

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**

**SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS**

**FINANCIAL ASPECTS OF STARTING  
AND DEVELOPING BUSINESS**

**Guidelines to individual work  
of Bachelor's (first) degree  
students of all specialities**

**Kharkiv  
S. Kuznets KhNUE  
2023**

UDC 658.14/.17(072.034)

F54

**Compiled by** I. Aleksieienko

Затверджено на засіданні кафедри фінансів.

Протокол № 1 від 25.08.2022 р.

*Самостійне електронне текстове мережеве видання*

**Financial** Aspects of Starting and Developing Business [Electronic F54 resource] : guidelines to individual work of Bachelor's (first) degree students of all specialities / compiled by I. Aleksieienko. – Kharkiv : S. Kuznets KhNUE, 2023. – 54 p. (English)

The main issues of the topics which are studied according to the plan of lectures on the academic discipline, individual tasks and guidelines to them are provided. Tasks for individual work, tests, questions for self-assessment and topics for writing essays are offered.

For Bachelor's (first) degree students of all specialities.

**UDC 658.14/.17(072.034)**

© Simon Kuznets Kharkiv National  
University of Economics, 2023

# Introduction

In the current conditions, it is becoming increasingly important to solve the problems of opening domestic businesses in an unstable economy. Of great importance are the theoretical aspects and practical recommendations for the formation of the idea of business, organization and opening of one's own business, as well as choosing a form of doing business, generating start-up capital for business, applying the basics of financial calculations and identifying the sources of additional funds. In this regard, the process of creating an idea and opening your own business requires deep knowledge of the theory and practice of decision-making in the field of business strategy justification, choice of the areas and forms of doing business; and the search for ways to improve relationships in the financial sphere in the conditions of market transformation of the economy is not only actual but it is also an important task of theoretical and practical importance.

The purpose of these guidelines is the formation of students' theoretical knowledge and practical skills in the field of business organization, the formation of theoretical and methodological basis necessary for the use of financial instruments, developing the ability to evaluate the effectiveness of business ideas, to analyze the current market situation observed in the country, to make financial calculations in order to choose the most effective way to raise capital.

The tasks of the guidelines are:

mastering the basic principles of organizing and implementing your own business at macro and micro levels;

applying methodological approaches to the analysis of the expediency of attracting additional borrowed funds in their own business project taking into account the risk factor;

mastering the skills in self-assessment of financial efficiency of implementation of business ideas with the use of computer equipment and software-mathematical complexes.

The academic discipline "Financial Aspects of Starting and Developing Business" studies the tools of economic justification and decision making in the system of starting one's own business taking into account the uncertainty of the environment.

The object of the academic discipline is the organization of their own business.

The subject of the academic discipline is the theoretical and methodological bases of financial activity of business entities in the conditions of organization of their own business. As a result of studying the academic discipline students are expected to form the necessary competences with the following outcomes:

Competences	Outcomes
<p>Understanding and ability to critically comprehend the conceptual foundations of economic theory that relate to the financial aspects of starting your own business, summarize the principles and patterns of business functioning and development</p>	<p>The ability to identify the nature and main forms of doing business in the activities of economic entities and in the economy of the country;  to identify the main objects and subjects of modern business, analyze the interaction between the subjects of economic relations and take into account the peculiarities of their functioning;  to determine the essence of financial instruments, to characterize current trends and prospects of development of certain types of business</p>
<p>The ability to use theoretical and methodological tools of financial, economic, mathematical, statistical, legal and other sciences to diagnose the state of financial systems</p>	<p>The ability to evaluate the feasibility of financing real investment projects, the value of assets using different approaches;  to characterize innovation and the innovation process, prove the need for financing these areas of activity, identify the objects of innovation, taking into account the features of venture financing;  to analyze the legal framework for attracting investments, determine the factors of investment activity;  to analyze peculiarities of activity of financial and credit institutions;  to conduct a comprehensive assessment of the effectiveness of the investment project;  to identify sources of financing your own business and calculate their required size, carry out procedures for optimization of the structure of financial resources</p>
<p>The ability to justify, make professional decisions in the field of finance and take responsibility for them</p>	<p>The ability to develop the structure of the business idea of the project and evaluate the feasibility of financing the project, given the uncertainty and risk factor;  to classify business projects, determine the stages of project implementation</p>

## The individual plan of student's work

The student's work on practical tasks takes place in the classroom according to the plan given in Table 1.

Table 1

### The individual plan of student's work on practical tasks

Topic	Forms and types of education	Forms of evaluation
1	2	3
<b>Content module 1</b>		
<b>A business idea. Organizing and opening your own business</b>		
<i>Topic 1.</i> Starting your own business	Questions for discussion: 1.1. Modern models of effective business. 1.2. Business type clustering. 1.3. Analysis of the degree of market saturation of a certain type of business. Problem solving. Presentation of individual tasks	Active participation in classroom activities. Consideration of the prepared materials in the classroom
<i>Topic 2.</i> Which business is more profitable? Benefit assessment of a business idea	Questions for discussion: 2.1. Active income ideas to earn extra money. 2.2. Passive income ideas for building wealth. 2.3. Best business ideas for newbie entrepreneurs. Problem solving	Active participation in classroom activities
<i>Topic 3.</i> Creating a new product and defining a business idea	Questions for discussion: 3.1. Finding sources and generating ideas. 3.2. Positive image of the company. 3.3. Life stages of a new product. 3.4. Market launch strategy for a new product. Problem solving	Active participation in classroom activities
<i>Topic 4.</i> Costs and production value	Solution of practical tasks for the calculation of costs associated with the production of goods. Determination and justification of the price of goods or services	Active participation in classroom activities
<b>Content module 2</b>		
<b>Starting capital and basics of financial calculations</b>		
<i>Topic 5.</i> The fundamentals of financial calculations	Implementation of practical tasks for increasing and discounting capital in determining its value	Active participation in classroom activities

Table 1 (the end)

1	2	3
<i>Topic 6.</i> Forms of raising capital	Performance of practical tasks to determine the cost of the loan, the execution of the loan repayment schedule	Active participation in classroom activities
<i>Topic 7.</i> Starting a business as a form of investment project realization	Solving practical problems to determine the features of the use of investments, the use of methods for analyzing the effectiveness of investments	Active participation in classroom activities
<i>Topic 8.</i> An innovative form of investment	Questions for discussion: 8.1. Economic essence of innovation and the innovation process. 8.2. Objects and subjects of innovative activity. 8.3. Financing innovative activity. Problem solving. Presentation of individual tasks	Active participation in classroom activities. Consideration of the prepared materials in the classroom
<i>Topic 9.</i> Financing the investment process	Carrying out practical tasks to determine the definition and optimization of the cost of investment resources	Active participation in classroom activities
<i>Topic 10.</i> Selling property	Performance of the task on the topic "Objectives of the assessment of the value of property. The subject of valuation and the factors influencing its value". Presentation of individual tasks	Active participation in classroom activities. Consideration of the prepared materials in the classroom

The student's individual work is provided with a system of teaching aids designed for the study of the academic discipline. The aids are located on the S. Kuznets KhNUE site of personal educational systems [27]. For each topic, the students can find tasks for practical classes with guidelines to them as well as other additional materials on the academic discipline.

# Content module 1. A business idea. Organizing and opening your own business

## Topic 1. Starting your own business

1.1. Modern models of effective business.

1.2. Business type clustering.

1.3. Analysis of the degree of market saturation of a certain type of business.

### Practical tasks

#### Task 1.1

##### What is a business model?

A business model is an outline for how your company plans to make money. In general, a business model explains four things:

What product or service will a company sell?

How does it intend to market that product or service?

What kind of expenses will the company face?

How does the company expect to turn a profit?

Because there are many different businesses, the list of business model types is constantly changing. Here are 12 common business model options, all of which can be customized for a specific company or industry.

A "disruptive business model" innovates on these basic structures. And lots of businesses earn money from multiple revenue streams, meaning their business models include several of these types.

Expand on the essence of the following business models (Table 2).

Table 2

### The essence of typical business models

Type of business model	Explanation
1	2
Retailer model	
Manufacturer model	
Fee-for-service model	

Table 2 (the end)

1	2
Subscription model	
Bundling model	
Product-as-a-service model	
Leasing model	
Franchise model	
Distribution model	
"Freemium" model	
Advertising or affiliate marketing model	
Razor blades model	
Long tail	
Brick-and-Mortar	
Crowdsourcing	
Brokerage	

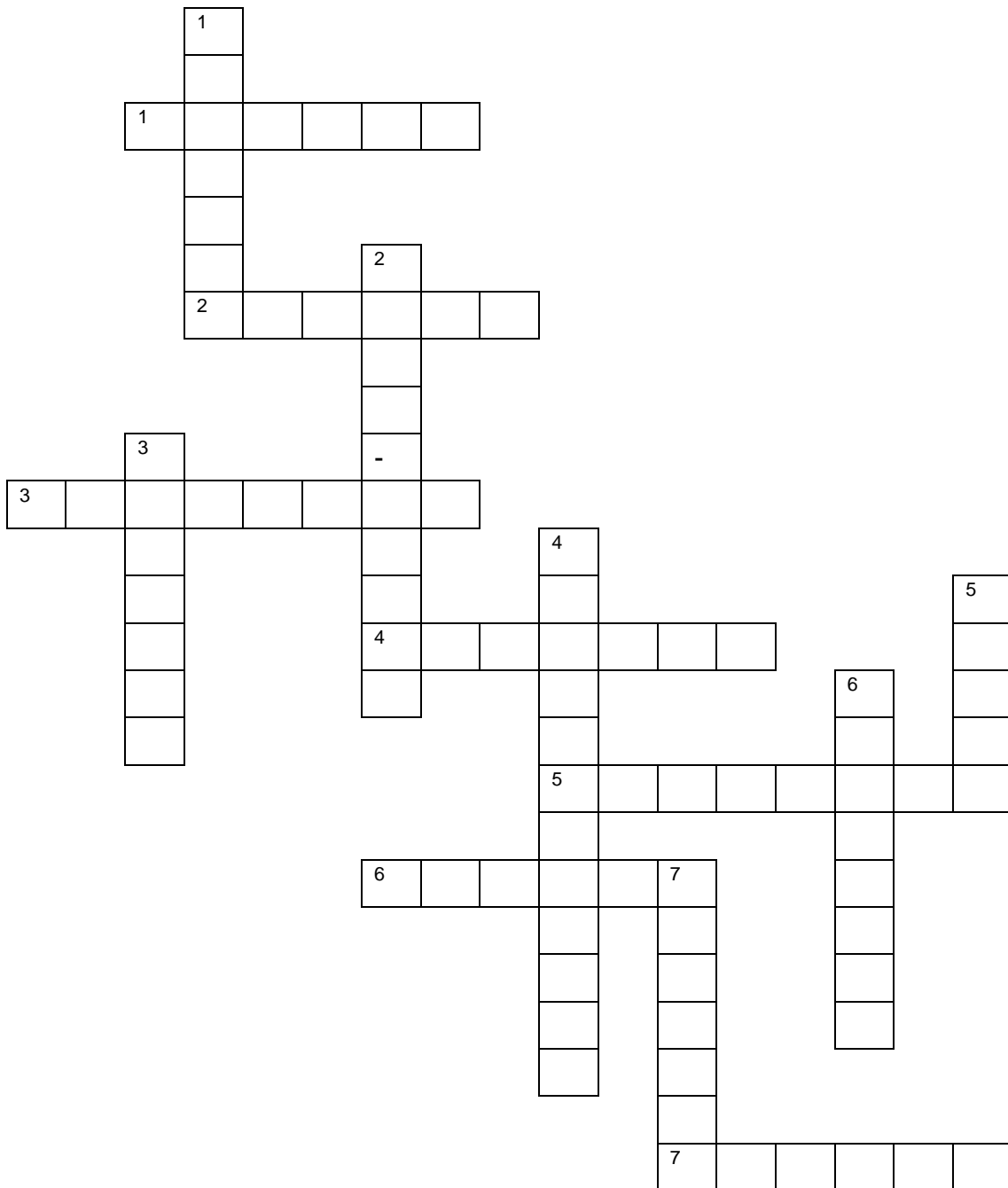
### Task 1.2

To expand the conceptual apparatus of the implementation of the processes of creating an idea and opening a business, solve the crossword puzzle.

Horizontal lines:

1. Cash or material values received by the state, individual or legal entity as a result of any activity for a certain period of time.
2. Coming-out of goods, services and capital abroad for sale in foreign markets.
3. A legal or natural person who has suffered a financial collapse and is unable to pay off his debts.
4. An independent, organizational and separate business entity with the rights of a legal entity that produces and sells goods, performs work, and provides services.
5. An agreement between two or more parties on any issue with the aim of establishing, changing or terminating legal relations.
6. Failure to fulfill financial obligations on time; non-payment of debts, financial insolvency.
7. The job or series of jobs that you do during your working life, especially if you continue to get better jobs and earn more money.





Vertical lines:

1. The totality of all monetary resources at the disposal of the state or economic entities, as well as the system for the formation, distribution and use of such resources.
2. The amount of expenses the company needs to provide the service.
3. A specialist who is well versed in the methods of scientific analysis.
4. An accounting method of allocating the cost of a tangible asset over its useful life to account for declines in value over time.

5. Skill and experience, especially in relation to making objects; a job or activity that needs skill and experience, or something produced using skill and experience.

6. A situation in which several processes are in a state of endless waiting for resources due to blocking each other.

7. The vehicles, pedestrians, ships, or planes moving along a route.

### Tests

1. The features of entrepreneurship:

a) dynamism in development, lust for money;

b) poorness, initiative;

c) responsibility, mobility, riskiness;

d) increase in turnover, high speed of communication.

2. About whom are the following words: a category of citizens who live on interest or dividends, most often from the lease of property or products of their own intelligence, as well as from acquired financial assets:

a) renters;

b) entrepreneurs;

c) head hunters?

3. The level of financial literacy is of great importance for business success:

a) yes;

b) no.

4. What is the right value equation:

a)  $S = M / V$ ;

b)  $M = V \times N$ ;

c)  $V = M \times S$ ?

5. Determine what activities can be called entrepreneurial:

a) the owner of a private car uses it for trips about the country;

b) the teacher conducts a lesson on the subject "One's business";

c) the owner of a private truck uses it to transport goods for sale;

d) an army officer runs a military airfield.

6. Business is a specific economic activity that is carried out or planned to be carried out using the assets of an integral property complex:

a) yes;

b) no.

7. The goal of an innovative business model is:
- a) to disrupt existing industry logic so that the customer does not gain more value and you gain competitive advantage and profit;
  - b) to get a profit;
  - c) to break down existing industry logic in such a way that the customer gets more value and you get a competitive advantage and profit.
8. Business is a specific economic activity that is carried out or planned to be carried out using the assets of an integral property complex.
- a) yes;
  - b) no.
9. What can NOT be considered characteristics distinguishing an entrepreneur:
- a) liability;
  - b) initiative;
  - c) the desire to receive an easy profit;
  - d) mobility?
10. What is the sphere of entrepreneurship in the purchase and sale of goods and services in order to meet demand and profit:
- a) commercial;
  - b) production;
  - c) financial;
  - d) the sphere of consumption?

### **Questions for self-assessment**

1. The essence and basic forms of doing business.
2. The process of forming a business model.
3. The main components of a business model.
4. Main business areas and purpose.
5. Current trends and prospects for the development of certain types of business.
6. Consumer demand and consumer expectations.
7. Main trends of development of small and medium business.

### **Essay topics**

1. Pareto's law: the essence, the basic principles and the most famous examples.
2. The long tail concept: key features, real-life business examples.

3. Razor and Blade Business Model (Lock-in): the essence, the basic principles and the most famous examples.

4. What are unicorn companies? Top 10 companies in the world. Ukrainian unicorn companies. Dead unicorn.

**Recommended reading:** [4; 5; 10; 19; 22].

## **Topic 2. Which business is more profitable?**

### **Benefit assessment of a business idea**

2.1. Business according to income sources.

2.2. Analysis and evaluation of their own capabilities.

### **Practical tasks**

#### **Task 2.1**

Passive income has long been the holy grail for entrepreneurs looking to free up their time, unfettering the cord of daily duties and responsibilities from the potential to generate healthy monthly revenues. While the importance of passive income isn't often doubted, the monumental hurdle often required to achieve a respectable amount of cash flow from automatically-recurring revenue streams is often too great for most to bear.

Clearly, it's hard to generate passive income. It requires the upfront investment of a significant amount of our time, usually with little to no returns for extended periods. We can go months and even years without a single dollar produced from passive income activities, making even the most astute entrepreneur shake their head in sheer and utter frustration.

The truth of the matter is that time is far more valuable than money. While money can be spent and earned, time can only be spent once, then it's gone forever. As we age and grow older, we understand the importance of time and being able to freely choose what we do with those.

Expand the essence of the following passive income activities (Table 3).

### The essence of typical business models

Passive income activities	Explanation
Start a blog	
Write and publish an e-book	
Create an online course	
Produce an audiobook	
Become an affiliate marketer	
Build a sales funnel	
Develop a smartphone app	
Earn real estate rental income	
Sell digital products on Etsy	
Generate royalties from jingles or audio tracks	
Make YouTube video tutorials	
Sell professional photos online	
Use cash back credit cards	
Purchase dividend stocks	
Invest through peer-to-peer lending platforms	

### Task 2.2

Create your own business idea. Try to formulate the business model of your idea using the following structure:

1. Customer segments: Who are the customers? What do they think, see, feel and do?

2. Value propositions: What value does the company provide? Why do customers buy and use?

3. Distribution channels: How are these values promoted, sold, and delivered? Why? Is it effective?

4. Customer relationship: How do you treat customers through their transaction process?

5. Revenue stream: How does this business generate revenue from the value provided?

6. Key activities: What are the most important strategies for selling value offers?

7. Key resources: What are the most important assets and resources a company must have in order to be competitive?

8. Key partners: Partners involved in delivering the business's value including those who provide resources and conduct business.

9. Cost structure: What are the company's major costs? What do they have to do with revenue?

### Tests

1. Which of the following is a type of earnings:

- a) passive;
- b) active;
- c) there is no right option?

2. Market division into consumer groups based on demographics such as age, gender, family size, family life cycle stages, income level, profession, education, religion, race and nationality, is called:

a) segmentation depending on the motives for the purchase or use of goods;

- b) behavioral segmentation;
- c) demographic segmentation.

3. The real market capacity is:

a) the volume of sales of goods in a given period of time (month, quarter, year) in a particular market;

b) the maximum possible sales of goods for a specific period of time, which can be achieved through the implementation of appropriate marketing programs;

c) sales volumes that were achieved in the past period.

4. A technique that allows you to measure the characteristics of lifestyle and classify them; it reveals the meaning of the main variables HOME (activities, interests, opinions):

- a) the geographic segmentation;
- b) the grouping method;
- c) the psychographic segmentation.

5. Which method of segmentation is based on differences in the system of consumer values and is based on the construction of a model of consumer behavior:

- a) the benefit segmentation method;
- b) the method of building a segmentation network;
- c) the method of multidimensional classification?

6. Goods that bring great instant satisfaction and have significant benefits in the long run are:

- a) common goods;
- b) private goods;
- c) desired goods.

7. What are the conditions for intensive and successful business development:

- a) always think about money and spend it carefully;
- b) buy a product that is not relevant;
- c) entrepreneurial abilities, personal interests, creative ideas, benefits?

8. Market capacity is:

- a) the volume of sales of goods in a given period of time;
- b) a fixed value;
- c) the volume of sales of goods for a specific period of time.

9. Passive income does not impose any restrictions:

- a) yes;
- b) no.

10. Geographical factors are those related to:

a) the development of machinery, equipment, tools, processes of processing and manufacture of products, materials and technologies, as well as know-how;

- b) location, topography, climate and natural resources;
- c) the circulation of money, goods, information and energy.

### **Questions for self-assessment**

1. Active and passive income.
2. Income from trading activities.
3. Income from production activities.
4. Income from investment and credit activities.
5. Proceeds from the sale of property and intellectual rights (property).
6. Income from exchange rate differences of foreign currency funds and securities.
7. E-commerce.
8. Small project or large scale production.
9. Assessment of one's own professional opportunities.
10. Determining the amount of potential income.

## **Essay topics**

1. Active income ideas to earn extra money.
2. Passive income ideas for building wealth.
3. Best business ideas for newbie entrepreneurs.

**Recommended reading:** [7; 10; 16; 19; 22].

## **Topic 3. Creating a new product and defining a business idea**

- 3.1. Finding sources and generating ideas.
- 3.2. Life stages of a new product.
- 3.3. Market launch strategy for a product.

### **Practical tasks**

#### **Task 3.1**

Create a new product launch plan.

Before starting on your new product launch plan, make sure you've crafted a product launch strategy. This'll help you inform and execute the tactical aspects of your product launch plan. The launch stage is often the busiest and most impactful stage of a new product launch. Activities during this phase focus on building brand awareness and anticipation, developing product messaging, identifying key marketing channels, and driving demand for your new product to ensure a successful launch [10].

#### ***Guidelines to task 3.1***

Follow the given sequence of steps to create an effective new product launch plan.

Step 1. Describe the product/service. Answer the questions:

What does the product do?

Why does it exist?

Who does it serve?

How does it help them?

Why is it the best option?

Step 2. Create a customer profile. By understanding things like a customer's needs, shopping behaviors, and more, you can figure out the best ways to reach this target audience.



You can use tool like Google Forms to create surveys on specific customer traits. Below are some ideas for the type of questions to include in your survey [26]:

Demography-related questions.

You should keep in mind that these are very personal and sensitive questions. As a result, you have to pay special attention to the way you structure them. One idea is to give consumers multiple answers to choose from for some demographic questions.

Here are a few examples you can replicate:

1. What is your nationality?

2. In what year were you born:

From 1960 to 1980;

From 1981 to 2000;

From 2001 onward?

3. What is your gender?

male;

female;

other (please specify).

4. What is your relationship status?

Socioeconomic questions.

These questions also ask for private information, so it's best to use multiple-choice answers here as well. Below are a few examples to give you an idea of which questions to ask in order to gain socioeconomic data:

1. What is your employment status:

employed full-time;

employed part-time;

self-employed;

retired;

unemployed?

2. What is your highest educational qualification?

3. What is your household's annual income:

7 000 UAH or less;

7 001 UAH to 10 000 UAH;

10 001 UAH to 17 000 UAH;

17 001 UAH or more?

Questions related to psychology.

Since there are so many potential answers to these types of questions, you can ask open-ended questions like the ones below:

1. What hobbies do you enjoy?
2. What do you value most in life?
3. What factors affect your decision to buy a product or service?

Geography-related questions.

These are generally easy-to-answer questions about a consumer's geographical location, such as:

1. In what region do you live?
2. How would you describe the weather in your area?
3. Are you exempt from paying taxes in your region?

The survey may include other questions that relate directly to your product/service.

Step 3. Fill in your customer profile template.

Now that you've surveyed your top customers, covered all their attributes, and gained a complete overview of why they give you their business, compose your research into one single document – this will serve as your customer profile.

If you're aware of how to structure the document, list the information in the following order:

1. Give your customer a name.
2. Put a face to their profile.
3. Add their demographic information.
4. List their psychographic and socioeconomic attributes.
5. Include a quote from the customer.
6. Add their goals, pain points, and motivators.
7. Add the type of communication channels they would prefer to use.

To create a customer profile, use the forms at the links [23; 25; 26].

Step 4. Determine and describe the channels for disseminating information about your product/service.

Here is a quick tap to the popular communication channels both traditional and digital: website; messaging; e-mail; face-to-face communication; phone; community; traditional channels.

Give an example of the use of one of the communication channels with the client (advertising banner, slogan, logo; unique name of the product/service, e-mail, SMS correspondence, etc.).

## Questions for self-assessment

1. Methods of finding ideas for your business and your own product.
2. Description and development of the project idea and definition of general directions of use of the potential product (service).
3. Difference of your own goods from competing counterparts.
4. Developing a new product idea.
5. Determination of factors affecting the product life cycle.
6. Analysis of market opportunities and market environment.
7. Developing a strategy for market introduction of a potential product (service) within a business project.

## Tests

1. This is one of the more straightforward types of customer profiling. Gaining an understanding of your customers' location, whether it's based on large areas like continent and country or down to detailed city and town analysis, can help you offer the most relevant and helpful products:

- a) geographic;
- b) psychographic;
- c) behavioral;
- d) demographic.

2. Environmental factors related to the circulation of money, goods, information and energy are:

- a) economic;
- b) political;
- c) socio-demographic;
- d) technological;
- e) competition;
- f) geographical.

3. Some of the subjects of market relations are evaluated according to such factors as: assessment of development trends of raw materials markets; characteristics of the resource; price elasticity of resources; the number of firms using similar types of resources, etc. They are:

- a) suppliers;
- b) customers;
- c) intermediary;
- d) manufacturers.

4. What types of goods characterize these examples: butter and margarine; physical books and e-books; sandals and flip-flops; tuna and salmon:

- a) substitutes;
- b) semi-finished products;
- c) services;
- d) counterfeit products?

5. There are things (quantitative characteristics of product properties) that make the customer buy the specific product. They are:

- a) competitiveness parameters;
- b) competitiveness of goods;
- c) competitiveness indicators.

6. A stage of the product life cycle which characterizes a decrease in sales and reduced profits is called:

- a) recession;
- b) development;
- c) growth;
- d) maturity.

7. This curve of life cycles of product shows the rapid rise and fall of product popularity:

- a) the capture curve;
- b) the classic curve (boom);
- c) long-term capture;
- d) the seasonal curve (fashion curve);
- e) the nostalgia curve;
- f) the failure curve.

8. This period of the life cycle of a small business is characterized by the process of formation of the enterprise:

- a) the beginning of production of goods or services;
- b) research, development of production technology;
- c) commercial success of a product or service;
- d) lack of commercial success and sales of goods or services.

9. What is a product launch:

- a) it is the process of bringing a product to market;
- b) it is a product that has anti-gravity properties;
- c) it is re-releasing products to increase awareness;
- d) it is a release of a series of products that are related?

10. What is one benefit of a product launch:
- it provides an organized plan to take the product to market;
  - it is an easy way to sell products;
  - it is a way to sneak a product out without anyone knowing about it;
  - it guarantees a wait list for your product?

### **Essay topics**

1. Creating a brand legend.
2. Positive image of a company.
3. Market launch strategy for a new product.

**Recommended reading:** [4; 10; 16; 21; 22].

## **Topic 4. Costs and production value**

- 4.1. Expenses according to the type of economic activity.
- 4.2. Costs associated with the production of goods.
- 4.3. Cost of production.

### **Practical tasks**

#### **Task 4.1**

The cost price of a product is 65 UAH. Sales price with the VAT is 700 UAH; the VAT is 20 %; the excise tax is 5 %. Determine the structure of the selling price of the product.

Price structure is the main element included in the price (cost price, rate of return, VAT, excise tax).

#### **Task 4.2**

The cost price of a product is 3 500 UAH per unit. The minimum profitability acceptable for the manufacturer is 20 %. The value added tax rate is 20 %. Determine the minimum acceptable selling price for the item.

#### **Task 4.3**

What is the structure of the selling price if its level with VAT is equal to 58 UAH at a VAT rate of 20 % and the cost price of 99 UAH? Determine the profitability of this type of product.

### **Guidelines to tasks 4.1 – 4.3**

Cost-plus-profit pricing assumes production costs and the desired margin. This method allows companies to keep profit, and it is easy to apply when calculating prices for a large number of products.

1. Determine the manufacturer's price:

$$\text{Profit margin} = \text{Cost price} \times \text{Profit rate.} \quad (1)$$

$$\text{Net price} = \text{Cost price} + \text{Profit margin.} \quad (2)$$

*Example.* Suppose, the fixed costs for a company, are \$900 and the variables are \$1 per unit. The company expects to sell 100 units. The total cost would be  $\$900 + \$100 = \$1\,000$ , so the price of each item would be \$10. Next, they want to set a 30 % markup. So the price would be  $1.3 \times 10 = \$13$  and the profit would be  $3 \times 100 = \$300$ .

*Clarification.*

Net: the Net price is the price excluding VAT. It is also called "ex VAT" or "Net", in other words, the total before the VAT is added.

Gross: the Gross price is the price including VAT. It is also called "inc. VAT", in other words, the amount after VAT added.

2. Calculation of the sales price including VAT:

Adding VAT.

Adding VAT to an amount is very easy. All you need to do is multiply your net amount by your ratio.

For example, if you are selling a chair for \$150 Net and need to add 20 % VAT to get the Gross price including VAT, you use:

$$150 \times 1.20 = \$180.$$

So the Gross amount including VAT is \$180.

Removing VAT.

Taking VAT off an amount is just as easy (providing you have a calculator). All you do is divide your Gross amount by your ratio.

For example, if you bought a table for a Gross price of \$180 including 20 % VAT and want to work out the Net price excluding VAT, you do this:

$$180 \div 1.20 = \$150.$$

So the Net amount excluding VAT is \$150.

Finding the VAT amount from a Gross amount.

Sometimes you have a total Gross amount and need to find the amount of VAT it contains. The simplest method is to find the Net amount (see *Removing VAT* above) and take the Net away from the Gross.

Going back to our example, if you bought a table for a Gross price of £180 including 20 % VAT and want to find the amount of VAT included in the price, you do this:

$$180 \div 1.20 = \$150 \quad \text{and then} \quad 180 - 150 = \$30.$$

So the amount of VAT in this case is \$30.

### 3. Calculation of the excise tax (duty).

To calculate the excise tax amount, multiply the product purchase price by the excise tax percentage.

*Example.* Consider a company High Breweries Limited located in Salt Lake City, US, which produces 2 000 liters of Brewery in 24 hours. High Breweries has to pay an excise tax to the federal tax department and has an excise tax of \$5 per liter. Calculate how much excise tax company must pay on a daily basis to the tax department.

*Solution.* The total Excise tax liability = 2 000 × 5 = \$10 000.

High Breweries Limited needs to pay \$10 000 in excise tax to the federal tax department for producing 2 000 liters of the Brewery on a daily basis.

Price structure is the main element included in the price (cost price, rate of return, VAT, excise tax).

### **Task 4.4**

You have a business of creating wooden furniture chairs. You determined the following costs:

wood costs: \$100;

labor and materials: \$40;

total cost: \$140.

According to this example, prove that, the margin will be 28.6 % with a markup of 40 %, 33.3 % with a markup of 50 % and 16.7 % with a markup of 20 %.

### **Task 4.5**

Using the example above, let's say we want the selling price to give us a 40 % margin. Determine the selling price of the product and the size of the margin in absolute terms.

### **Task 4.6**

Calculate the selling price of the sweatshirt if the business purchases 100 items to sell in its shop and pays a total of \$1 500 for 100 sweatshirts.

The bookkeeper of the firm determines the ideal profit margin of 35 %. What size markup can be set with such a margin?

#### **Task 4.7**

Calculate the selling price for a subscription service.

The accountant calculates the selling price to find the ideal starting point for the magazine's yearly subscription by first finding the total cost of providing the digital magazine. The accountant calculates the following costs of providing subscription services:

magazine content costs \$50 000 monthly to produce;

marketing expenses amount to \$15 000 monthly;

internet expenses cost the magazine brand \$100 per month.

The accountant finds the brand's total costs and multiplies this value by the brand's markup of 40 % per month. The magazine currently has 15 000 readers.

What price can the accountant of the magazine offer if the price of competitors is \$7.5?

#### ***Guidelines to tasks 4.4 – 4.7***

There are two often-used approaches to calculating a sales price. The traditional method is to add a markup percentage to the cost of the product. Alternatively, you can calculate a sales price in terms of the gross margin you want to earn from selling the product.

The markup percentage method.

When you calculate a sales price, you must allow for the cost of the product, overhead and profit. Overhead costs include staff salaries, rent, utilities, taxes, insurance, advertising and administrative costs. The traditional method of calculating a sales price is to add a markup percentage to the cost of the product. This approach has the virtue of simplicity, but it may be difficult to determine if the price covers the costs.

The gross margin method.

An alternative approach is to plug the cost of a product into a formula that yields the gross margin and gross margin percentage. Because gross margin is the figure commonly used when determining if a business is making enough to cover all costs and also to produce a profit, it may be more useful. Whichever approach you use, it is important not to confuse the two approaches. The dollar amount added to the cost of a product may be the same, but a traditional markup percentage is a different number than a gross margin percentage.



Markup/Margin (also called Gross Profit) is the difference between a product's cost and its selling price.

$$\text{Markup/Margin} = \text{Selling price} - \text{Cost of goods sold.} \quad (3)$$

According to the formula in absolute terms, the indicators are equal to each other. However, their values differ in relative dimension.

Reason: the percentage of markup is determined in relation to the cost of production. That is, it indicates how much was added in the formation of the sale price. The percentage of margin is determined in relation to the sale price. It indicates how much you earned (as a percentage) from the sale of products. Formulas:

$$\text{Markup (\%)} = \text{Markup (Margin)} / \text{Cost of goods sold.} \quad (4)$$

$$\text{Margin (\%)} = \text{Margin (Markup)} / \text{Selling price.} \quad (5)$$

### Tests

1. This is a pricing method that is based on the cost of production, manufacturing, and distribution of a product:
  - a) cost-based pricing;
  - b) prices based on the balance of supply and demand;
  - c) competition-based pricing.
2. This is the money that customers must pay for a product or service:
  - a) price;
  - b) cost of product;
  - c) value.
3. This is a company's approach to determining the price at which it offers a good or service to the market:
  - a) pricing policy;
  - b) marketing policy;
  - c) financing policy;
  - d) fiscal policy.
4. Which of the following does not apply to the features of small business finance:
  - a) large amounts of capital;
  - b) high level of business risks;
  - c) access to financial resources on preferential terms?

5. Do the costs of advertising, sales of products and remuneration of the accountant of the enterprise relate to conditionally variable costs?

- a) no;
- b) yes.

6. This is the sum of both fixed and variable costs accrued during production. In other words, it's the total cost of production and changes according to production volume:

- a) total cost;
- b) fixed costs;
- c) variable costs;
- d) average cost;
- e) marginal cost.

7. Does gross profit show how much you make after meeting all costs:

- a) no;
- b) yes?

8. The price at which something is offered for sale:

- a) selling price;
- b) cost price;
- c) purchase price;
- d) retail price.

9. The principle of effective and competitive organization of production, which consists in the repeatability of production and the absence of downtime is:

- a) continuity;
- b) proportionality;
- c) flexibility;
- d) rhythmicity.

10. This is the amount by which a manufacturer reduces the retail price of a product when it sells to a reseller, rather than to the end customer:

- a) trade discount;
- b) markup;
- c) trade allowance.

### **Questions for self-assessment**

1. Nature and types of costs. External and internal costs. Economic costs. Costs associated with normal activities.

2. Financial expenses. Expenses from participation in capital.

3. Operating expenses. Other expenses.

4. The essence of production costs. Total costs and unit costs. Costs depending on the type of products.
5. Direct and indirect costs. Current costs. Long-term costs.
6. The essence of the cost of production.
7. Budgeting and costing.
8. Grouping of costs in the calculation of the cost of production.

**Recommended reading:** [3; 5 – 7; 21].

## **Content module 2. Starting capital and basics of financial calculations**

### **Topic 5. The fundamentals of financial calculations**

- 5.1. The theory of time value for money.
- 5.2. Capital raising and discounting using a simple interest rate.
- 5.3. Discounting using a compound interest rate.
- 5.4. Increasing capital using a compound interest scheme.

#### **Practical tasks**

##### **Task 5.1**

You have \$80 in a savings account that earns 10.5 % annually. The interest is not compounded. How much interest will you earn in 5 years?

##### **Task 5.2**

A total of \$1 200 is invested at a simple interest rate of 6 % for 4 months. How much interest is earned on this investment?

##### **Task 5.3**

A business takes out a simple interest loan of \$10 000 at a rate of 7.5 %. What is the total amount the business will repay if the loan is for 8 years?

##### **Task 5.4**

The financial agreement of the client with the bank provides for the repayment of debt in the amount of 5.3 thousand UAH in 90 days for the loan amount of 5 thousand UAH. Determine the profitability of such a transaction for the bank in the form of an annual interest rate.

### **Task 5.5**

How much do you need to invest now, to get \$10 000 in 10 years at 8 % interest rate?

### **Task 5.6**

You take out a \$1 000 loan for 12 months and it says "1 % per month", how much do you pay back?

### **Task 5.7**

You have \$1 000, and want it to grow to \$2 000 in 5 years, what compound interest rate do you need?

### **Task 5.8**

How long does it take you to convert \$1 000 to \$5 000 if the bank offer is 8 % per annum?

### **Task 5.9**

How much time is needed to triple the capital when accruing simple (compound) interest in the amount of 19 % per annum?

### **Task 5.10**

You want to know how many periods it will take to turn \$1 000 into \$2 000 at 10 % simple interest.

### ***Guidelines to tasks 5.1 – 5.10***

There are two methods (processes) for estimating the value of money over time: compounding and discounting.

*Value increase (compounding)* is the process of reducing the present value of money (financial instrument) to their value in the upcoming period.

*Compounding.* Compounding is the technique used to evaluate the ability of an asset to grow with reinvestment of interest earned during the investment period. With a simple interest scheme the following formula is used:

$$FV = PV \times (1 + r \times n), \quad (6)$$

where FV is the future value of money;

PV is the present value of money;

r is the rate of interest;

n is the period of a financial transaction.

With a compound interest scheme formula (7) is used:

$$FV = PV \times (1 + r)^n. \quad (7)$$

*Discounting* is the process of determining the present value of a payment or a stream of payments that is to be received in the future. Given the time value of money, money is worth more today than it would be worth tomorrow. Discounting is the primary factor used in pricing a stream of tomorrow's cash flows. With a simple interest scheme formula (8) is used:

$$PV = \frac{FV}{(1+r \times n)}. \quad (8)$$

With a compound interest scheme formula (9) is used:

$$PV = \frac{FV}{(1+r)^n}. \quad (9)$$

Interest accrual schemes:

*A simple interest scheme* involves the invariance of the base from which accrual occurs;

*a compound interest scheme* is such a scheme where interest is calculated on the ever growing base, taking into account the interest accrued in prior periods (interest on interest).

Indicators for determining the duration of the financial transaction and the size of the interest rate are presented below:

*a simple interest scheme:*

$$n = \frac{FV - PV}{PV \times r}. \quad (10)$$

$$r = \frac{FV - PV}{PV \times n}. \quad (11)$$

*a compound interest scheme:*

$$n = \frac{\ln \frac{FV}{PV}}{\ln(1+r)}. \quad (12)$$

$$r = \sqrt[n]{\frac{FV}{PV}} - 1. \quad (13)$$

### Task 5.11

You make an initial investment of \$5 000 for three years. Find the value of the investment after three years if the investment earns a return of 10 % compounded monthly.

### Task 5.12

What is the value of an investment of \$3 500 after 2 years if it earns 1.5 % compounded quarterly?

### Task 5.13

If the rate of compound interest for the first, second and third year is 8 %, 10 % and 15 % respectively, find the amount and the compound interest on \$12 000 in 3 years.

### Task 5.14

It is necessary to find the future value of 5 500 UAH, if for the first 3 years annual compound interest is charged on this amount at a rate of 12 %. Each subsequent year, the interest rate increases by 2 % with semi-annual accrual.

### **Guidelines to tasks 5.11 – 5.14**

Intra-annual interest accrual.

In the practice of financial agreements, there are often situations in which capitalization of interest occurs several times a year – every six months, quarterly, monthly, and even daily.

This may occur when concluding deposit agreements, when obtaining a bank loan, in joint-stock companies when paying dividends, etc.

The formula used in this case is:

$$FV_n = PV \times \left(1 + \frac{r}{m}\right)^{m \times n}, \quad (14)$$

where  $m$  is interest rate per year;  $n = 2, 4, 12, 365!$

The more often the interest is calculated during the year, the greater the future cost of money becomes.

The formula for determining the future value of funds at a given variable rate is:

$$FV_n = PV \prod_{k=1}^m (1 + r_k)^{n_k}. \quad (15)$$

### Task 5.15

Write an essay on the topic "Sources of financing business ideas, their value in the modern market".

At least two alternative sources of funding for future activities or financial instruments that allow you to accumulate a certain amount of capital for the implementation of the idea in the future need to be investigated.

It is necessary to indicate their cost (the use of statistical information and their analysis is an advantage for obtaining a higher score), assess the advantages and disadvantages, the degree of risk, justify your own choice of the best.

### Tests

1. What factor influences the decline in the value of money over time:
  - a) unemployment;
  - b) fear factor;
  - c) money liquidity;
  - d) inflation?
2. The principle of lending, which is to pay for the use of credit money, is:
  - a) the principle of urgency;
  - b) the principle of payment;
  - c) the principle of return.
3. Earning interest on interest is called:
  - a) extra interest;
  - b) inflation interest;
  - c) simple interest;
  - d) compound interest.
4. The process of determining the present value of a payment or a stream of payments that is to be received in the future is:
  - a) discounting;
  - b) compounding;

- c) capitalization;
- d) reinvestment.

5. Estimate of the inflation rate which shows how much prices rose over a period is:

- a) the inflation rate;
- b) the consumer price index;
- c) the rate of interest;
- d) the discount rate.

6. Congratulations!!! You have won a cash prize! You have two payment options. Which option will you choose:

- a) receive 2 000 UAH in a year;
- b) receive 1 800 UAH now?

7. The idea that money to be paid out or received in the future is not equivalent to money paid out or received today, is:

- a) SMART Money;
- b) PV/FV Money;
- c) Time Value of Money;
- d) Compound Money.

8. While the concept of compounding is generally associated with \_\_\_\_\_, discounting is associated with \_\_\_\_\_:

- a) present value; future value;
- b) future value; present value;
- c) periodic payments; present value;
- d) annuities; dividing.

9. What is the current value of a security that pays \$500 per year for 7 years if similar investments now earn 12 %:

- a) \$226;
- b) \$5 044;
- c) \$3 500;
- d) \$2 282?

10. Which of these is an annuity:

- a) Bob gets \$10 this year and \$20 next;
- b) Jack gets \$10 in three months and \$10 six months later;
- c) Betty gets \$50 in six months and \$20 six months later;
- d) Joan gets \$100 every year for the rest of her life?



### **Questions for self-assessment**

1. Present and future cost of capital. The need and value of money over time.
2. Factors influencing the change in the value of money over time.
3. Extension and discounting processes.
4. The concept of percentages, their types and classification. Interest accrual period.
5. The future value of money, its economic content.
6. The scheme of simple interest, its content and features of use. Determining the cost of capital in the case of annual interest accrual.
7. The concept of discounting simple interest. The current value of capital.
8. The concept of compound interest. The scheme of simple and compound interest, the fundamental difference between them.
9. The need to estimate future revenues from the current point of view.

**Recommended reading:** [3; 8; 12; 15; 21].

## **Topic 6. Forms of raising capital**

- 6.1. The necessity and the essence of credit.
- 6.2. Forms and types of credit. Credit classification criteria.
- 6.3. Bank credit.
- 6.4. Economic limits of credit.

### **Practical tasks**

#### **Task 6.1**

If a loan of 74 000 UAH is received for 8 years, payment for redemption of the credit will amount to 7 900 UAH. Interest will accrue on the outstanding balance of debt. Use a classic loan repayment scheme.

#### **Task 6.2**

If a loan of 74 000 UAH is received for 8 years, payment for redemption of the credit will amount to 7 900 UAH. Interest will accrue on the outstanding balance of debt. Use an annuity loan repayment scheme.

#### **Task 6.3**

A private corporation wishes to borrow \$8.6 million for the construction of a new building by issuing a twenty-year coupon bond at an annual percentage

interest rate of 13 % to be paid semi-annually. The principal amount will be paid within 10 years in equal semi-annual payments. Use a classic loan and an annuity loan repayment schemes.

### **Guidelines to tasks 6.1 – 6.3**

There are classic and annuity loan repayment forms. What is the difference?

Loan payment (A) consists of two parts:

$$A = R + I, \quad (16)$$

where R is the body of the loan;

I is percentage payment.

An annuity is essentially a loan, a multi-period investment that is paid back over a fixed (or perpetual, in the case of a perpetuity) period of time. The amount paid back over time is relative to the amount of time it takes to pay it back, the interest rate being applied, and the principal (when creating the annuity, this is the present value). To understand how to calculate an annuity, it's useful to understand the variables that impact the calculation.

With annuity (also known as an amortizing loan), you get the principal back in regular payments, stretched over the period of the loan. In this scenario, interest is calculated from the residual loan amount (total loan amount less principal repayments, according to the schedule).

The present value of an annuity can be calculated as follows:

$$PV = A \times \sum_{i=1}^k \frac{1 - (1+r)^{-n}}{r}. \quad (17)$$

The future value of an annuity can be calculated as follows:

$$FV = A \times \sum_{i=1}^k \frac{(1+r)^n - 1}{r}. \quad (18)$$

An example of the design of the loan repayment schedule based on an annuity scheme is shown in Table 4.

Table 4

### The annuity debt repayment schedule

Period	Debt (PV)	Payment (A)	Body loan (R)	Interest (I) 20 %
1	20	6.7	$2.7 = 6.7 - 4$	$4.0 = 20 - 0.2$
2	$17.3 = 20 - 2.7$	6.7	$3.2 = 6.7 - 3.5$	$3.5 = 17.3 - 0.2$
3	$14.1 = 17.3 - 3.2$	6.7	3.9	2.8
4	10.2	6.7	4.6	2.0
5	5.6	6.7	5.6	1.1
Total		33.5	20.0	13.4

If you use the annuity scheme debt, the loan payment amount remains unchanged.

An example of the design of the loan repayment schedule based on the classical scheme is shown in Table 5.

Table 5

### The classical repayment schedule

Period	Debt (PV)	Payment (A)	Body loan (R)	Interest (I) 20 %
1	20	$8 = 4 + 4$	$4 = 20/5$	$4 = 20 - 0.2$
2	16	$7.2 = 4 + 3.2$	$4 = 20/5$	$3.2 = 16 - 0.2$
3	12	6.4	4	2.4
4	8	5.6	4	1.6
5	4	4.8	4	0.8
Total		32	20	12

If you use debt according to the classical scheme, the amount of repayment of the principal remains unchanged.

### Tests

1. What function of the loan helps to monitor compliance with the terms of the credit contract:

- a) the replacement of cash;
- b) stimulating;
- c) redistribution;
- d) control?

2. Which scheme of loan repayment is cheaper for borrowers:
  - a) the annuity debt repayment schedule;
  - b) the classical repayment schedule;
  - c) the simple interest scheme;
  - d) the compound interest scheme?
3. This is a type of cash flow, the duration of all periods of which is equal to:
  - a) future value;
  - b) annuity;
  - c) present value.
4. Specify the classification feature of this type of loan, such as installments:
  - a) the goal of the loan;
  - b) the term of the loan.
5. A sum of money that one or more individuals or companies borrow from banks or other financial institutions so as to financially manage planned or unplanned events and in doing so, the borrower incurs a debt, which he has to pay back with interest and within a given period of time, is called:
  - a) a loan;
  - b) the price of credit;
  - c) the bank income.
6. Does lending contribute to the development of industries:
  - a) no;
  - b) yes?
7. This is what is transferred from the lender to the borrower and that makes its way back from the borrower to the lender (money, goods, things, services or financial assets, other tangible and intangible (intellectual) property in debt):
  - a) the object of credit;
  - b) the subject of credit;
  - c) the goal of credit;
  - d) the pledge of credit.
8. This is the net amount of cash that an entity receives and disburses during a period of time:
  - a) a cash-flow;
  - b) an annuity;
  - c) cash;
  - d) a rent payment.

9. The cost of using credit is:

- a) interest rate;
- b) installment credit;
- c) backup funding;
- d) financial safety.

10. This is debt which is not guaranteed with collateral or may be issued in a much smaller amount:

- a) secured debt;
- b) unsecured debt;
- c) revolving debt.

### **Questions for self-assessment**

1. Credit as a form of value movement on a reverse basis.

2. The main features of the loan. Subjects and objects of credit relations.

3. Features of credit in a market economy. Market of loan capital.

4. Debt capital and credit. Debt capital as a form of monetary capital.

The main features of loan capital.

5. The forms of credit, the advantages and disadvantages of each form.

Types of credit. Characteristics of individual types of credit: commercial, consumer, state, international, banking.

6. Principles and methods of bank lending. The mechanism of bank lending.

7. Forms of collateral and insurance of bank loans.

8. The concept of credit limits, causes and consequences of their breach.

9. Percentage of credit. Percentage, types, economic boundaries of movement and factors of change of interest rate.

10. Interest rate risk. Percentage in inflation.

### **Essay topics**

1. The essence of economic categories of money, banks, credit and their applied value.

2. Development of credit service, its advantages and disadvantages.

3. Alternative lending.

4. Loans for business development in Ukraine.

**Recommended reading:** [8; 9; 17; 18; 21].

## **Topic 7. Starting a business as a form of investment project realization**

- 7.1. The economic essence of investment.
- 7.2. Characteristics of investment objects.
- 7.3. Characteristics of investing entities.

### **Practical tasks**

#### **Task 7.1**

The management of Fine Electronics Company is considering to purchase equipment to be attached with the main manufacturing machine. The equipment will cost \$6 000 and will increase annual cash inflow by \$2 200. The useful life of the equipment is 6 years. After 6 years it will have no salvage value. The management wants a 20 % return on all investments. Based on the available information, calculate the indicator of the net present value (NPV).

#### **Task 7.2**

Smart Manufacturing Company is planning to reduce its labor costs by automating a critical task that is currently performed manually. The automation requires the installation of a new machine. The cost of purchasing and installation of a new machine is \$15 000. The installation of the machine can reduce annual labor cost by \$4 200. The life of the machine is 15 years. The salvage value of the machine after fifteen years will be zero. The required rate of return of Smart Manufacturing Company is 25 %. Should Smart Manufacturing Company purchase the machine?

#### **Task 7.3**

A project requires an initial investment of \$225 000 and is expected to generate the following net cash inflows: year 1: \$95 000, year 2: \$80 000, year 3: \$60 000, year 4: \$55 000. Compute the net present value of the project if the minimum desired rate of return is 12 %.

#### **Task 7.4**

An investment of \$200 000 is expected to generate the following cash inflows in six years: year 1: \$70 000, year 2: \$60 000, year 3: \$55 000, year 4: \$40 000, year 5: \$30 000, year 6: \$25 000. Compute the discount payback period of the investment. Should the investment be made if management wants to recover the initial investment in 3 years or less?

### **Guidelines to tasks 7.1 – 7.4**

Implementation of a business idea is a project of capital investment for profit. Indicators of evaluation of the effectiveness of investment projects are also used to assess the effectiveness of doing business.

The indicators are: the net present value of the project (NPV), the profitability index (PI), the discount payback period (DPP), the internal rate of return on investment (IRR).

NPV is the sum of the present values of the cash inflows and outflows.

The formula for determining the net present value is:

$$NPV = \sum_{i=1}^k \frac{CF_i}{(1+r)^i} - IC, \quad (19)$$

where  $CF_i$  is the net cash flow;

$r$  is the discount rate, which indicates the rate of change in the value of money over time. It can be calculated as the weighted average cost of capital;

$IC$  is the invested capital;

$i$  is the number of time periods.

Payback method with uneven cash flow: In the above examples we have assumed that the projects generate an even cash inflow but many projects usually generate an uneven cash flow. When projects generate an inconsistent or uneven cash inflow (a different cash inflow in different periods), the simple formula given above cannot be used to compute the payback period. In such situations, we need to compute the cumulative cash inflow and then apply the following formula:

$$DPP = \text{Years before break-even} + \frac{\text{Unrecovered amount}}{\text{Cash flow in recovery year}}. \quad (20)$$

### **Questions for self-assessment**

1. The economic essence of investment. Investment process and its stages.

2. The concept of investment objects. Real and financial investments, their main characteristic.

3. The concept of subjects of investment activity. Businesses as subjects of investment activity.

4. Financial institutions in the investment market. Banks, credit unions, pawnshops, leasing companies, trust companies, insurance companies, funded pension institutions, joint venture institutions.

**Recommended reading:** [1; 6; 12; 16; 20].

## **Topic 8. An innovative form of investment**

8.1. The economic essence of investing and the innovation process.

8.2. Objects and subjects of innovative activity.

8.3. Financing of innovative activity.

### **Individual tasks**

#### **Topics for presentations**

1. The features of functioning of the subjects of innovation and investment activities (business angels, business incubators, business accelerators, venture funds).

2. The sources of financing business ideas, their value in the modern market.

3. Crowdfunding as a technology to finance innovative projects: pros and cons.

4. The features of the implementation of the innovation format "startup".

5. Priority objects of investment in the modern market (Where to invest money to earn? 10 ways to invest your savings).

6. World-renowned fraudulent schemes and manias with financial investments of the 19th and 21st centuries.

7. What macroeconomic factors have the greatest impact on investment activity in Ukraine?

8. Endowment fund. Examples of the most successful endowments.

9. Hedge funds and private equity.

### **Tests**

1. Investments are:

- a) all types of property values;
- b) all kinds of intellectual property;
- c) a program document;



- d) the right to use land;
  - e) all answers are correct.
2. Investments are divided into:
- a) real;
  - b) direct;
  - c) financial;
  - d) indirect;
  - e) all answers are correct.
3. Investment activity can be carried out in the form of:
- a) investment by legal entities;
  - b) investing by individuals;
  - c) state investment;
  - d) foreign investment;
  - e) joint investment by citizens and legal entities of Ukraine and foreign countries;
  - f) investing in other people;
  - g) all answers are correct.
4. Investments in economic essence are divided into:
- a) gross;
  - b) total;
  - c) clean;
  - d) all answers are correct.
5. Short-term investments include:
- a) for a period up to 6 month;
  - b) for a period of up to a year;
  - c) with a payback period more than two years;
  - d) for a period up to five years but more than one year.
6. The net investment is:
- a) the amount of gross investment and depreciation;
  - b) the difference between gross investment and depreciation;
  - c) difference in gross investment and net profit.
7. If the net investment of enterprise is greater than zero, this means:
- a) the company has an expanded reproduction of its assets;
  - b) financing of investments is carried out by the method of self-lending;
  - c) the net present value is a positive value;
  - d) there is no correct answer.

8. Direct investments of an enterprise provide:
  - a) direct participation in the selection of investment objects;
  - b) investing capital in cash;
  - c) acquisition of controlling block of shares;
  - d) investing in a parent company.
9. If the net investment of the enterprise is less than zero, this means:
  - a) the company has an expanded reproduction of its assets;
  - b) financing of investments takes place at the expense of credit funds;
  - c) the production potential of the enterprise is reduced;
  - d) there is no correct answer.
10. The multiplier effect is:
  - a) the growth rate of income from the growth of net investment;
  - b) receiving income from net investment;
  - c) receiving net profit from gross investments.

### **Questions for self-assessment**

1. The economic essence of innovation and innovation process. The concepts and types of innovation. Classification of innovations. Models of the innovation process.
2. The objects of innovation activity and their characteristics. The subjects of innovation and their characteristics.
3. The main goal of the state innovation policy, the basic principles of the state innovation policy.
4. Priority directions of state support of the enterprise innovation activity.
5. Financial support for innovation.
6. Venture financing. The types of venture financing, their features. Problems of development of venture financing in Ukraine.

**Recommended reading:** [1; 6; 14; 15].

## **Topic 9. Financing the investment process**

- 9.1. The characteristics of investment resources.
- 9.2. Methods of formation of investment resources.
- 9.3. Valuation of investment resources.
- 9.4. Methods of optimizing the structure of the sources of investment resources.

## Practical tasks

### Task 9.1

To open a company, capital was attracted from internal and external sources in a 80/20 ratio. The required rate of return on equity capital is 21 %, borrowed capital is attracted at 27 % per annum. Determine the weighted average cost of the capital of the firm.

### Task 9.2

Determine the weighted average cost of capital, provided that the total capital is 85 000 UAH, the amount of equity capital is 37 000 UAH, the rate of return on the equity capital is 19 %, and part of the borrowed capital is attracted at 31 %.

### Task 9.3

Determine the weighted average cost of capital, provided that the average annual amount of the equity capital is 179 000 UAH, the amount of net profit received in the reporting year is 66 500 UAH, the total capital of the company is 300 000 UAH, and the interest rate on the bank loan (due to which part of the capital is formed) is 29 %.

### Task 9.4

Determine the weighted average cost of capital, provided that it is formed from three sources: equity in the amount of 78 000 UAH is used with a yield of 13 %; a bank loan in the amount of 27 000 UAH was issued at a rate of 37 % per annum, part of the capital was formed through leasing of equipment (an external source of capital attraction) in the amount of 35 000 UAH which requires interest payment in the amount of 34 % per annum.

### **Guidelines to tasks 9.1 – 9.4**

*The cost of the equity* of an enterprise in the reporting period is determined by the formula:

$$\text{The cost of equity} = \frac{\text{Net profit}}{\text{The average annual amount of equity}} \times 100 \%. \quad (21)$$

*The cost of a bank loan* is determined by the interest rate set by the bank as a payment for the use of the loan.

A change in the cost of a loan with the inclusion of additional costs is calculated:

$$\text{The cost of a bank loan} = \frac{\text{Loan interest rate} \times (1 - \text{income tax rate})}{1 - \text{The level of borrowing costs}}. \quad (22)$$

*The condition of the interest accrual scheme.*

Differences in interest accrual schemes also change the value of money. While accruing of simple interest does not change their base of accrual, complex interest provides capitalization of the interest income.

*The condition for the frequency of interest accrual for a compound scheme.*

The frequency of compounding is of primary value in the cost of credit. And the more often they are charged, the greater its value. An indicator that helps to determine the effectiveness of capital raising in the conditions of variability in the frequency of interest is the effective ratio.

The formula for determining the effective ratio is:

$$r_e = \left(1 + \frac{r}{m}\right)^m - 1, \quad (23)$$

where  $r_e$  is the size of the effective rate;

$r$  is the size of the nominal tax rate;

$m$  is the frequency of interest accrual per year.

Both equity and debt capital from various sources can be attracted for doing business. Then their value will be determined as the indicator of the weighted average cost of capital WACC that is the average interest rate for all sources of company financing.

The calculation takes into account the share of each source of funding in the total cost. The indicator characterizes the relative level of expenses of each source of financing and their number in the capital structure.

The formula for determining the weighted average cost of capital is:

$$\text{WACC} = k_d \times (1 - \text{tax}) \times \frac{D}{E + D} + k_e \times \frac{E}{E + D}, \quad (24)$$

where  $E$  is the equity of the enterprise;

$E + D$  is the total capital value of the enterprise;

$k_e$  is the market rate of return on equity of the enterprise, %;

D is the borrowed capital;

$k_d$  is the market value of the borrowed capital, %;

tax is the income tax rate, %.

### Tests

1. The sources of formation of investment resources borrowed by the enterprise include:

- a) issue of bonds;
- b) issue of shares;
- c) share of net profit;
- d) depreciation charges.

2. Which of the following belongs to external sources of formation of the enterprise's own investment resources (attracted investment resources):

- a) issue of bonds;
- b) share of net profit;
- c) financial leasing;
- d) issue of shares?

3. The second most important internal source of the formation of the enterprise's own investment resources is:

- a) issue of bonds;
- b) issue of shares;
- c) depreciation charges;
- d) share of net profit.

4. Internal sources of formation of own investment resources are:

- a) issue of bonds;
- b) issue of shares;
- c) financial leasing;
- d) share of net profit.

5. Determine which of the indicators of the effectiveness of the investment project characterize the amount in the total flow of funds investment profit:

- a) net present value;
- b) index of yield;
- c) payback period;
- d) profitability index.

6. Which model is used to estimate the future income of an asset for investors:

- a) the model for assessing the optimal capital structure according to the criterion for determining the effect of financial leverage;
- b) the WACC model for estimating the weighted average cost of capital;
- c) the CAPM capital asset valuation model?

7. To which of the sources of attraction of investment resources does the additional investment loan belong:

- a) own;
- b) borrower's;
- c) loans?

8. To which of the methods of formation of investment resources of the enterprise does the issue of corporate bonds belong:

- a) shareholding;
- b) self-financing;
- c) budget financing;
- d) credit financing?

9. Own sources of formation of investment resources of the subject of state donation are:

- a) depreciation deductions;
- b) part of the surplus current assets immobilized in investments;
- c) charitable contributions and sponsorship;
- d) grants, subventions, subsidies;
- e) profit of the enterprise;
- f) all answers are correct.

10. This indicator describes the effect of debt on the return on equity: additional debt can increase the return on equity for the owner:

- a) operating leverage;
- b) financial leverage;
- c) investing leverage.

### **Questions for self-assessment**

1. The characteristics of investment resources. Forms of investment resources.

2. The principles of formation of investment resources.

3. The methods of formation of investment resources.

4. The sources of formation of investment resources.
5. Self-financing and sources of its financial resources.
6. A bank investment loan and ways to attract it.
7. Valuation of investment resources. Methods of valuation of equity, attracted and borrowed capital.
8. Calculation of the volume of investment resources of a real investment project.
9. The methods of optimizing the structure of investment resources.

**Recommended reading:** [1; 8; 9; 11; 14; 15; 18].

## **Topic 10. Selling property**

- 10.1. Sale of property and valuation of property.
- 10.2. The main types of the property value.
- 10.3. The basics of calculating the value of real estate.

### **Practical tasks**

#### **Task 10.1**

Match the terms and definitions (Table 6).

Table 6

#### **Definition of valuation of property**

Concept	Definition
Value	a real estate valuation measure used to compare different real estate investments
Real estate income	real property that consists of land and improvements, which include buildings
Retail	the monetary, material, or assessed worth of an asset, good, or service
Capitalization rate	profit made from real estate
Real estate	process of selling consumer goods or services to customers through multiple channels of distribution to earn a profit
Commercial property	real estate that is used for business activities
Farmland	typically, land devoted to agriculture

## Tests

1. What indicator determines the amount of income received, taking into account the lost profit, which arises due to the inability to invest resources in an alternative way:

- a) NPV;
- b) EVA;
- c) IRR;
- d) PP;
- e) IP?

2. What are the advantages of calculating the level of added value to assess the effectiveness of investment attractiveness:

- a) the possibility of taking into account investment risks;
- b) the ability to assess the added value backed by investments;
- c) high accuracy of strategic analysis results;
- d) a combination of elements of cost and cost approaches;
- e) the possibility of taking into account the investment and operational risks?

3. Which of the following are the methods for determining investment attractiveness:

- a) quantitative;
- b) qualitative;
- c) expert;
- d) complex;
- e) rational?

4. Which of the following statements regarding the method of capitalization of income are correct:

- a) according to the capitalized value method, data on the value, composition and structure of assets do not directly affect the valuation;
- b) the method is used to assess the value of the enterprise as a whole property complex and corporate rights of the enterprise;
- c) the method is based on data on the residual value of assets;
- d) the method should be used at a stable income of the enterprise or at a stable rate of their change;
- e) the capitalized revenue value is the same as the present value of cash flow?



5. The fixed assets turnover in the process of their use is associated with:
  - a) risk;
  - b) periodicity;
  - c) liquidity;
  - d) correct answers are a, b, c;
  - e) there is no correct answer.
6. To evaluate a credit and financial institution as a financial base, you can use:
  - a) dividends or a stream of payments to bank shareholders;
  - b) profit (its various types); financial receipts;
  - c) gross profit;
  - d) cash flow;
  - e) added value.
7. To predict the net profit of a financial and credit institution, the following methods are used:
  - a) the investment model;
  - b) the revenue model;
  - c) the cost model;
  - d) the compensation model.
8. Conditions for the formation of the investment attractiveness of the enterprise are:
  - a) there are opportunities for the development of the company's personnel;
  - b) the invested funds must bring the enterprise to a qualitatively different level in terms of production volumes, technologies, and product quality;
  - c) there are opportunities for further development of the enterprise;
  - d) invested funds must pay off quickly enough;
  - e) invested funds must generate cash flow.
9. Users of information on the investment attractiveness of the enterprise include:
  - a) owners;
  - b) investors;
  - c) the state;
  - d) personnel;
  - e) creditors.

10. The sources of information about investment attractiveness are:

- a) financial reporting;
- b) industry coefficients;
- c) stock indices;
- d) macroeconomic forecasts;
- e) marketing observations.

### **Questions for self-assessment**

1. What is real estate? What is the difference between personal and commercial real estate?
2. What is the name of the income from the use of real estate?
3. Explain how you make money by investing in real estate.
4. Why should an investor evaluate the value of real estate?
5. What is the difference between commercial real estate and agricultural land? Can land be classified as real estate?
6. Approaches to real estate appraisal.
7. Real estate appraisal methods.
8. Who is the main user of information and property values?
9. What are the features of real estate appraisal in Ukraine?

### **Essay topics**

1. Evolution of approaches to real estate appraisal.
2. The features of assessment of agricultural land.
3. Development of investment in real estate in Ukraine.
4. The reasons for the rise in property prices in Ukraine.

**Recommended reading:** [9; 13; 15; 17].

### **Recommended reading**

1. Бізнес-планування підприємницької діяльності : навч. посіб. / З. С. Варналій, Т. Г. Васильців, Р. Л. Лупак, Р. Р. Білик. – Чернівці : Техно-друк, 2019. – 264 с.
2. Доброва Н. В. Основи бізнесу : навч. посіб. / Н. В. Доброва, М. М. Осипова. – Одеса : Бондаренко М. О., 2018. – 305 с.
3. Іваненко Т. В. Основи фінансової математики : підручник. – Київ : КПІ ім. Ігоря Сікорського, 2019. – 200 с.

4. Кемпкенс О. Дизайн-мислення / О. Кемпкенс. – Київ : Форс, 2020. – 224 с.
5. Колот А. М. Створення власного бізнесу : навч. посіб. / А. М. Колот, Г. О. Швиданенко. – Київ : КНЕУ, 2017. – 311 с.
6. Копитко М. І. Управління інноваціями : навчальний посібник для самостійного вивчення дисципліни у схемах і таблицях / М. І. Копитко. – Львів : ЛьвДУВС, 2019. – 292 с.
7. Основи економічної грамотності та підприємництва : навчальний посібник / С. В. Алексєєва, Л. О. Базиль, В. Б. Байдулін та ін. – Житомир : "Полісся", 2021. – 248 с.
8. Щетинін А. І. Гроші та кредит : навч. посіб. / А. І. Щетинін. – Дніпро : Університет митної справи та фінансів, 2019. – 163 с.
9. Алексєєнко І. І. Інвестування [Електронний ресурс] : навч. посіб. / І. І. Алексєєнко. – Харків : ХНЕУ ім. С. Кузнеця, 2018. – 205 с. – Режим доступу : <http://repository.hneu.edu.ua/handle/123456789/23736>.
10. Карпюк Г. І. Основи підприємництва [Електронний ресурс] : навч. посіб. для здобувачів професійної (професійно-технічної) освіти / Г. І. Карпюк. – Режим доступу : <https://mon.gov.ua/storage/app/media/pto/2021/04/19/Osnovy%20pidpryemnytstva.pdf>.
11. Фінанси [Електронний ресурс] : навч. посіб. / І. В. Журавльова, О. В. Гаврильченко, О. П. Полтініна та ін. ; за заг. ред. д-ра екон. наук, професора І. В. Журавльової. – Харків : ХНЕУ ім. С. Кузнеця, 2017. – 330 с. – Режим доступу : <http://repository.hneu.edu.ua/handle/123456789/19579>.
12. Фінансова математика [Електронний ресурс] : конспект лекцій / О. В. Шибаніна, В. П. Ключан, І. В. Ключан та ін. – Миколаїв : Миколаївський національний аграрний університет, 2020. – 140 с. – Режим доступу : <http://dspace.mnau.edu.ua/jspui/bitstream/123456789/7561/1/Finansova%20matematyka.pdf>.
13. Beracha E. The determinants of the ex ante risk premium in commercial real estate / E. Beracha, J. Freybote, Z. Lin // Journal of Real Estate Research. – 2019. – No. 41(3). – P. 411–442.
14. Corporate Finance / D. Hillier, S. Ross, R. Westerfield et al. – 3rd European ed. – Maidenhead : McGraw-Hill Education, 2016. – 1248 p.
15. Damodaran Aswath. Investment Valuation: Tools and Techniques for Determining the Value of Any Asset / A. Damodaran. – 3rd ed. – Hoboken, New Jersey : John Wiley & Sons. Inc., 2012. – 949 p.

16. Gassmann O. The Business Model Navigator: 55 Models that Will Revolutionise Your Business / O. Gassmann, K. Frankenberger, M. Csik. – Harlow : Pearson Education Limited, 2014. – 387 p.

17. Liu C. H. Real assets, liquidation value and choice of financing. / C. H. Liu, P. Liu, Z. Zhang // Real Estate Economics. – 2019. – No. 47(2). – P. 478–508.

18. Romanenko O. Finance : textbook / O. Romanenko. – Kharkiv : S. Kuznets KhNUE, 2017. – 111 p.

19. Osterwalder A. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers / A. Osterwalder, Y. Pigneur. – New Jersey : Wiley, 2010. – 288 p.

20. Cost and management accounting. Study material [Electronic resource]. – Access mode : [https://www.icsi.edu/media/webmodules/publications/FULL\\_BOOK\\_PP-CMA-2017-JULY\\_4.pdf](https://www.icsi.edu/media/webmodules/publications/FULL_BOOK_PP-CMA-2017-JULY_4.pdf).

21. Credit. Student activities [Electronic resource]. – Access mode : [www.financialfootball.com/modules/en/NFL\\_Module\\_Rookie-Credit\\_Student.pdf](http://www.financialfootball.com/modules/en/NFL_Module_Rookie-Credit_Student.pdf).

22. Generate your business idea [Electronic resource] / International Labour Office, Enterprises Department. – Access mode : [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/---ifp\\_seed/documents/instructional\\_material/wcms\\_436192.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/instructional_material/wcms_436192.pdf).

23. Harrison A. How to create a GOOGLE FORM to use as your customer profile [Electronic resource] / A. Harrison. – Access mode : [https://www.youtube.com/watch?v=hTZVo0cKfjs&ab\\_channel=AmandaHarrison](https://www.youtube.com/watch?v=hTZVo0cKfjs&ab_channel=AmandaHarrison).

24. Krisansen J. New product launch plan: what to do during pre-launch, launch, and post-launch [Electronic resource] / J. Krisansen. – Access mode : <https://cxl.com/blog/new-product-launch-marketing-plan>.

25. Matsen J. 10 easy steps to creating a customer profile [+Templates] [Electronic resource] / J. Matsen. – Access mode : <https://blog.hubspot.com/service/customer-profiling>.

26. The academic discipline "Financial Aspects of Starting and Developing Business". – A page on the Moodle platform. – Access mode : <https://pns.hneu.edu.ua/course/view.php?id=7038>.

27. Qayum A. What is a customer profile? 5 steps to create your customer profile [Electronic resource] / A. Qayum. – Access mode : <https://www.oberlo.com/blog/customer-profile>.

# Content

Introduction .....	3
The individual plan of student's work .....	5
Content module 1. A business idea. Organizing and opening your own business .....	7
Topic 1. Starting your own business .....	7
Topic 2. Which business is more profitable? Benefit assessment of a business idea .....	12
Topic 3. Creating a new product and defining a business idea .....	16
Topic 4. Costs and production value .....	21
Content module 2. Starting capital and basics of financial calculations .....	27
Topic 5. The fundamentals of financial calculations .....	27
Topic 6. Forms of raising capital .....	33
Topic 7. Starting a business as a form of investment project realization .....	38
Topic 8. An innovative form of investment .....	40
Topic 9. Financing the investment process .....	42
Topic 10. Selling property .....	47
Recommended reading .....	50

НАВЧАЛЬНЕ ВИДАННЯ

# ФІНАНСОВІ АСПЕКТИ СТВОРЕННЯ ІДЕЇ ТА ВІДКРИТТЯ БІЗНЕСУ

**Методичні рекомендації  
до самостійної роботи  
студентів усіх спеціальностей  
першого (бакалаврського) рівня  
(англ. мовою)**

*Самостійне електронне текстове мережеве видання*

Укладач **Алексєєнко Інна Іллівна**

Відповідальний за видання *І. В. Журавльова*

Редактор *З. В. Зобова*

Коректор *З. В. Зобова*

Подано основні питання тем, що вивчають за планом лекцій із навчальної дисципліни, завдання для самостійної роботи та методичні рекомендації до них. Запропоновано завдання для індивідуальної роботи, тестові завдання, запитання для самооцінювання та теми для написання есе.

Рекомендовано для студентів першого (бакалаврського) рівня вищої освіти всіх спеціальностей.

План 2023 р. Поз. № 18 ЕВ. Обсяг 54 с.

---

Видавець і виготовлювач – ХНЕУ ім. С. Кузнеця, 61166, м. Харків, просп. Науки, 9-А

*Свідоцтво про внесення суб'єкта видавничої справи до Державного реєстру  
ДК № 4853 від 20.02.2015 р.*