities when budgeting and financial planning for a sectoral enterprise.	D2		CW2		TQ
<b>Acquired abilities</b>					
A.1. Is able to evaluate necessary resources, determine the sequence and duration of operations and to plan stages of a sectoral enterprise investments project implementation as well as manage its quality and the investment project team, considering the restrictions set in the process of budgeting and financial		PWR1 PWR2 PWR3 PWR5 PWR7 PWR8 PWR9	CW2		PT

planning.					
A.2. Is able to conduct a peer-review of procurement procedure summarizing for a sectoral enterprise as well as to develop a methodological framework within the constraints of procurement activities considering budgeting and financial planning features.		PWR4 PWR6	CW2		PT
<b>Mastered skills</b>					
S.1 Has the skill of applying knowledge concerning methods of budgeting and financial planning when defining operations, team composition and quality assurance methods of a sectoral enterprise investments project as well as skill to identify the restrictions set for a project team in the process of budgeting and financial planning.		PWR3 PWR4 PWR5 PWR6 PWR7 PWR9			CT
S.2 Has the skill of document drafting and paperwork, based on the results of the expert analysis of documents, related to financial planning and budgeting in the form of an opinion at a sectoral enterprise.		PWR1 PWR2 PWR8			CT

*D – topic discussion; AC – colloquium (discussion of theoretical material, academic conference); CT – case-task (individual task); LWR – report on laboratory work; PWR – report on practical work; T/CW – progress check (control work); TQ – theoretical question; PT – practical task; CT – complex task of grading test.*

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) progress check is carried out in the form of practicals reports presentation and midterm control works (after learning every discipline module).

#### **2.2.1. Presentation of laboratory work**

9 practicals are planned. Standard topics of practicals are given in ACWP.

Presentation of practicals 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 with respect to the Fundamentals of budgeting module, the second CW – with respect to the Production budgeting module.

#### **Standard tasks of the first CW:**

1. Budget functions.
2. Definition of budget forms.

#### **Standard tasks of the second CW:**

1 Deviations of actual indicators by centers of responsibility from their standard values and their analysis as a means of control.

2. ABC as a classification of inventories.

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. Fulfillment of the complex individual self-work task**

An individual complex task for the students is used for assessment of their skills and abilities acquired in the process of learning the discipline in which the course project or course paper is not stipulated.

Standard scale and criteria of assessment of the individual complex task presentation are given in the general part of FET of the educational program.

## **2.4. 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 presentation of a report on practicals and positive integral estimation with respect to the results of continuous assessment and progress check.

### **2.4.1. Midterm assessment procedure without additional evaluation testing**

Midterm assessment is made in the form of a test. Credit on the discipline is based on the results of the previously fulfilled by the student individual tasks on the given discipline.

Criteria of putting the final mark for the components of competences in the process of midterm assessment made in the form of test are given in the general part of FET of the educational program.

### **2.4.2. Midterm assessment procedure followed by evaluation testing**

In definite cases (for example, in case of re-attestation of the discipline) midterm assessment in the form of the test on this discipline can be made as the card-based evaluation test. Every card includes theoretical questions(TQ) aimed at control of the acquired knowledge, practical tasks (PT) aimed at mastered abilities, and complex tasks (CT) aimed at control of the acquired skills of all declared competences.

The card is formed in such a way that the included questions and practical tasks could estimate the level of maturity of **all** declared competences.

#### **2.4.2.1. Standard questions and tasks the discipline testing**

##### **Standard questions for the acquired knowledge control:**

1. The fundamentals of planning.
2. Types of planning based on timing, purpose, and planning details.
3. Estimate planning (budgeting).
4. Budget functions.
5. Fixed and flexible budgets.
6. Analysis of deviations and budgetary control.

##### **Standard questions and practical tasks for the mastered abilities control:**

1. Draw up a flexible budget and conduct an analysis of deviations
2. Design a financial structure based on a given enterprise financial structure.
3. Optimize accounts receivable and the enterprise cash budget

##### **Standard complex tasks for the acquired skills control:**

1. Draw up a sales budget, production budget and direct labor budget based on source data
2. Determine the need of the enterprise in basic materials according to the plan for production, in auxiliary materials for general production and marketing needs, additionally, draw up a procurement budget based on the source data.
3. Determine what is the company's net cash flow from operating activities, from investing activities and from financing activities.

#### **2.4.2.2. 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 the* declared competences is made according to the four-point assessment scale.

Standard scale and criteria of estimating educational achievements in the process

of testing 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 testing 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.*

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 test standard criteria given in the general part of FET of the educational program are used.