PJSC "Higher Educational Institution
"INTERREGIONAL ACADEMY OF PERSONNEL MANAGEMENT"
Danube Brunch

МАУП

SYLLABUS

of the academic discipline (selective)

BUSINESS PROCESS REENGINEERING

Specialty: **D3 Management**

Level of higher education: **first (bachelor's) level**

Study program: **Management**

IAPM 2025

General information about the academic discipline

Name of the discipline	Business process reengineering
Code and name of specialty	D3 Management
Level of higher education	First (bachelor's) level
Discipline status	Selective
Number of credits and hours	3 credits/90 hours Lectures: 16 hours Seminars/practical classes: 14 hours Students' independent work: 60 hours
Terms of study of the discipline	8 semester
Language of instruction	Ukrainian
Type of final control	Pass/fail (credit)

General information about the instructor. Contact information.

Full name of the instructor	Pavlo Bodenchuk
Academic degree	None
Position	Lecturer in Economics
Areas of scientific research	Information and analytical support for business process management in the context of digital economic transformation
Links to the registers of identifiers for scientists	ORCID: https://orcid.org/0009-0000-0640-7977
Contact information	
E-mail:	menedzmentuk@gmail.com
Contact phone number	+380677445957
Instructor's portfolio on the website	https://izmail.maup.com.ua/assets/files/bodenchuk-ps-portfolio-a.pdf

Discipline's description. The discipline *Business Process Reengineering* is a key component of managerial training and is focused on studying modern methods of radical redesign of enterprise activities aimed at achieving a significant leap in performance. The discipline presents the methodology of transitioning from functional management to a process-oriented approach, where the primary object of management is the end-to-end business process that creates value for the customer. Students learn to analyze the current state of an organization using the *As-Is* model, identify bottlenecks, and design ideal future-state business models (*To-Be*). Particular attention is paid to visual modeling tools, the role of information technologies as a catalyst for change, and the psychological aspects of overcoming employee resistance during the implementation of innovations.

The subject of the discipline comprises a set of theoretical principles, methods, and instrumental tools used for fundamental rethinking and radical redesign of a company's business processes in order to improve key performance indicators, including cost, quality, service, and operational speed.

The aim of the discipline is to develop in higher education students systematic process-oriented thinking, as well as to form practical competencies in diagnosing operational efficiency, modeling enterprise business architecture, and managing organizational transformation projects.

The objectives of the discipline include mastering methodologies for describing business processes in accordance with international standards such as BPMN 2.0 and IDEF0, as well as acquiring skills in value analysis and benchmarking. The discipline is intended to train students to identify processes that do not create added value, develop regulations for new procedures, and integrate them with modern corporate information systems, including ERP, CRM, and BPMS. An important objective is also the study of change management methods aimed at minimizing risks during business reorganization.
Learning Outcomes upon successful completion of the discipline, the student shall
Know:

- the essence of business process reengineering (BPR) and its differences from continuous improvement approaches such as Kaizen and TQM;
- modern business process modeling notations, including BPMN, IDEF0, and DFD, as well as their syntax;
- principles of designing a process-oriented organizational structure of an enterprise;
- key process performance indicators (KPIs) and methods for their measurement;
- the role of information technologies in the automation and robotization (RPA) of business processes;
- – strategies for overcoming resistance to change on the part of employees.

Be able to:

- to develop graphical models of business processes in the As-Is and To-Be states using CASE tools;
- to diagnose bottlenecks, functional duplication, and process gaps;
- to calculate the economic efficiency of implemented changes, including cycle time reduction and cost minimization;
- to develop transition plans to a new management model and related regulatory documentation;
- to form a reengineering team and manage organizational transformation projects.

Prerequisites for the discipline. Effective mastery of the discipline is based on knowledge acquired through the study of Management (fundamentals of management), Enterprise Economics (understanding of costs and efficiency), and Strategic Management (vision of organizational goals). An important foundation is also provided by competencies gained in

the disciplines Digital Technologies in Management and Information Systems in Management, which ensure understanding of the technical aspects of automation.

Post-requisites for the discipline. Knowledge and skills in business process reengineering are applied during pre-graduation practice and in the preparation of the bachelor's qualification thesis, particularly in sections related to improving the performance of the research object. In professional practice, these competencies are critically important for positions such as business analyst, development manager, management consultant, and project manager for digital transformation initiatives.

Content of the academic discipline

<table>
<tr><th>№</th><th>Topics</th><th>Teaching methods /assessment methods</th></tr>
<tr><td>Topic 1</td><td>Theoretical Foundations of Business Process Reengineering (BPR)</td><td rowspan="8">Teaching Methods:
– Problem-oriented lectures involving analysis of cases of unsuccessful and successful company transformations and examination of the causes of process inefficiency;
– Practical modeling workshops focused on developing business process diagrams using BPMN 2.0 and IDEF0 notations with CASE tools, as well as diagnosing bottlenecks and functional duplication;
– Project-based work consisting of reengineering a real business process, including the transition from the As-Is model to the To-Be model and calculation of the economic effect of implemented changes.

Assessment Methods:
– Ongoing assessment: testing of knowledge related to process description methodologies and quality management standards;
– Assessment of practical skills: defense of developed process maps and justification of proposed changes, such as elimination of redundant steps, automation, and parallelization;
– Final assessment: presentation of a business process optimization project or a pass/fail assessment.</td></tr>
<tr><td>Topic 2</td><td>Methodologies for Business Process Description and Modeling</td></tr>
<tr><td>Topic 3</td><td>Diagnosis and Analysis of the Current State of Processes (As-Is Model)</td></tr>
<tr><td>Topic 4</td><td>Design of New Business Processes (“To-Be” Model)</td></tr>
<tr><td>Topic 5</td><td>Information Technologies as a Catalyst for Reengineering</td></tr>
<tr><td>Topic 6</td><td>Change Implementation Management and Overcoming Resistance</td></tr>
<tr><td>Topic 7</td><td>Evaluation of Reengineering Effectiveness and Key Performance Indicator (KPI) System</td></tr>
<tr><td>Topic 8</td><td>Integration of Reengineering with Modern Management Concepts</td></tr>
<tr><td colspan="3">Module Assessment Task</td></tr>
<tr><td colspan="3">Final assessment: pass/fail (credit)</td></tr>
</table>

Technical Equipment and Software.

The discipline is delivered in specialized computer laboratories where each workstation is equipped with a personal computer. Multimedia equipment, including a projector and an interactive whiteboard, is used for visual demonstration of educational materials.

The learning process is supported by the necessary software tools, including CASE tools and process visualization instruments, as well as access to the Internet for working with:

– cloud-based business process modeling services using BPMN 2.0 and IDEF0 notations for developing *As-Is* and *To-Be* diagrams;

– demo versions of Business Process Management Systems (BPMS) for simulating process execution and identifying bottlenecks;
– libraries of reference models and industry standards for conducting benchmarking.

Forms and methods of assessment.

The assessment system of learning outcomes consists of ongoing assessment and final (semester) assessment. Ongoing assessment is conducted systematically during practical classes and in the course of evaluating independent work. Its purpose is to verify theoretical knowledge and practical skills, in particular the ability to diagnose management bottlenecks, perform business process modeling in the *As-Is* and *To-Be* states, and develop projects for their radical optimization.

Assessment forms include:

– Oral assessment activities: defense of practical assignments with justification of the feasibility of reengineering and the selected modeling notation, presentation of the results of individual projects, and participation in professional discussions on change implementation methodologies and overcoming employee resistance;
– Written and practical assessment activities: completion of computer-based tests and solving situational tasks (case studies) using CASE tools and international process description standards, including BPMN and IDEF0.

Assessment methods combine short quizzes, evaluation of the quality of developed graphical models and calculations of the economic efficiency of changes, as well as monitoring students' activity during the solution of applied problem-based situations.

Grading system and requirements.

Table of distribution of points received by students*

Topics	Ongoing knowledge assessment						Final Assessment		Total points
	Seminar 1 (Topic 1.2)	Seminar 2 (Topic 3)	Seminar 3 (Topic 4)	Seminar 4 (Topic 5.6)	Seminar 5 (Topic 7)	Seminar 6 (Topic 8)	Module assessment task	Pass /Fail	
Work during the seminar	6	6	6	6	6	6	20	20*	100
Independent work	4	4	4	4	4	4			

*The table contains information about the maximum points for each type of assignment

Assessment Criteria and Procedures.

The knowledge assessment system for the discipline is based on the requirements of the current *Regulations on Student Assessment* and is implemented through an accumulative approach. This approach ensures that all student achievements throughout the semester are taken into account, including the quality of practical assignments, the results of modular

assessment, and participation in discussions, thereby ensuring transparency in the formation of the final grade.

Modular Assessment. Modular Assessment (MA) is conducted once per semester in the form of a comprehensive MA after completion of the core learning content. The MA aims to assess the level of mastery of theoretical knowledge and the ability to apply it in solving applied tasks.

Structure of the Modular Assessment includes:

– test tasks designed to assess knowledge of terminology, reengineering methodologies, and business process modeling standards;

– a practical task aimed at assessing skills in developing process maps (*As-Is*, *To-Be*) and formulating proposals for their optimization.

Assessment Criteria for the Modular Assessment:

– Excellent (90–100% of points): the student provides correct answers to test questions, completes the practical task without errors, demonstrates a deep understanding of the applied tools, and is able to interpret the obtained results;

– Good (75–89% of points): the student generally completes the tasks successfully but makes minor inaccuracies in answers or chooses a less optimal approach to solving the practical task;

– Satisfactory (60–74% of points): the student has mastered the basic material but makes errors in test tasks or completes the practical task with logical inconsistencies or not in full;

– Unsatisfactory (less than 60% of points): the student fails to answer most test questions, does not complete the practical task, or demonstrates a lack of skills in working with professional tools.

Assessment of independent work (Maximum — 4 points)

Independent work of the student, including completion of individual home assignments, study of additional topics, and case analysis, is assessed based on the review of completed tasks or their defense during practical classes.

– **4 points (Excellent):** the student demonstrates a creative approach to task completion, a deep understanding of the topic, and the ability to independently select optimal tools for solving the business task. The work is completed flawlessly, the results obtained are well substantiated, comprehensive conclusions are provided, and the assignment is submitted within the established deadline.

– **3 points (Good):** the assignment is completed in full and the results are correct; however, minor inaccuracies are present in the formatting of the work, data interpretation, or in the inefficient use of certain tools, for example, choosing a more complex solution instead of an optimal one.

– **2 points (Satisfactory):** the work is completed but contains significant shortcomings, including errors in the selection of strategies or tools that do not critically affect the final result, lack of analytical conclusions, or non-compliance with formatting requirements. Alternatively, the assignment is completed correctly but submitted after the established deadline without a valid reason.

– **0–1 point (Unsatisfactory):** the assignment is not completed, is completed only partially with less than 50% of the required volume, contains major errors that lead to incorrect results, or a case of plagiarism or academic misconduct is identified.

Scale for evaluating the performance of independent work (individual tasks)

The maximum possible assessment of independent work (individual tasks)	Execution level			
	Excellent	Good	Satisfactory	Unsatisfactory
4	4	3	2	0-1

Evaluation of Additional (Individual) Educational Activities

To stimulate students' creative activity and encourage in-depth study of business performance management methodologies, the allocation of incentive (bonus) points is предусмотрено. Additional points are awarded for activities performed beyond the mandatory requirements of the discipline.

1. Research and Applied Activities

Points are awarded for demonstrating the ability to diagnose and redesign business processes:

- participation in scientific and practical conferences and seminars on reengineering, process management, Lean management, and digital business transformation — 3–5 points;
- development of original applied solutions, including creation of an optimization model for a real enterprise business process, development of process execution regulations, preparation of a CRM/ERP system implementation project, and calculation of performance KPIs — up to 6 points;
- participation in startup competitions, business hackathons, or case championships focused on operational efficiency and strategic management — 5–10 points;
- analytical work with data, including preparation of analytical reports with visualization, such as benchmarking of competitors' processes, analysis of bottlenecks in logistics or sales, and assessment of the effects of automation — up to 5 points.

2. Academic Discipline and Consistency

In accordance with the *Regulations on Assessment*, incentive points are awarded for a high level of work organization and adherence to academic culture:

- attendance of all classes, both lectures and practical sessions, without absences — 3 points;
- high-quality systematization of lecture material, including a structured set of notes with descriptions of BPMN/IDEF0 modeling notations, optimization methods, ISO standards, and terminology — 2 points;
- independent mastery of additional tools not covered by the basic curriculum, such as professional CASE tools (Bizagi, MS Visio, ARIS Express) or simulation modeling systems, with demonstration of practical skills — up to 4 points;

– timely completion and defense of practical assignments in accordance with established project deadlines — 3 points.

Additional points are added to the student's ongoing rating; however, the total final grade for the discipline may not exceed 89 points prior to taking the examination or pass/fail assessment.

Final Semester Assessment (Pass/Fail Assessment)

The final semester assessment (pass/fail assessment) is a mandatory stage of completing the study of the discipline *Business Process Reengineering*. It may be conducted either through the accumulation of points on an automatic basis or by taking a final pass/fail assessment.

The form of final assessment is a pass/fail examination in the form of a written test, which may include completion of a practical situational task (case study) on a personal computer. The final grade is awarded based on the student's learning outcomes throughout the semester and consists of the total points from ongoing assessment, including defense of practical assignments and independent work, results of modular assessment, and additional incentive (bonus) points.

Students who have accumulated the required number of points during the semester, 60 points or more, and have successfully defended all practical assignments required by the syllabus are entitled to receive a pass automatically without taking the final test.

Grade Formation Procedure:

– Students who have completed all tasks required by the syllabus during the semester, including successful defense of practical assignments, completion of independent work, and passing the modular assessment, and who have accumulated a total of 60 points or more, receive the final grade automatically according to the number of points obtained, without additional testing.
– Students who have completed the mandatory types of work and have no academic arrears in practical assignments but have accumulated fewer than 60 points, as well as those who wish to improve their result and increase their rating score, are required to take the final assessment in the form of a written test or a combined computer-based task during the pass/fail assessment session.

To evaluate students' learning outcomes throughout the semester, a 100-point grading scale, the national grading scale, and the ECTS grading scale are applied.

Summary assessment scale: national and ECTS

Total points for all types of learning activities	ECTS assessment	National scale assessment for exam, course project (work), internship	
		National scale assessment for exam, course project (work), internship	For pass/fail (credit)
90 – 100	A	excellent	pass
82 – 89	B	good	
75 – 81	C		
68 – 74	D	satisfactory	
60 – 67	E		
35 – 59	FX	unsatisfactory with the possibility of retaking	fail unsatisfactory with the possibility of retaking
0 – 34	F	unsatisfactory with mandatory re-study of the discipline	fail unsatisfactory with mandatory re-study of the discipline

Discipline's Policy

Successful mastery of the educational component *Business Process Reengineering* requires students to demonstrate systematic work habits, analytical thinking, and a responsible attitude toward practical activities. Mandatory conditions include regular attendance of lectures and, in particular, practical classes, active participation in discussions of modern methods for improving business efficiency, as well as timely and high-quality completion of all practical and individual assignments.

In the event of missed classes or unsatisfactory results, the student is required to eliminate academic arrears by completing missed practical assignments and demonstrating the acquired competencies to the instructor.

An integral part of the learning process is strict adherence to the principles of academic ethics and digital culture. The educational process is based on the principles of academic integrity, which require exclusively independent completion of all analytical and project-based tasks, development of business process models (*As-Is*, *To-Be*), and preparation of their optimization plans.

Any use of external information sources must be accompanied by proper referencing. Within the discipline, any manifestations of academic misconduct are unacceptable, including submission of others' projects, graphical schemes, or modeling results as one's own, plagiarism, fabrication of research results, cheating during testing, deception, or attempts to influence the objectivity of assessment.

Recommended sources of information:

Basic literature:

1. Oliinyk, O. M. et al. *Business Process Reengineering*: study guide. Zaporizhzhia: Zaporizhzhia National University, 2025. 89 p. Available at: https://dspace.znu.edu.ua/jspui/bitstream/12345/25356/1/0060942.pdf.

2. Kozyr, V. V., Sliesariev, V. V., Us, S. A., Khomiak, T. V. *Modeling and Reengineering of Business Processes*: textbook. Dnipro: Dnipro University of Technology, 2022. 163 p. Available at: https://surli.cc/qrarko.
3. Vorobiova, S. Business process reengineering of commercial enterprises based on control and critical points: approaches, methods, and practical application. *Economy and Society*, 2025, No. 71. DOI: https://doi.org/10.32782/2524-0072/2025-71-153.
4. Kravchuk, I., Lavrynenko, S., Zelinska, A. Digitalization of business processes: an innovative component of enterprise management. *Economy and Society*, 2023, No. 58. DOI: https://doi.org/10.32782/2524-0072/2023-58-19.
5. Rybalko-Rak, L. A., Opryshko, V. I., Bilan, L. P., Derzhii, R. V. Organizational approach to assessing enterprise business process reengineering. *Business Inform*, 2023, No. 10, pp. 347–352. DOI: https://doi.org/10.32983/2222-4459-2023-10-347-352.

Additional literature:

1. Vasylieva, T. A., Us, Ya. O., Liulov, O. V., Pimonenko, T. V. Business process reengineering of enterprises: from traditional to digital marketing. *Bulletin of Sumy State University. Series: Economics*, 2020, No. 3, pp. 309–318. DOI: 10.21272/1817-9215.2020.3-35.
2. Demianenko, T., Yakovenko, I. Business process reengineering as a modern method of managing strategic changes in an enterprise. *Adaptive Management: Theory and Practice. Series: Economics*, 2022, Vol. 14, No. 28. DOI: https://doi.org/10.33296/2707-0654-14(28)-08.
3. Diakonova, A. K., Trishyn, F. A., Korotych, O. M. Business process reengineering as a modern tool for successful development of the restaurant industry. *Economy and Society*, 2021, No. 29. DOI: https://doi.org/10.32782/2524-0072/2021-29-28.
4. Zhezhukha, V. Y. The essence and significance of reengineering at enterprises. *Problems of the Economy*, 2020, No. 4 (46), pp. 155–163. Available at: https://www.problecon.com/export_pdf/problems-of-economy-2020-4_0-pages-155_163.pdf.
5. Zaika, S., Kharchevnikova, L., Zaika, O. Business process reengineering as a tool for effective enterprise management. *Entrepreneurship and Innovation*, 2021, No. 21, pp. 49–54. DOI: https://doi.org/10.37320/2415-3583/21.8.
6. Revenko, O. V., Ippolitova, I. Ya. Theoretical and methodological aspects of business process reengineering implementation at an enterprise. *Economics and Enterprise Management*, 2021, Issue 60, pp. 109–117. DOI: https://doi.org/10.32843/infrastruct60-21.
7. Sakun, L. M. et al. Business process reengineering as a modern method of managing strategic changes in an enterprise. *Economics and Organization of Management*, 2020, No. 2 (38), pp. 81–97. DOI: https://doi.org/10.31558/2307-2318.2020.2.7.
8. Svitlychna, V., Aleksandrova, S. Business process reengineering in the HoReCa sector: aspects of organizational support. *Economy and Society*, 2022, No. 41. DOI: https://doi.org/10.32782/2524-0072/2022-41-24.

Information resources:

1. Business Process Management Initiative (BPMI): official website. Available at: https://abpmp.org.ua/our-mission/.
2. Ministry of Digital Transformation of Ukraine: official website. Available at: https://thedigital.gov.ua/.