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|  |  | **Department of International Economics** |
| **Management of internetional business projects. industry 4.0****Work program of the discipline (Syllabus)** |

# Details of the discipline

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| Level of higher education | *Second (master's)* |
| Field of knowledge | *05 Social and behavioral sciences* |
| Specialty | *051 Economics* |
| Educational program | *International Economics* |
| Discipline status | *Selective* |
| Form of study | *full-time education* |
| Year of study, semester | *2021-2022 academic year, 5th year, 2nd semester* |
| The scope of discipline | *3,5 credits* |
| Semester control / control measures | *Credit* |
| Timetable | [*http://rozklad.kpi.ua*](http://rozklad.kpi.ua) |
| Language  | *English* |
| Information aboutcourse leader / teachers | Lectures and practicals: Kukharuk Anna Dmitrievna, Associate Professor of International Economics Department, Ph.D., Associate Professor, annakukharuk@gmail.com  |
| Course placement | Google classroom  |

# Curriculum

# Description of the discipline, its purpose, subject of study and learning outcomes

*The discipline "Management of international business projects. Industry 4.0" lays the foundation for mastering the problems of international commercial project activities in the Fourth Industrial Revolution.*

*The study of the discipline contributes to the formation of students' systematic understanding of project-oriented activities of enterprises and the specifics of project management, which can serve as a basis for creating a system of knowledge on effective initiation, planning, development, implementation and completion of business projects.*

*The purpose of the discipline is the formation of students' abilities: a comprehensive understanding of the content of project management of enterprises of various forms of ownership; analyze specific economic situations and solve practical problems related to project management, taking into account the challenges of Industry 4.0; aggregate information, calculate summary performance indicators of international business projects and perform their economic interpretation.*

*After studying the discipline the student will:*

*- understand the theoretical and methodological, methodological and organizational aspects of project management in the era of Industry 4.0;*

 *- know the principles of implementation of competitive business projects on the basis of technological superiority and innovation;*

*- have professional terminology in the field of business project management;*

*- understand the features of different approaches to the development of organizational structures for managing international projects;*

*- be able to apply methods of network and calendar planning of projects and methods of organizing the activities of project groups, taking into account the team roles of participants;*

*- know the procedure of project risk assessment;*

*- know the basics of planning, ensuring and quality control of projects;*

*- be able to identify the main software products that are suitable for use in project management to solve specific problems.*

# Prerequisites and postrequisites of the discipline (place in the structural and logical scheme of education according to the relevant educational program)

*Prerequisite for studying the discipline is mastering the following disciplines: "Economic Theory", "Microeconomics", "Macroeconomics", "Business Economics", "Finance", "Management", "Competition and Competitiveness of the International Business". Study of the credit module "Management of international business projects. Industry 4.0 "promotes the formation of students' systematic understanding of project-oriented activities of enterprises and the specifics of project management, which can serve as a basis for forming a system of knowledge on effective initiation, planning, development, implementation and completion of business projects in further professional activities.*

# The content of the discipline

# *Section 1. Theoretical foundations of project management in Industry 4.0.*

# *Topic 1.1. Processes and Challenges of Industry 4.0.*

# *Topic 1.2. Methods of business project management in the conditions of Industry 4.0.*

# *Topic 1.3. Substantiation of expediency of innovative business project.*

# *Section 2. Organization of project activities in international business.*

# *Topic 2.1. International business project life cycle.*

# *Topic 2.2. System of interests and competencies of project participants.*

# *Topic 2.3. Project-oriented management software.*

# *Section 3. Project-oriented management objects.*

# *Topic 3.1. Optimization of quality, cost and duration of the project.*

# *Topic 3.2. Project team and communications management.*

# *Topic 3.3. Contract and project risk management.*

# Training materials and resources

*The student receives a list of recommended basic and additional literature, as well as links to information resources. A significant part of the literature is the current work of domestic and foreign scientists. Using the means of communication mentioned earlier in this document, the teacher distributes the necessary teaching materials to the students.*

***Basic literature:***

*1. David I. Cleland; Roland Gareis. Global Project Management Handbook: Planning, Organizing, and Controlling International Projects, Second Edition (McGRAW-HILL, 2006, 1994). <https://www.accessengineeringlibrary.com/content/book/9780071460453>*

*2.*[*Project Management Institute*](https://ru.scribd.com/author/353258687/Project-Management-Institute-Project-Management-Institute)*. A Guide to the Project Management Body of Knowledge (PMBOK® Guide)–Sixth Edition. ISBN: 978-1-62825-184-5*

*3. Köster, K. (2010). International project management. London: Sage Publications.*

***Additional literature:***

1. *Ansoff, H. (1975). Managing strategic surprise by response to weak signals. California Management Review. 18(2): 21-33.*
2. *Brière, S., & Auclair, I. (2020). Toward gendered projects in international development: Paradox, resistances and convergent approaches. International Journal of Project Man-agement.*
3. *Crost, B., Felter, J., & Johnston, P. (2014). Development projects and civil conflict. Amer-ican Economic Review, 104(6), 1833–1856.*
4. *Diallo, A., & Thuillier, D. (2005). The success of international development projects, trust and communication: An African perspective. International Journal of Project Manage-ment, 23(3), 237–252.*
5. *Feeny, S., & Vuong, V. (2017). Explaining aid project and program success: Findings from Asian development bank interventions. World Development, 90, 329–343.*
6. *Geraldi, J., Maylor, H., & Williams, T. (2011). Now, let’s make it really complex (compli-cated). International Journal of Operations and Production Management, 31(9), 966–990.*
7. *Geraldi, J., & Söderlund, J. (2018). Project studies: What it is, where it is going. Interna-tional Journal of Project Management, 36, 55–70.*
8. *Golini, R., Kalchschmidt, M., & Landoni, P. (2015). Adoption of project management prac-tices: The impact on international development projects of non-governmental organi-zations. International Journal of Project Management, 33, 650–663.*
9. *Golini, R., & Landoni, P. (2013). International development projects: Peculiarities and man-agement approaches. Newton Square, PA: Project Management Institute.*
10. *Ika, L. A., & Donnelly, J. (2017). Success conditions for international development capacity building projects. International Journal of Project Management, 35(1), 44–63.*
11. *Ika, L. A., Söderlund, J., Munro, L. T., & Landoni, P. (2020). Editorial. When project man-agement meets international development, what can we learn? International Journal of Project Management.*
12. *Jones, C., & Lichtenstein, B. (2008). Temporary inter-organizational projects: How tem-poral and social embeddedness enhance coordination and manage uncertainty. The oxford handbook of inter-organizational relations. Oxford: Oxford University Press.*
13. *Kahneman, D. (2011). Thinking fast and slow. Doubleday Canada.*
14. *Khang, D. B., & Moe, T. L. (2008). Success criteria and factors for international devel-opment projects: A life-cycle-based framework. Project Management Journal, 39(1), 72–84.*

***Information resources:***

*1. http://www.pmi.org/.*

*2. http://www.ipma.world/*

*3. https://www.iso.org*

*4. http://www.upma.kiev.ua*

*5. <https://appau.org.ua>.*

# Educational content

# Methods of mastering the discipline (educational component)

*The curriculum provides for 36 hours. lectures, 18 hours. practical classes, 1 modular test, 1 individual task in the form of calculation work, the type of semester control is a credit.*

*Strategies for active and collective learning are used, which are determined by the following methods and technologies:*

*1) methods of problem-based learning, problem-based presentation, partial-search*

*(heuristic conversation) and research method);*

*2) personality-oriented (developing) technologies based on active*

*forms and methods of learning ("brainstorming", "situation analysis" business, role and*

*simulation games, discussion, express conference, educational debate, round table, case study*

*technology, design technology, etc.);*

*3) information and communication technologies that provide problem-solving nature of the learning process and activation of independent work of students (electronic presentations for lectures, use of audio, video support of classes, in particular, analysis of YouTube network service on the availability and quality of training videos on financial analysis).*

 *Learning outcomes, tests and deadlines are announced to students in the first lesson.*

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| *№ з/п* | *Результати навчання* | *Методи**навчання* | *Форми оцінювання (контрольні**заходи)* | *Термін виконання* |
| *1* | *The concept of the project in the conditions of Industry 4.0 and its initial economic substantiation* | *Lecture material,**Case study,**Teamwork* | *Thematic task* | *2nd week* |
| *2* | *Defining the purpose and objectives of a specific international project* | *Lecture material,**Work with the documentation of the real project provided by the teacher* | *Thematic task* | *4th week* |
| *4* | *Determining the effects of the project* | *Lecture material,**Work with the documentation of the real project provided by the teacher, Case Study* | *Thematic task* | *6th week* |
| *5* | *Determining the structure of the budget and the main resources of the project. Forecast of possible obstacles to the implementation of project tasks for the next reporting period.* | *Lecture material,**Work with the documentation of the real project provided by the teacher* | *Thematic task* | *8th week* |
| *7* | *Acquaintance with APPAU for development of ideas of Industry 4.0 in Ukraine* | *Lecture material,**"Public hearings" in practical classes* | *Discussion, interview* | *10th week* |
| *8* | *Analysis of project tasks for the reporting period* | *Lecture material,**Work with the application and project documentation provided by the teacher* | *Thematic task* | *12th week* |
| *9* | *Research of the organization of work of project teams in the software environment* | *Lecture material,**Case study,**Self-testing,**Analysis of software products for project management* | *Thematic task**Modular control work.* | *14th week* |

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| ***№***  | ***Topics of lectures and issues for discussion*** |
| *1-2* | *Topic 1. Content and global challenges of Industry 4.0**Processes of the Fourth Industrial Revolution. Contents of the concept of Industry 4.0. and current topics of projects. Objectives, results and strategy of the project in the conditions of Industry 4.0. World experience of project-oriented management.* |
| *3-4* | *Topic 2. Methods of business project management in Industry 4.0.**History of project management methodology. The classic approach to project management. Calendar and network planning. Agile-approach to project management. Methods PRINCE2, Scrum, LEAN, Kanban, 6 Sigma. International organizations for project management and standardization (IPMA, PMI, ISO). Standardization of project management.* |
| *5-6* | *Topic 3. Justification of the feasibility of an innovative business project.**The concept of efficiency of an innovative project. Criteria for a successful innovation project. Indicators and methods of assessing the economic feasibility of the project.* |
| *7-8* | *Topic 4. Life cycle of an international business project.**The concept of project life cycle. Project initiation. Project development. Project implementation. Completion of the project. Life cycle management processes. The difference between the project and product life cycle.* |
| *9-10* | *Topic 5. The system of interests and competencies of project participants.**Professional and personal interests of project participants. Necessary competencies of project team members. Competences of the project manager. Correspondence of interests and competencies of project participants.* |
| *11-12* | *Topic 6. Project-oriented management software.**Features of web-based project management. Software package from Microsoft, Welkom Software Technologies, Primavera Systems Inc. Means of project structuring: work decomposition structures (WBS), organizational structures of the enterprise (OBS), resource structures (RBS), work coding systems and calendar-network planning of works, resources and costs (PERT - diagram, Gantt chart).* |
| *13-14* | *Topic 7. Optimization of quality, cost and duration of the project.**System for evaluating the quality, cost and timing of project work. Principles of project quality management. Cost management in the project management system. Time management in project management.* |
| *15-16* | *Topic 8. Project team management and communications.**Providing the project with labor resources. Attracting, distributing and using material resources. Financial management in project activities. Technologies of group communication in the decision-making system.* |
| *17-18* | *Topic 9. Contract and project risk management.**Management of contract activities of the company. Classification of project risks. Risk identification. Project risk assessment systems. Tools for minimizing threats to project activities.* |

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| ***№***  | ***Topics of practical classes and issues for discussion*** |
| *1* | *Topic 1. Content and global challenges of Industry 4.0**Processes of the Fourth Industrial Revolution. Contents of the concept of Industry 4.0. and current topics of projects. Objectives, results and strategy of the project in the conditions of Industry 4.0. World experience of project-oriented management.* |
| *2* | *Topic 2. Methods of business project management in Industry 4.0.**History of project management methodology. The classic approach to project management. Calendar and network planning. Agile-approach to project management. Methods PRINCE2, Scrum, LEAN, Kanban, 6 Sigma. International organizations for project management and standardization (IPMA, PMI, ISO). Standardization of project management.* |
| *3* | *Topic 3. Justification of the feasibility of an innovative business project.**The concept of efficiency of an innovative project. Criteria for a successful innovation project. Indicators and methods of assessing the economic feasibility of the project.* |
| *4* | *Topic 4. Life cycle of an international business project.**The concept of project life cycle. Project initiation. Project development. Project implementation. Completion of the project. Life cycle management processes. The difference between the project and product life cycle.* |
| *5* | *Topic 5. The system of interests and competencies of project participants.**Professional and personal interests of project participants. Necessary competencies of project team members. Competences of the project manager. Correspondence of interests and competencies of project participants.* |
| *6* | *Topic 6. Project-oriented management software.**Features of web-based project management. Software package from Microsoft, Welkom Software Technologies, Primavera Systems Inc. Means of project structuring: work decomposition structures (WBS), organizational structures of the enterprise (OBS), resource structures (RBS), work coding systems and calendar-network planning of works, resources and costs (PERT - diagram, Gantt chart).* |
| *7* | *Topic 7. Optimization of quality, cost and duration of the project.**System for evaluating the quality, cost and timing of project work. Principles of project quality management. Cost management in the project management system. Time management in project management.* |
| *8* | *Topic 8. Project team management and communications.**Providing the project with labor resources. Attracting, distributing and using material resources. Financial management in project activities. Technologies of group communication in the decision-making system.* |
| *9* | *Topic 9. Contract and project risk management.**Management of contract activities of the company. Classification of project risks. Risk identification. Project risk assessment systems. Tools for minimizing threats to project activities.* |

# Self-work

*The student's independent self work includes such components as preparation for current surveys, preparation for practical classes, in particular preparation of thematic tasks in the term specified by the teacher, preparation for modular control work, for defense of calculation work, for a credit.*

# Policy and control

# Policy of academic discipline (educational component)

***Violation of deadlines and incentive points***

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| *Encouragement points* |
| *Criterion* | *Weight score* |
| *Writing a thematic scientific article* | *5 points* |

***Attending classes***

*Attendance at lectures, practical classes, as well as absence from them, is not evaluated. However,*

*students are encouraged to attend classes because they are taught theoretical*

*material and develop the skills needed to complete a semester individual assignment. The grading system is focused on obtaining points for student activity, as well as performing tasks that are able to develop practical skills and abilities.*

***Evaluation control measures missed***

*The task, which is submitted for inspection in violation of the deadline, is evaluated taking into account the penalty points.*

*In case of omission for a good reason of the lesson in which the control event took place,*

*- testing can be written another day on an individual schedule;*

*- thematic tasks are performed remotely, stored on google disk and defended in person at the next class.*

***Procedure for appealing the results of evaluation control measures***

*Students have the opportunity to raise any issue related to the control procedure and expect it to be addressed according to predefined procedures.*

*Students have the right to challenge the results of the control measures, but it is obligatory to explain, with which criterion they do not agree according to the assessment letter and / or comments.*

***Calendar boundary control***

*Intermediate attestation of students (hereinafter - attestation) is a calendar boundary control. The purpose of the certification is to improve the quality of student learning and monitor the implementation of the schedule of the educational process by students.*

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| --- | --- | --- |
| Criterion | 1st attestation | 2nd attestation |
| Term of certification | 8th week | 14th week |
| The condition for obtaining certifications is the current rating | ≥ 15 points | ≥ 30 points |

***Academic integrity***

*The policy and principles of academic integrity are defined in Section 3 of the Code of Honor of the National Technical University of Ukraine "Kyiv Polytechnic Institute named after Igor Sikorsky". Details: https://kpi.ua/code.*

***Norms of ethical behavior***

*Norms of ethical behavior of students and employees are defined in Section 2 of the Code of Honor of the National Technical University of Ukraine "Kyiv Polytechnic Institute named after Igor Sikorsky". Details:* [*https://kpi.ua/code*](https://kpi.ua/code)*.*

***Education in English***

*There is a possibility of conducting lectures and practical classes in English, which will help to master the professional terminology of the original language. The number and schedule of English classes are agreed by the teacher with students at the beginning of the semester.*

***Extracurricular activities***

*Participation in conferences, forums, round tables, etc. is envisaged within the study of the discipline.*

***8. Types of control and rating system for assessing learning outcomes***

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| --- | --- | --- | --- | --- | --- |
| *№* | *Evaluation control measure* | *%* | *Weight score* | *Quantity* | *Total* |
| *1.* | *Thematic task* | *30* | *5* | *6* | *30* |
| *2.* | *Modular control work* | *15* | *15* | *1* | *15* |
| *3.* | *Individual task* | *15* | *15* | *1* | *15* |
| *4.*  | *Examination* | *40* | *40* | *1* | *40* |
|  | *Total score* | *100* |
| ***Semester certification of students*** |

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| --- | --- |
| *Prerequisite for admission to the exam* | *Критерій* |
| *1* | *Current rating* | *RD ≥ 60 % from the maximum number of points per semester before the exam (60\*0,5=30 points).* |
| *2* | *Individual task* | *Task completed, no plagiarism* |
| *3* | *Modular control work* | *The work is done* |

***Possibility to receive a grade "automatically":*** *yes, in case of receiving a rating for the semester**RD ≥ 60 % from the maximum number of points (60 points and above).*

Table of correspondence of rating points to grades on the university scale:

|  |  |
| --- | --- |
| *Scores* | *Rating* |
| 100-95 | Excellent |
| 94-85 | Very good |
| 84-75 | Good |
| 74-65 | Satisfactorily |
| 64-60 | Enough |
| Less than 60 | Unsatisfactorily |
| Admission conditions are not met | Not allowed |

# Additional information on the discipline (educational component)

*An example of an individual task and the criteria for its evaluation are presented in Annex A.*

*An example of a modular test is presented in Annex B.*

**Work program of the discipline (syllabus):**

**Conducted by** Associate Professor of International Economics Department, Ph.D., Associate Professor

 Anna KUKHARUK

**Approved** by the Department of International Economics (protocol № 11 of 26.05.2021)

**Agreed** at the Methodical Commission of the faculty (protocol № 10 from 15.06.2021)

*Annex A*

***INDIVIDUAL TASK IN THE DISCIPLINE***

***"MANAGEMENT OF INTERNATIONAL BUSINESS PROJECTS. INDUSTRY 4.0 »***

***AND THE SYSTEM OF ITS EVALUATION***

1. *To analyze the involvement of the world (2 countries of the student's choice) in the processes of Industry 4.0.*

*- to analyze the level of economic and technological development of the world, using the methods of references, expert method and macroeconomic analysis.*

*- to compare selected countries on the basis of technological readiness for the implementation of Industry 4.0.*

*2. Perform an analysis of the development of project activities in selected countries. Give examples of innovative projects according to the description scheme:*

*- Topics*

*- Concept*

*- Implementation period*

*- Participants*

*- The main expected economic effects.*

***Format:*** *printed document with a standard title page (university, discipline title, work title, author's name, group, city, year of work).*

***Structure:*** *Introduction, The main part, consisting of 2 sections (1) analysis of the level of economic and technological development of the world; 2) analysis of the development of project activities in selected countries and Conclusions.*

***Volume:*** *up to 15 pages A 4. Font: Times New Roman, 14, 1.5 space*

*Graphs and tables are required.*

***THE EVALUATION SYSTEM***

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| --- |
| *Component of the assessment* |
| *Criterion* | *Points* |
| *Completeness of coverage of answers to component tasks* | *5* |
| *The amount of information sources used* | *4* |
| *The level of expression of the author's own opinion* | *3* |
| *Saturation of graphic and analytical material* | *3* |
| *Total score* | *15* |

*Annex B*

***Assignment of the modular test***

*The main purpose of the test is to establish an integrated level of students' acquisition of theoretical knowledge and skills based on the results of studying sections of the discipline. During the mastering of the material students are offered to solve the problem of one modular test, which consists of six tasks: a block of tests on three closed questions, two open theoretical questions and problems.*

*It is proposed to perform the control work on the following topics:*

*Topics of section 1. Theoretical bases of project management (tests and questions).*

*Topics of section 2. Organization of project activities in international business (tests and questions).*

*Topics of section 3. Objects of project-oriented management (tasks and situations).*

***A typical task***

***Test part:***

***1. The main characteristics of the project are:***

*a) complexity, risk, high cost;*

*b) limited time, budget, unique result;*

*c) limited resources, continuity, the need for control.*

***2. The criteria for a successful project are the following:***

*a) performed on time, within resources and according to customer expectations;*

*b) it is performed on time and within the allocated resources;*

*c) a unique result was obtained within the budget.*

***3. Choose one correct statement:***

*a) the totality of all projects of the enterprise is called the program of projects;*

*b) the portfolio includes interrelated project programs;*

*c) one of the projects of the enterprise may not be included in the project program.*

***Theoretical part.***

***4.*** *To reveal the advantages and disadvantages of Trello and Slack software products for project management tasks.*

***5.*** *Explain the content of the organizational structure of project management.*

*Situation.*

***6.*** *Provide economic recommendations for solving the problem of the enterprise (each student receives an individual situation in addition to the MCR option)*

***THE EVALUATION SYSTEM***

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| *Component of the assessment* |
| *Criterion* | *Points* |
| *Completeness of coverage of answers to component tasks* | *10 балів* |
| *Accuracy and logic of material presentation* | *5 балів* |
| *Total* | *15 балів* |