



Ministry of Education and Science of Ukraine
Chernihiv Polytechnic National University
*Educational and Scientific Institute of Business, Economy
and Administration*

Department of Management and Administration

SYLLABUS

Project Management

APPROVE

Head of Department
DSc., Pr. Rudenko O.M.

“08” 02 2024

Developer: N.V. Tkalenko, Professor of the Department of Public Administration and Management of Organizations of Chernihiv Polytechnic National University, Doctor of Economics, Professor.

(signature)

Protocol of “08” February 2024 № 3

Agreed with the guarantor of the educational program: DSc., Pr. Popelo O. V.

1. General information about the course

Course	Required
Language	<i>English</i>
Year of study and semester	Bachelor Management HR 4 st year/8 th semester
Lector	DSc., Pr. Nataliia Tkalenko
Profile	https://pumo.stu.cn.ua/wp-content/uploads/2023/01/profil-vykladacha_tkalenko.pdf
Contact	Chernihiv, Shevchenko str. 95 B. 4, of. 13 tnv2504@gmail.com

2. Abstract The purpose and objective of this course are to equip future managers with the necessary skills and knowledge for effective project management, incorporating global and local advancements. The focus of this course is the process of professional activity and its organizational and legal structuring. Essential tools and concepts, including project charters, scope statements, work breakdown structures, project estimation, and scheduling methodologies, will be explored. Practical experience will be gained through the use of Microsoft Project software, enabling students to manage projects from initiation to deployment.

Upon completing this course, students will be able to:

- ✓ Understand the significance of projects and project management in achieving an organization's strategic goals, considering various organizational structures like functional, matrix, and project-based.
- ✓ Develop key project documents such as a project charter, scope statement, Work Breakdown Structure (WBS), and Responsibility Assignment Matrix (RAM).
- ✓ Construct task precedence relationships using a Work Breakdown Structure (WBS), develop a network diagram and critical path, and formulate a schedule incorporating both initial and balanced resource allocations.
- ✓ Identify and evaluate principal elements of schedule, cost, and performance risks, and comprehend methods for risk management using both qualitative and quantitative approaches.
- ✓ Formulate strategies for leading a high-performance project team.
- ✓ Implement monitoring techniques for schedule and cost management using earned value methods.
- ✓ Design a comprehensive communications plan to ensure stakeholders are kept informed about project progress, issues, and governance.
- ✓ Employ project management software for the planning, execution, monitoring, and reporting of a project.
- ✓ Develop a project closeout strategy to maximize organizational learning and value, capturing best practices and lessons learned.

3. The purpose and objectives of the discipline. The purpose of the course is to form knowledge on project management, the acquisition of higher education practical skills in solving complex specialized and practical problems, characterized by complexity and uncertainty of conditions: 3K1. The ability to carry out research at the level;

3K6. The ability to generate new ideas (creativity);

3K8. The ability to adapt and take action in a new situation

CK7. The ability to design facilities, manage them, show initiative and entrepreneurial spirit

Subject of the discipline: project management processes in organizations, which are implemented using specific methods and tools of project management.

Tasks are solved in studying the discipline:

- presentation of generalized model characteristics of project management as a system of interrelated goals, functions and tools that are defined, implemented and used in the course of management;

- acquisition of skills to perform the main functions of project management: organization, planning and control;

- mastering the methodology necessary for successful project management, as well as acquiring skills of adaptation and implementation of project solutions in practice.

The result of the discipline study is the formation of future professionals with appropriate competence for effective project management.

4. Expected learning outcomes of the discipline. During the study of the discipline, the applicant must achieve or improve the following program learning outcomes (PR), provided by the educational and scientific program:

IPPH 7. Organize and implement effective communications within the team, with representatives of different professional groups and in the international context;

IPPH 10. Demonstrate leadership skills and the ability to work in a team, interact with people, influence their behavior to solve professional problems;

IPPH 11. Provide personal professional development and personal time planning.

IPPH. 13. Be able to plan and implement information, methodological, material, financial and personnel support of the organization (subdivision)

As a result, applicants:

would to know:

- theoretical foundations of project management;
- main project management functions;
- ways to organize project management and planning the content, time, cost of the project;
- sources of project resources,
- risks arising from project management,
- project implementation control systems.

be able to:

- plan the content of the project;
- build a network model and calculate the project schedule;
- draw up a project budget;
- monitor the progress of the project;
- build a project team;
- use application management packages for projects.

5. Prerequisites. The course is tidied according to the curriculum of "master" and provides pre-mastering of educational components: "Information systems and smart-technologies for management", "Change management", "Technology and methods of quality management". It represents expanding and deepening knowledge about the project approach. Understanding of core project management concepts and terminologies. Competence in data analysis and decision-making. Familiarity with project management software and tools. Strong ability to communicate effectively in both written and verbal forms.

6. Course Volume

Type of classes	Number of hours
Lectures	32
Seminars	28
Independent work	60
Total hours (ECTS)	180 (6)

7. Topics of course

Module 1.

Topic 1. Introduction to Project management

General characteristics of the course "Project Management": purpose, objectives, issues. The value of the course for training. The order of studying the course and control of students' knowledge. Systematics of the course "Project Management" and its connection with other disciplines.

Origins of project management. History of project management development. Concepts and classification of projects. The essence of the project management system, its elements. Project management goals. Principles and functions of project management.

Organization of the project management system. Designing the organizational structure of project management. Project management using the external organizational structure of the project, the advantages and disadvantages of the organizational structure.

Topic 2. Development of the project concept. Project performance indicators. Calculation of project efficiency

Project idea, preliminary research, additional research, pre-project research, technical feasibility of the project, economic feasibility of the project, technical analysis, commercial analysis, financial analysis, environmental analysis, organizational analysis, social analysis, economic analysis, structural analysis, budget efficiency analysis.

Topic 3. General approaches to project planning

Project planning, project planning process, project plan, principles of project planning, planning methodology, project control, types of control, integration of planning and control, change management. Stages of monitoring the progress of the project in the parent organization.

Module 2.

Topic 4. Structuring the project. Network and calendar planning of the project

Project structuring, project working structure, cost structuring, structuring methodology, unidirectional project structure, bidirectional project structure, three-way project structure, project coding, network planning, network model, arrow graphs, advance graphs, calendar planning, charting, diagram network schedules, critical path, duration of work.

Topic 5. Planning costs, budget, time and project schedule

Resource planning. General assessment of resource needs and their distribution over time. Compilation of a table of resource needs for project work. Construction of a resource histogram. Compilation of a table of available resources. Comparison of the need and availability of resources, determining their shortage or surplus. Identification of suppliers of resources for the project. Optimization of total schedules of resource requirements. Taking into account the factors that affect the provision of the project with resources. Formation of schedules of supply of resources. Replanning the calendar plan. Control and construction of new resource plans and histograms. Contract planning. Project cost estimate. Project budget.

Topic 6. Monitoring the implementation of the project

Tasks of control over project implementation. Control methods. Monitoring the implementation of calendar plans and budget units. Preliminary control. Current control. Final control. Budget control. Reporting in the control system. Measurement and analysis of project performance indicators. Method of comparison with planned indicators. Adjusted budget method. Cost ratio. Estimated project implementation period. Project progress. Monitoring project progress. Earned Value method. The essence of the basic concepts of Earned Value.

Module 3.

Topic 7. Risk management in projects

The concept of risk and uncertainty. Classification of project risks. Causes and factors influencing the dynamics of risks. Basic methods of risk analysis. Ways to reduce project risks. The concept and classification of risks. Risk management model. Causes of risks. The main methods of risk analysis: 1) response sensitivity analysis; 2) scenario analysis; 3) market risk (beta risk); 4) determining the break-even point; 5) decision tree; 6) Monte Carlo method. Risk reduction methods.

Topic 8. Project quality management. Procurement management. Organization and conducting of tenders for projects

Methodological bases of project quality management and ways to ensure project quality. The cost of ensuring the quality of projects. Methods of project quality control.

The concept of competitive bidding (tenders). Classification and procedure. Features of the organization of carrying out and drawing up of the reporting on two-stage bidding. Bidding on projects, their features. Tender proposals.

8. Evaluation system and requirements

<p>General Course Evaluation System</p>	<p>The means of assessment and methods of demonstrating learning outcomes in the discipline are current and semester control. Current control includes surveys conducted during lectures and practical classes, as well as the completion of individual tasks within the scientific direction of the student's research. Questions for current control are included in the relevant guidelines. Semester control is conducted in the form of a credit test, the questions for which are placed in the MOODLE distance learning system at the beginning of the semester.</p> <p>The assessment of students' knowledge is carried out in accordance with the Regulations on current and final assessment of students of higher education of Chernihiv Polytechnic National University (https://stu.cn.ua/wp-content/stu-media/normobaza/normdoc/norm-osvitproces/polozhennya-pro-potochne-ta-pidsumkove-oczinyuvannya-znan-zdobuvachiv-vo.pdf).</p> <p>For the discipline, a student can earn up to 60% of the final grade for all types of work during the semester and up to 40% of the final grade – for the test. Current control is carried out by interacting with students during lectures, consultations, and surveys during practical classes. Each module is given a test. The module test contains different types of tasks: problem-solving, tests, theoretical questions. The results of the current control for the relevant module are announced by the lecturer at the next class. The scores obtained by the student during the module controls make up the assessment of the current control.</p> <p>The current control assessment is disclosed to the student before the session. Students who have fully completed the curriculum of the discipline and received 60 points as a result of the current control can retain the points scored as the final semester grade.</p>
<p>Conditions of Admission to the Final Control</p>	<p>The final control is a credit test. If a student wishes to improve the grade obtained for the points gained during the semester, they take the credit test with the following tasks: 20 test questions for the course (up to 20 points); a practical task (up to 20 points). In this case, the final semester grade is given based on the highest sum of points (either based on the results of the credit test or on the results of current and module controls).</p> <p>If a student has not completed all types of work during the semester, has unfinished work, or has not scored the minimum required number of points (20), they are not allowed to take the test during the session but have the right to eliminate academic arrears in the manner prescribed by the "Regulations on current and final assessment of students of higher education of Chernihiv Polytechnic National University."</p>

Distribution of points received by students

Module		Number of points		Weights
Module 1.		0...	100	0,2
1	Completeness of keeping syllabi.	0...	2,5	
2	Preparedness for practical classes.	0...	2,5	
3	Solving a practical problem.	0...	10	
4	The answer to a theoretical question.	0...	5	
5	Module test	0...	80	
Module 2.		0...	100	0,2
1	Completeness of keeping syllabi.	0...	2,5	
2	Preparedness for practical classes.	0...	2,5	
3	Solving a practical problem.	0...	10	
4	The answer to a theoretical question.	0...	5	
5	Module test	0...	80	
Module 3.		0...	100	0,2
1	Completeness of keeping syllabi.	0...	2,5	
2	Preparedness for practical classes.	0...	2,5	
3	Solving a practical problem.	0...	10	
4	The answer to a theoretical question.	0...	5	
5	Module test	0...	80	
TOTAL		0...	60	

Assessment scale: national and ECTS

Total points for all the educational activities	ECTS	National scale	
		for the exam, coursework	For test
90 – 100	A	excellent	credited
82-89	B	good	
75-81	C		
66-74	D	satisfactory	
60-65	E		
0-59	FX	unsatisfactory with the possibility of reassembly	not credited with the possibility of re-assembly

9.Course Policies. If a student does not fully complete all types of academic work during the semester, has uncompleted laboratory work, or does not score the minimum required number of points, they are not allowed to take the differentiated credit during the semester control. However, they have the right to eliminate academic arrears as prescribed by the "Regulations on current and final assessment of knowledge of students of NU "Chernihiv Polytechnic" (<https://stu.cn.ua/wp-content/stu-media/normobaza/normdoc/norm-osvitproces/polozhennya-pro-potochne-ta-pidsumkove-oczinyuvannya-znan-zdobuvachiv-vo.pdf>). Retaking the credit to improve a positive grade is not allowed. In case of retaking the credit, all points scored during the semester are annulled, and the repeated differentiated credit takes the form of testing.

The general policy of the course includes adherence to the principles of attending classes according to the approved schedule, as well as free attendance of lecture classes for individuals who have obtained permission in accordance with the "Procedure for granting permission for free attendance of classes to higher education students of NU "Chernihiv Polytechnic". (<https://stu.cn.ua/wp-content/stu-media/normobaza/normdoc/norm-osvitproces/poryadok-nadannya-do-zvolu-na-vilne-vidviduvannya-zanyat-zdobuvacham-vyshhoyi-osvity.pdf>).

The key to successful mastering of the discipline is activity and involvement during laboratory/practical and lecture classes - answering questions from the lecturer (as one of the elements of current control), asking questions to clarify unclear aspects, and solving practical tasks. Consultations take place in accordance with the approved schedule or personal or group consultations (through the built-in forum) on the course page in the NU "Chernihiv Polytechnic" distance learning system.

Deadline Policy. The timeliness of individual work submission is evaluated at 1 point. Accordingly, the maximum grade for late submissions is reduced by the stated number of points. Exceptions may be made in the presence of 8 valid reasons for the late submission of said works (illness, participation at the specified time in other types of educational, scientific, or organizational work, official work in the specialty, etc.).

Laptop/Smartphone Usage Policy. Students are requested to keep their smartphones in silent mode during lectures and practical classes, as calls, messaging, and social media communication can be distracting for both the instructor and other students. Laptops, tablets, and smartphones may not be

used in classrooms during classes and during final control (except for taking tests in the Moodle system).

Policy of incentives and charges. According to the results of educational, scientific or organizational activities, students may be awarded additional points for the course - up to 10 points, depending on the importance of the achievements. Types of extracurricular activities, for which students of higher education are encouraged with an additional number of points: participation in international projects, scientific research, theses, participation in scientific and practical conferences, inventions, patents, author's certificates according to the courses.

Policy of academic integrity. Academic integrity must be ensured during the course (principles are described in the Code of Academic Integrity of Chernihiv Polytechnic University) <https://stu.cn.ua/wp-content/stu-media/normobaza/normdoc/norm-yakist/kodeks-akademichnoyi-dobrochesnosti.pdf>. Writing off during mid-term and final tests, performing practical tasks to order, prompts are considered manifestations of academic dishonesty. All course participants are expected to maintain academic integrity in the above-mentioned areas. Various disciplinary measures (including retaking certain stages) are applied to students of higher education who have been found to have violated academic integrity.

Rules for transferring loans. Credits received in other institutions of higher education, as well as the results of training in non-formal and/or informal education, can be re-enrolled by the teacher in accordance with the regulation "Procedure for determining the academic difference and re-enrollment of academic disciplines at Chernihiv Polytechnic University" (<https://stu.cn.ua/wp-content/stu-media/normobaza/normdoc/norm-osvitproces/poryadok-vyznachennya-akademichnoi-riznyczy-ta-vyznannya-rezultativ-poperednogo-navchannya.pdf>). Recognition of learning outcomes in non-formal education extends to any content modules of the course.

10. Recommended literature

Basic

1. Project Management Institute. (2021). A guide to the project management body of knowledge (PMBOK® guide).
2. Larson, E. W., & Gray, C. F. (2017). Project management: The managerial process. McGraw-Hill Education.
3. Verzuh, E. (2015). The fast forward MBA in project management. John Wiley & Sons.
4. Schwaber, K. (2020). Agile project management with Scrum. Microsoft Press.
5. Kerzner, H. (2021). Project management case studies. John Wiley & Sons.
6. Основи управління проектами: пер. с англ./ Дж. Хігні. – 5-е вид. - К.:Фабула, 2020. – 272с.

Methodical support

1. Guidelines for practical exercises and independent work "Project Management" for students for the second (educational and scientific) level of higher education, branch of knowledge 07 Management and Administration (specialty 073 "Management").

Supporting

1. Алексеєнко І. Інформаційно-комунікаційне забезпечення процесів управління проектами та вартістю підприємства / І. Алексеєнко, С.Лелюк, О.Полтніна // Development Management. – 2020. – Вип. 18(3). – С 1-13.
2. Багашова Н.В. Світові та вітчизняні тенденції розвитку управління проектами. Ефективна економіка. 2015. № 6. URL: http://nbuv.gov.ua/UJRN/efek_2015_6_34.
3. Рибак А.І. Управління зацікавленими сторонами в проектному менеджменті: Монографія. / А.І. Рибак, І.Б. Азарова. Одеса: ОДАБА, 2017. 145 с.
4. Pinova A., Cherepovitsyn A., Evseeva O. Stakeholder Management: An Approach in CCS Projects. Resources. 2018; 7(4):83. https://www.researchgate.net/publication/329533326_Stakeholder_Management_An_Approach_in_CCS_Projects. doi:10.3390.
5. Kerzner H. The future of project management [Електронний ресурс] / H. Kerzner, J. LeRoy Ward. – Режим доступу: <https://www.iil.com/resources/futureof-project-management-v2.pdf> 2)
6. Stakeholder Analysis using the Power Interest Grid. URL: <https://www.projectmanagement.com/wikis/368897/Stakeholder-Analysis--using-thePower-Interest-Grid>.

Information sources

1. Система дистанційного навчання НУ «Чернігівська політехніка».
2. Національна бібліотека України ім. В.І.Вернадського // <http://www.nbuv.gov.ua>.
3. Сайт Української асоціації управління проектами: [Електронний ресурс]. – режим доступу: <http://urpa.kiev.ua/content/view/40/78/lang,ukrainian/>
4. Сайт Інституту проектного менеджменту: [Електронний ресурс]. – режим доступу: <http://pmi.org.ua/ru/certification>.
5. Офіційна Інтернет-сторінка Державного комітету статистики України <http://www.ukrstat.gov.ua>.

