



## Syllabus

### Course Program



# Startup business planning

#### Specialty

121 – Software Engineering  
122 – Computer Science

#### Educational program

Software Engineering  
Computer Science and Intelligent Systems

#### Level of education

Bachelor's level

#### Semester

6

#### Institute

Institute of Computer Science and Information Technology

#### Department

Software Engineering and Management Intelligent Technologies (321)

#### Course type

Special (professional), Mandatory

#### Language of instruction

English, Ukrainian

## Lecturers and course developers



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Web of Science: <https://www.webofscience.com/wos/author/record/T-7377-2018>

[More about the lecturer on the department's website](#)

## General information

### Summary

The subject of the discipline is the basic principles and approaches to planning; sources and methods of developing business ideas; methods, procedures and technologies of business planning and information technologies used for business modeling and evaluation of business projects; acquiring the skills of formulating and presenting a business idea, conducting a market analysis, developing a business plan.

### Course objectives and goals

The purpose of teaching the discipline is for students to study the methods, procedures and technology of business planning.

### Format of classes

Lectures, laboratory classes, self-study, consultations. Final control in the form of a credit.

### Competencies

#### 121 - Software engineering

K01. Ability to abstract thinking, analysis and synthesis.  
K02. Ability to apply knowledge in practical situations.

- K05. Ability to learn and master modern knowledge.
- K06. Ability to search, process and summarize information from various sources.
- K07. Ability to work in a team.
- K21. Ability to evaluate and take into account economic, social, technological and environmental factors that affect the field of professional activity.

### **122 - Computer Science**

- GC1. Ability to think abstractly, analyze and synthesize.
- GC2. Ability to apply knowledge in practical situations.
- GC3. Knowledge and understanding of the subject area and understanding of professional activities.
- GC6. Ability to learn and master modern knowledge.
- GC7. Ability to search, process and analyze information from various sources.
- GC 8. Ability to generate new ideas (creativity).
- GC9. Ability to work in a team.
- GC10. Ability to be critical and self-critical.
- GC11. Ability to make informed decisions.
- GC12. Ability to evaluate and ensure the quality of work performed.
- GC14. Ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine

## **Learning outcomes**

### **121 - Software engineering**

- PLO22. To know and be able to apply project management methods and tools.
- PLO24. Be able to calculate the economic efficiency of software systems.

### **122 - Computer science**

- PLO11. Have the skills to manage the life cycle of software, products and services of information technology in accordance with the requirements and restrictions of the customer, be able to develop project documentation (feasibility study, terms of reference, business plan, agreement, contract).

## **Student workload**

The total volume of the course is 120 hours (4 ECTS credits): lectures – 32 hours, laboratory classes – 16 hours, self-study – 72 hours.

## **Course prerequisites**

Fundamentals of prototyping

## **Features of the course, teaching and learning methods, and technologies**

### **Teaching and learning methods:**

interactive lectures with presentations, discussions, laboratory classes, teamwork, case method, student feedback, problem-based learning.

### **Forms of assessment:**

written individual assignments for laboratory work (CAS), assessment of knowledge in laboratory classes (CAS), express surveys (CAS), online tests (CAS), final/semester control in the form of a semester exam, according to the schedule of the educational process (FAS).

## **Program of the course**

### **Topics of the lectures**

- Topic 1. Planning as a business management tool**
- Topic 2. Planning methodology and organization**
- Topic 3. Strategic planning and business plan**
- Topic 4. Information support for planning**
- Topic 5. The concept of a business idea, sources and methods of developing a business idea**

- Topic 6. The main stages of developing a business plan. Requirements for the structure and content of the business plan
- Topic 7. Business description. Tools and methods. Strategic analysis of the external environment
- Topic 8. Description of the market and its target segments. Analysis of competitors. Determination of demand for products/services
- Topic 9. Development of a marketing plan. Sales forecasting methods
- Topic 10. Development of a production plan. Production process. Production costs
- Topic 11. Development of an organizational plan. The main forms of ownership
- Topic 12. Development of a financial plan
- Topic 13. Main economic indicators of the business environment
- Topic 14. Methods of project analysis and evaluation
- Topic 15. Risk analysis and assessment
- Topic 16. Modern information technologies in business planning

## Topics of the workshops

Workshops are not provided within the discipline.

## Topics of the laboratory classes

- Topic 1. Development of a business development plan. Application of different types of planning and types of plans.
- Topic 2. Planning and forecasting methods. MS Project software.
- Topic 3. Development of a business idea and methods of its presentation. Development of a work plan for creating a business plan in MS Project.
- Topic 4. Strategic analysis of the external environment. Development of a business plan in the Project Expert program. Completing the "Product List", "Environment", "Company" modules.
- Topic 5. Development of a calendar plan for the selected project. "List of assets", "List of resources" modules. Development of a production plan. Modules "Materials and components".
- Topic 6. Development of a personnel plan. Development of a financial plan. "General expenses" modules.
- Topic 7. Formation of financial reports. Modules "Profits and losses", "Balance sheet", Break-even analysis.
- Topic 8. Break-even analysis. Carrying out a sensitivity analysis. Preparation and presentation of a business plan.

## Self-study

Individual assignments are not provided in the curriculum.

Students are recommended with additional materials (videos, articles) for self-study and processing.

## Course materials and recommended reading

### Key literature

1. Abrams, R. (2019). *Successful Business Plan: Secrets & Strategies* (7th ed.).
2. Cowan, T. (2023). *Business Plan Workbook: A Manual for Leaders*.
3. Shelton, H. (2017). *The Secrets to Writing a Successful Business Plan: A Pro Shares A Step-by-Step Guide to Creating a Plan That Gets Results*.
4. Grant, W. (2020). *How to Write a Winning Business Plan: A Step-by-Step Guide for Startup Entrepreneurs to Build a Solid Foundation, Attract Investors and Achieve Success with a Bulletproof Business Plan*.

### Additional literature

- 1 Paperie, T. (2022). *The Small Business Planner: A Day-By-Day Plan for Your Small Business*
2. Vibrant Publishers, Dr. AnnaMaria Bliven. (2022). *Business Plan Essentials You Always Wanted To Know (Self-Learning Management Series)*
3. Піхлер, Р. (2019). Книга Agile продукт-менеджмент за допомогою Scrum. Створення продуктів, що подобаються клієнтам

## Assessment and grading

### Criteria for assessment of student performance, and the final score structure

100% Final assessment as a result of Final exam (30%) and Continuous assessment (70%).

30% Final exam

70% Continuous assessment:

Module №1 (10%)

Module №2 (10%)

Laboratory works (50%)

Laboratory work №1 (10%)

Laboratory work №2 (10%)

Laboratory work №3 (10%)

Laboratory work №4 (10%)

Laboratory work №5 (10%)

### Grading scale

Total points	National	ECTS
90-100	Excellent	A
82-89	Good	B
75-81	Good	C
64-74	Satisfactory	D
60-63	Satisfactory	E
35-59	Unsatisfactory (requires additional learning)	FX
1-34	Unsatisfactory (requires repetition of the course)	F

## Norms of academic integrity and course policy

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI": to demonstrate discipline, good manners, kindness, honesty, and responsibility. Conflict situations should be openly discussed in academic groups with a lecturer, and if it is impossible to resolve the conflict, they should be brought to the attention of the Institute's management.

Regulatory and legal documents related to the implementation of the principles of academic integrity at NTU "KhPI" are available on the website: <http://blogs.kpi.kharkov.ua/v2/nv/akademichna-dobrochesnist/>

## Approval

Approved by

08.06.2023

Head of the department

Ihor HAMAIUN

08.06.2023

Guarantors of the educational programs

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