МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ЗАТВЕРДЖЕНО
на засіданні кафедри
інформаційних систем.
Протокол № 1 від 22.08.2023 р.

ПОГОДЖЕНО
Проректор з навчально-методичної роботи

_____ Каріна НЕМАШКАЛО

БІЗНЕС-АНАЛІЗ В ІТ-ПРОЕКТАХ

робоча програма навчальної дисципліни (РПНД)

Галузь знань	**12 "Інформаційні технології"**
Спеціальність	**121 "Інженерія програмного забезпечення"**
Освітній рівень	**перший (бакалаврський)**
Освітня програма	**"Інженерія програмного забезпечення"**

Статус дисципліни	**вибіркова**
Мова викладання, навчання та оцінювання	**англійська**

Розробник:
к.е.н., доцент   підписано КЕП   Ірина УШАКОВА

Завідувач кафедри
інформаційних систем   _____   Дмитро БОНДАРЕНКО

Гарант програми   _____   Олег ФРОЛОВ

Харків
2024

<table>
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APPROVED
at the meeting of the Information
Systems Department
Protocol № 1 of 22.08.2023

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AGREED
Vice-rector for educational and methodological
work

_____ Karina NEMASHKALO

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BUSINESS - ANALYSIS IN IT-PROJECTS

Program of the course

Branch of knowledge	**12 "Information technologies"**
Specialty	**121 "Software engineering"**
Study cycle	**first (bachelor)**
Study programme	**"Software Engineering"**

Course status	**elective**
Language	**English**

Developer:
Professor,   digital signature   Iryna USHAKOVA
PhD (Economics)

Head of Information
Systems Department   _____   Dmytro BONDARENKO

Head of Study programme   _____   Oleg FROLOV

Kharkiv
2024

INTRODUCTION

The success of IT projects depends on understanding the needs of stakeholders, the ability to correctly and quickly respond to changes in their requirements, taking into account the peculiarities of the organization's business processes, using innovative technologies in the process of developing software systems, finding alternative solutions, and determining the best conditions for maintaining competitive advantages. A business analyst helps companies improve existing business processes for creating products, services, and software systems. It collects, analyzes and transforms the needs, wishes and ideas of stakeholders into requirements, which will then be used by the development team during the creation of the software system. The possibility of achieving these tasks is determined by thorough professional training of future specialists in the field of software engineering, which takes into account all aspects of business analysis.

The course "Business analysis in IT-projects" is a variable educational course and is studied in accordance with the curriculum for training specialists of the "bachelor" degree, specialty 121 "Software engineering".

The purpose of the course "Business analysis in IT-projects" is basic professional training, the formation of theoretical knowledge and practical skills necessary for the use of business analysis, its principles and methods when identifying the needs of interested parties and justifying decisions that describe possible ways of implementing changes in the organization that benefit stakeholders in a certain context.

The tasks of the course are:
- definition of key concepts of business analysis;
- identifying the needs of interested parties and requirements for software systems;
- analysis of the company's strategy and business model;
- developing a product vision;
- development and use of the impact map;
- identification of interested persons and analysis of their role and influence on the project;
- analysis of the portrait and behavior of product users;
- the use of user stories in the development of software systems;
- development and use of user story maps.

The subject of the course is: methods of identifying the needs of interested parties and justifying decisions regarding the requirements for software systems that will contribute to the benefit of interested parties.

The object of the course is the needs of interested parties regarding changes in the organization through the implementation of software systems.

In the process of training, the student acquires the necessary knowledge during lectures and performing laboratory work. The independent work of students is also of great importance in the process of studying and consolidating knowledge . All types

of classes are developed in accordance with the transfer system of the organization of the educational process.

The learning outcomes and competence formed by the course are defined in the table. 1.

Table 1

Learning outcomes and competencies formed by the course

Learning outcomes	Competences
LO04	SC05
LO09	SC01
LO10	SC02
LO11	SC01
LO14	SC13
LO16	GC07

where, LO04. Know and apply professional standards and other regulatory documents in the field of software engineering.

LO09. Know and be able to use methods and tools for collecting, formulating and analyzing software requirements.

LO10. Conduct a pre-design survey of the subject area, system analysis of the design object.

LO11. Select input data for design, guided by formal methods of requirements description and modelling.

LO14. Apply in practice software tools for domain analysis, design, testing, visualization, measurement and documentation of software.

LO16. To have skills in team development, approval, design and release of all types of program documentation.

GC07. Ability to work in a team.

SC01. Ability to identify, categorize and formulate software requirements.

SC02. Ability to participate in the design of software, including modelling (formal description) of its structure, behaviour and processes of operation.

SC05. Ability to comply with specifications, standards, rules and guidelines in the professional field when implementing life cycle processes.

SC13. Ability to reasonably choose and master tools for software development and maintenance.

COURSE CONTENT

Content module 1. Basics of business analysis in IT projects
Topic 1. Introduction to business analysis
1.1. General information about business analysis
1.2. Basic terms of business analysis

1.3. Business analyst profession

Topic 2. Key concepts of business analysis

2.1. BABOK Professional Business Analysis Standard.

2.2. Business analysis task form

2.3. Central conceptual model

Topic 3. Requirements for software systems

3.1. Classification of requirements in BABOK

3.2. Needs, requirements, solutions and context

3.3. Requirements quality criteria

3.4. Interested parties

3.5. Requirements and designs

Topic 4. Analysis of enterprise strategy

4.1. Company strategy and business model

4.2. CANVAS model

Topic 5. Product vision

5.1. Developing a product vision

5.2. Stages of collection and analysis of business requirements

5.3. Product positioning

5.4. Vision product forms

Content module 2. Approaches and methods of business analysis in IT projects.

Topic. 6. Impact mapping method

6.1. Purpose of the Impact mapping method

6.2. Advantages of using an impact map

6.3. Development of impact map

6.4. Displaying metrics on a map

6.5. Typical mistakes

Topic 7. Identification and cooperation with interested parties

7.1. Stakeholder identification and collaboration tasks

7.2. Stakeholder analysis task

7.3. Methods of identification of interested parties

Topic 8. Analysis of users and their requirements

8.1. Design Thinking methods for defining requirements

8.2. Method of ladder of user needs

8.3. User portrait

8.4. Tools for modeling user actions

Topic 9. User stories

9.1. Description of user history

9.2. Readiness criteria for user stories

9.3. User history properties

9.4. Decomposition of user stories

Topic 10. User Story Mapping method

10.1. Purpose of User story mapping
10.2. User story map structure
10.3. Stages of creating a User story map

The list of laboratory studies by course is given in the table. 2.

Table 2

List of laboratory studies

Topic name	Content
Topic 4. Laboratory work 1.	Business model development
Topic 5. Laboratory work 2.	Product Vision Development
Topic 6. Laboratory work 3.	Development of an impact map
Topic 7. Laboratory work 4.	Identification and analysis of project stakeholders
Topic 8. Laboratory work 5.	User analysis
Topic 9. Laboratory work 6.	Development of requirements for the software product. User Story
Topic 10. Laboratory work 7.	Mapping of user stories: User Story Mapping

The list of self-studies in the course is given in table 3.

Table 3

List of self-studies

Topic name	Content
Topic 1 - 10	Study of theoretical material
Topic 4 - 10	Completing tasks for laboratory work

The number of hours of lecture and laboratory classes and hours of independent work are given in the technological card for the course .

TEACHING METHODS

In the process of teaching the course "Business analysis in IT projects", productive learning methods are used, aimed at activating and stimulating the educational and cognitive activities of the applicants, namely presentations (Topics 1-3); case studies and work in small groups (Topics 4-10). Applicants work in teams on an IT-project related to business analysis issues.

FORMS AND METHODS OF ASSESSMENT

The University uses a 100-point cumulative system for assessing the learning outcomes of students.

Current control is carried out during lectures and laboratory classes and is aimed at checking the level of preparedness of the student to perform specific work and is evaluated by the sum of points scored: the maximum sum is 60 points; the minimum amount that allows a student to pass an exam is 35 points.

The final control includes the semester control and certification of the student.

Semester control is conducted in the form of a exam.

The maximum number of points that a student can receive during the exam is 40 points. The minimum amount for which the exam is considered passed is 25 points.

The final grade for the course is determined by summing the points for the current and final control.

During the teaching of the course, the following control measures are used:

Current control: written test (10 points), defense of laboratory work (50 points).

Semester control: Exam (40 points).

More detailed information on the assessment system is provided in technological card of the course.

An example of an exam card and assessment criteria

Exam card

Task 1. Perform a vertical and horizontal analysis of the matrix of responsibility of interested parties.

It is necessary to perform:

1. Build a responsibility matrix with proposed changes.

2. Justify the changes regarding the horizontal analysis.

3. Justify the changes regarding the vertical analysis.

Task 2. Build an onion diagram.

It is necessary to perform:

1. Divide stakeholders into layers depending on their importance for achieving the project goal.

2. Construct an onion diagram with stakeholders on its layers and marked connections between them.

Evaluation criteria

The examination ticket consists of two tasks. The final grade for the exam is the sum of the marks for each task. In general, the completed examination work is evaluated on a 40-point scale.

The first task is evaluated from 0 to 20 points. In the task, the acquirer must perform a vertical and horizontal analysis of the RACI Stakeholder Responsibility Matrix. For this task, the applicant receives an assessment according to the following criteria:

20 points	for a completely correctly completed task

15-19 points	for a task performed with minor inaccuracies and insignificant errors (for each inaccuracy, the grade is reduced by 2 points)
10-14 points	if the task is completed correctly in general, but not completely
1-9 points	for a task performed with significant errors (for each error, the grade is reduced by 2 points)
0 points	task not completed at all

The second task is evaluated from 0 to 20 points. In the task, the acquirer must construct an onion diagram of the importance of stakeholders. For this task, the applicant receives an assessment according to the following criteria:

20 points	for a completely correctly completed task
15-19 points	for a task performed with minor inaccuracies and insignificant errors (for each inaccuracy, the grade is reduced by 2 points)
10-14 points	if the task is completed correctly in general, but not completely
1-9 points	for a task performed with significant errors (for each error, the grade is reduced by 2 points)
0 points	task not completed at all

RECOMMENDED LITERATURE

Main

1. Ушакова І. О. Лабораторний практикум з системного аналізу та проєктування інформаційних систем [Електронний ресурс] : навчальний посібник / І. О. Ушакова, І. Б. Медведєва. – Харків : ХНЕУ ім. С. Кузнеця, 2022. – 251 с. – Режим доступу : http://repository.hneu.edu.ua/handle/123456789/27815.

2. Козак О.Л. Опорний конспект лекцій з курсу «Аналіз вимог до програмного забезпечення» для студентів напрямку підготовки «Програмна інженерія» / О.Л. Козак. – Тернопіль, 2021. – 56 с.

Additional

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10. Wiegers K. Software Requirements Essentials: Core Practices for Successful Business Analysis; 1st Edition / K. Wiegers, C. Hokanson. – Addison-Wesley Professional, 2022.– 208 p.

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12. Довідник Business Analysis [Електронний ресурс]. – Режим доступу : https://itwiki.dev/management/ba-reference

13. ІТ-менеджмент і бізнес-аналіз: консалтинг та навчання [Електронний ресурс // E5: Improve yourself Continually]. – Режим доступу – https://e5.ua/uk/trainings/

14. Канал для системних та бізнес-аналітиків в ІТ [Електронний ресурс]. – Режим доступу : https://t.me/artofba

15. Спільноста розробників dou.ua [Електронний ресурс]. – Режим доступу : https://dou.ua/

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