SYLLABUS OF THE ACADEMIC DISCIPLINE
"Information technologies in investment management"

Degree higher education - Bachelor
Specialty 073 Management
Academic program "Management"
Academic Year of study 4 , Semester 7
Form of study: full-time
Number ECTS credits 5
Language of training: Ukrainian

Lecturer of the academic discipline	**Havrylyuk Vitaliy P., PhD in Economics, Ass. Professor of the Department of Production and Investment Management**
Contact information of the lecturer (e-mail)	havrylyuk@nubip.edu.ua
EEC URL on the educational portal of NUBiP of Ukraine	-

COURSE DESCRIPTION

The discipline "Information Technologies in Investment Management" is optional. The purpose of studying the discipline is to form among higher education students a system of knowledge of the functioning of information systems and technologies, their use for investment management, the structure and stages of building information systems in management, familiarization with modern information technologies and their use in management information systems, IT project management methodology, management at all stages of the project, from customer requirements to a functioning system. Higher education students will gain practical skills in project creation, organizational support for their implementation and evaluation of the effectiveness of project solutions using existing software systems.

As a result of studying the educational component, higher education applicants will master the following competencies:

Integral competence (IC): the ability to solve complex specialized problems and practical problems characterized by complex and uncertain conditions in the field of innovation and investment management or in the learning process, which involves the use of theories and methods of social and behavioral sciences.

General competencies (GC):

GC 8 Skills of using information and communication technologies.

GC 9. Ability to learn and master modern knowledge.

GC 11. Ability to adapt and act in a new situation.

Special (professional, subject) competencies (SC):

SC2. The ability to analyze the results of the organization's activities, compare them with the factors influencing the external and internal environment.

SC5. Ability to manage the organization and its divisions through the implementation of management functions.

SC7. Ability to select and use modern management tools.

SC9. Ability to work in a team and establish interpersonal interaction during solving professional tasks.

SK11. Ability to create and organize effective communications in the management process.

Program learning outcomes (PLO):

PLO4. Demonstrate skills in identifying problems and justifying management decisions.

PLO6. Demonstrate skills in searching, collecting and analyzing information, calculating indicators to justify management decisions.

PLO8. Apply management methods to ensure the effectiveness of the organization's activities.

PLO 16. Demonstrate skills of independent work, flexible thinking, openness to new knowledge, and be critical and self-critical.

STRUCTURE OF THE ACADEMIC DISCIPLINE

Topic	Hours (lectures/laboratory,practical, seminar)	Learning outcomes	Tasks	Assessment
Module 1				
Topic 1. Information technology as a foundation of information systems functioning.	3/3	*Know* the general characteristics of information systems and technologies; *Be able* to use information processes and technologies in management activities; *Understand* the technologies for processing data, text, graphics, knowledge, and real-world objects.	Work planning using Excel spreadsheet. Drafting calendar plan. Formation workers plans. Tasks for independent work. Survey.	10
Topic 2. Basic concepts and the role of information systems in management	3/3	*Know* the basic concepts and role of information systems in management; *Be able* to classify and use economic IS; *Be able* to use effectively information and communication technologies for organizing online teamwork.	Work planning using Excel spreadsheet. Scheduling of planned work. Tasks for independent work. Case studies.	10
Topic 3. Project management information systems. Life cycle of project of informatization	3/3	*Understand* phases of Informatization project; *Be able* to apply classic and flexible models of project life cycle.	Work planning using Excel spreadsheet. Scheduling of planned work. Planning of works taking into account their labor intensity. Determining the time of work execution. Task for independent work. Case studies.	10
Topic 4. Use of information system life cycle standards	3/3	*Know* main types of standards; *Distinguish* methods of Oracle CDM, Oracle PJM, standard ISO/IEC 12207.	Control over the execution of work using the Excel spreadsheet processor. Performing independent work. Survey.	10
Topic 5. Using information technology to analyze risks and identify opportunities	3/3	*Know* models of structuring projects and process of structuring a project; *Be able* to conduct structuring of a project.	Control over the execution of work using the Excel spreadsheet. Analysis of plan execution. Graphical display of the actual status of work. Task for independent work. Survey.	10
Independent work			Essay defense	20
Modular control			Summary test in EEC	**30**

Module 2				
Topic 6. Organization of work in project	3/3	*Be able* to apply design approach in enterprise management, understand shapes and technology of project activities organization, justify choice of organizational structures of informatization project management.	Using decision trees to solve management problems. Statistical theory of decision making. Performing independent work. Survey.	10
Topic 7. Planning in informatization project management	3/3	*Apply a* project content planning tools the, define limitations.	Modeling the decision-making problem using the Decision Tree method. Performing independent work. Survey.	10
Topic 8. Control in informatization project management	3/3	*Know* general principles of construction of project control system. *Be able* to use of project work control and monitoring tools, to carry out the necessary adjusting parameters project.	Risk assessment task using the Decision Tree method. Survey.	10
Topic 9. Project cost management	3/3	*Carry out* project cost analysis and its sources of financing, to be able to detect resource of overloads of a project and choose methods of their alignment, identify project costs, develop an estimated cost of the project and justify its budget.	Project Management with Microsoft Project. Creating Resources and Assignments. Project Analysis.	10
Topic 10. Quality management of the informatization project	3/3	*Know* modern quality management systems in project management, develop directions for implementing project quality policies, justify the costs of ensuring the quality of project work, and conduct project quality control and audit.	Laboratory work. Project effectiveness analysis using Project Expert. Performing independent work. Survey.	10
Independent work			Essay defense	20
Modular control			Summary test in EEC	**30**
Total by the 7th semester				**70**
Exam				**30**
Total by course				**100**

ASSESSMENT POLICY

Policy regarding deadlines and resits:	Works that are submitted late without valid reasons will be assessed with a lower grade. Module tests may be retaken with the permission of the lecturer if there are valid reasons (e.g. a sick leave).
Academic honesty policy:	Cheating during tests and exams is prohibited (including using mobile devices). Term papers and essays must have correct references to the literature used

Attendance policy:	Attendance is compulsory. For good reasons (e.g. illness, international internship), training can take place individually (online by the faculty dean's consent)

SCALE FOR ASSESSING THE KNOWLEDGE OF HIGHER EDUCATION STUDENTS

Higher education applicant rating, points	**National grade based on exam, credits results**	
	exams	**credits**
90-100	excellent	credited
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	not credited

RECOMMENDED SOURCES OF INFORMATION

1. Breus , S., Tsymbalenko , O., & Glukhov , M. (2024). Information technologies: their role in changing the business paradigm of companies. Economy and Society, (63). https://doi.org/10.32782/2524-0072/2024-63-15 .
2. . Corporate information systems [Text] : teaching . manual . / V. S. Hryhorkiv [and others] ; Chernivtsi . National . University named after Yuriy Fedkovych . Chernivtsi : Chernivtsi . National . University named after Yuriy Fedkovych : Ruta, 2021. 151 p.
3. Information systems and technologies [Text]: textbook / [V. B. Vyshnia et al.]; under the general editorship of Dr. Tech . Sciences, Prof. V. B. Vyshnia; Dnipropetrovsk State University of Internal Affairs . Dnipro: Dnipropetrovsk State University of Internal Affairs , 2021. 279 p.
4. Information systems of electronic document management [Text]: a manual / V. L. Pleskach, O. O. Brovarets , I. I. Garko ; Kyiv. National Taras Shevchenko University. Kyiv: Kyiv University, 2020. 301 p.
5. Katrenko A. V. IT Project Management. Book . 1: Standards, Models and Methods of Project Management. 2nd ed. Lviv, 2019. 552 p.
6. Information systems for enterprise management [Text]: a manual / Nesterenko O. V.; Ukrainian Scientific Center for the Development of Information Technologies (UkrRC RIT), National Academic University of Management . Kyiv: Ukrainian Scientific Center for the Development of Information Technologies, 2019. 134 p.
7. Information systems and technologies. Workshop [Text]: teaching manual / [compiled by: I. V. Artyshchuk , V. I. Babych]; Central Consumer Union of Ukraine, Lviv. Trade and Economics University. Lviv: Publishing House of Lviv. Trade and Economics University, 2020. 255 p.
8. Kuzminska O.G., Lytvynova S.G., Sayapina T.P. Information technologies: teaching aids . Kyiv: Central Publishing House Compprint , 2022. 210 p.
9. Advancing the Practice of Agile . URL : https://www.agilealliance.org/
10. Teamwork tools: from startup to large corporation. URL: https://www.atlassian.com/software/jira
11. Welcome this the Home of Scrum . URL: https://www.scrum.org/
12. The Guide this the Software Engineering Body of Knowledge (Swebok) Guide). URL : https://www.computer.org/web/webok
13. PMBOK® Guide and Standards . URL : https://www.pmi.org/pmbok-guide-standards
14. Smartsheet work execution platform . URL : https://www.smartsheet.com/smartsheet-university
15. Educational international platform . URL : https://www.coursera.org/
16. Educational international platform . URL : https://www.udemy.com