

Ministry of Education and Science of Ukraine
V. N. Karazin Kharkiv National University

Department of International Economic Relations and Logistics

APPROVED

Director

Educational and Scientific Institute
“Karazin Institute of International
Relations and Travel Business”

Nikolay PYSARENKO



27 August 2026

COURSE UNIT WORKING PROGRAMME

SPATIAL ECONOMICS AND REGIONAL DEVELOPMENT

level of higher education: third (educational and scientific) level

field of knowledge: C Social Sciences, Journalism, Information and International Relations

speciality: C1 Economics and International Economic Relations (by specialisations)

educational and scientific programme: International Economic Relations

specialisation: C1.02 International Economic Relations

status of the discipline: elective

institute: Educational and Scientific Institute “Karazin Institute of International Relations and Travel Business”

2026/2027 academic year

The programme was recommended for approval by the Academic Council of the Educational and Scientific Institute "Karazin Institute of International Relations and Travel Business"

27 August 2026, Minutes No. 1

PROGRAMME DEVELOPER: Olena V. Khanova,
PhD in Geography, Associate Professor, Associate Professor at the Department of International Economic Relations and Logistics

The programme was approved at the meeting of the Department of International Economic Relations and Logistics

Minutes No. 1 of 26 August 2026

Head of the Department of International Economic Relations and Logistics

 Anna ZAITSEVA

The programme was agreed with the Academic Lead of the Educational and Scientific Programme "International Economic Relations"

Academic Lead of the Educational and Scientific Programme

 Olena DOVGAL

The programme was agreed by the Scientific and Methodological Commission of the Educational and Scientific Institute "Karazin Institute of International Relations and Travel Business"

Minutes No. 1 of 27 August 2026

Chair of the Scientific and Methodological Commission of the Educational and Scientific Institute "Karazin Institute of International Relations and Travel Business"

 Hanna PANASENKO

INTRODUCTION

The programme of the academic discipline “Spatial Economics and Regional Development” has been developed in accordance with the educational and scientific programme for third-cycle (educational and scientific) higher education in speciality C1 “Economics and International Economic Relations (by specialisations)”, specialisation C1.02 “International Economic Relations”.

1. Description of the Academic Discipline

1.1. Aim of the Academic Discipline

The aim of the academic discipline “Spatial Economics and Regional Development” is to develop in third-cycle students a coherent scholarly understanding of the spatial dimensions of economic activity and their influence on regional development in a globalised environment.

1.2. Key Objectives of the Academic Discipline

- to develop students’ capacity to undertake comprehensive analysis of the spatial dimensions of economic activity and the mechanisms of regional development using contemporary theoretical approaches, spatial modelling methods and data-analysis tools;
- to develop competences in critically assessing socio-economic disparities and regional convergence and divergence processes, including their causes and consequences in the context of globalisation and European integration;
- to foster skills in developing and providing scholarly justification for regional development strategies, including innovation-driven and sustainable development strategies, with due regard to territorial, economic, environmental and social factors;
- to develop the capacity for interdisciplinary research and the public presentation and scholarly validation of research findings aimed at strengthening regional competitiveness and integrating Ukraine into the European research and economic area.

1.3. Number of ECTS credits – 3.

1.4. Total workload – 90 hours

1.5. Academic Discipline Profile
Elective
Full-time study
Year of study
2nd
Semester
4th
Lectures
13 hours
Practical classes and seminars
26 hours
Laboratory classes
0 hours
Independent study
51 hours
Individual assignments
0 hours

1.6. Competences Developed by the Academic Discipline:

GC02. Ability to search for, process and analyse information from various sources.

GC04. Ability to solve complex problems on the basis of a systemic scientific worldview, professional ethics and broad cultural awareness.

SC01. Ability to conduct original research and obtain scholarly results that generate new knowledge in international economic relations and related interdisciplinary fields and may be published in leading academic journals.

SC05. Ability to develop a coherent scholarly understanding of global economic interdependence and the regulatory mechanisms of international economic relations at national, regional and international levels in the context of contemporary processes of convergence and divergence, European integration and Euro-Atlantic integration.

1.7. Intended Learning Outcomes Supported by the Academic Discipline:

LO04. Analyse and apply conceptual models, the scholarly contributions of Ukrainian and international researchers, fundamental postulates and theories, paradigms of global economic development, and contemporary approaches to the functioning and development of the global economy and international economic relations.

LO10. Analyse and assess the current state and prospects of international economic relations on the basis of a coherent scholarly understanding of global economic interdependence; effectively apply regulatory mechanisms of international economic relations at national, regional and international levels in the context of contemporary convergence and divergence processes.

1.8. Prerequisites:

Research Project Management; Global Challenges in the System of International Economic Relations; Specific Features of Global Integration Processes; Economic and Mathematical Modelling of Global Economic Phenomena.

2. Thematic Plan of the Academic Discipline

Topic 1. Theoretical Paradigms and Methodology of Spatial Economics Research

Classical location and central place theories; growth pole and core–periphery theories; new economic geography; institutional, evolutionary, network and place-based approaches; space as a determinant of international economic processes; levels and scales of spatial analysis; development of a theoretical model and research hypotheses.

Topic 2. Spatial Organisation of the Global Economy and International Economic Activity

Agglomerations, clusters, global cities, functional and cross-border regions; spatial concentration of production, trade, investment and innovation; locational behaviour of transnational corporations; global and regional value chains; international production networks; reshoring, nearshoring and friendshoring; spatial consequences of the fragmentation of the global economy.

Topic 3. Methods, Data and Digital Tools for Spatial Economic Research

Sources of international, national and subnational data; geographic information systems and cartographic visualisation; exploratory spatial data analysis; global and local spatial autocorrelation; Moran's I and Local Indicators of Spatial Association (LISA); spatial weights matrices; spatial regression models; panel and convergence models; limitations of spatial data; reproducibility of research findings.

Topic 4. Spatial Inequality, Convergence and Territorial Resilience

The nature of regional disparities; spatial polarisation; σ - and β -convergence; club convergence; spatial spillover effects; asymmetric impacts of economic, security, climate and demographic shocks; the concept of territorial resilience; regional adaptation to the digital and green transitions.

Topic 5. Place-Based Regional Policy and Multilevel Governance

Principles of place-based policy; EU Cohesion Policy; smart specialisation; Integrated Territorial Investments; functional areas; regional innovation systems; interaction among central government, local, supranational and private institutions; financing of regional development; monitoring, performance evaluation and counterfactual evaluation of regional programmes.

Topic 6. Spatial Transformation of Ukraine: European Integration, Recovery and Regional Development Scenarios

Territorial consequences of the war; displacement of population and economic activity; changes in the geography of production, investment and logistics; border, frontline, industrial and rural areas; integration of Ukrainian regions into European

transport, production and innovation networks; strategic recovery priorities; scenario modelling of spatial development.

3. Structure of the Academic Discipline

Sections and topics	Number of hours					
	full-time study					
	total	including				
		lect.	sem.	lab.	ind.	ind. study
1	2	3	4	5	6	7
Topic 1. Theoretical Paradigms and Methodology of Spatial Economics Research	14	2	4			8
Topic 2. Spatial Organisation of the Global Economy and International Economic Activity	14	2	4			8
Topic 3. Methods, Data and Digital Tools for Spatial Economic Research	19	3	6			10
Topic 4. Spatial Inequality, Convergence and Territorial Resilience	14	2	4			8
Topic 5. Place-Based Regional Policy and Multilevel Governance	14	2	4			8
Topic 6. Spatial Transformation of Ukraine: European Integration, Recovery and Regional Development Scenarios	15	2	4			9
Total hours	90	13	26			51

4. Seminar Topics

No.	Course topic	Seminar topic	Number of hours
1	Topic 1	Theoretical paradigms of spatial economics: comparative analysis and scope of application	2
2		Designing spatial economic research: levels of analysis, territorial units and research hypotheses	2
3	Topic 2	Agglomerations, clusters and global cities in the spatial structure of the global economy	2
4		International trade, foreign direct investment and global value chains: spatial configuration and transformations	2
5	Topic 3	Sources of spatial data, territorial classifications and geospatial visualisation	2
6		Exploratory spatial data analysis: spatial weights matrices, Moran's I and local spatial clusters	2
7		Specification and interpretation of spatial regression models	2
8	Topic 4	Methodological approaches to assessing regional inequality, convergence and spatial polarisation	2

9		Territorial resilience of regions to global and local shocks	2
10	Topic 5	Place-based regional policy and EU Cohesion Policy instruments	2
11		Smart specialisation, multilevel governance and performance evaluation of regional strategies	2
12	Topic 6	Spatial consequences of the war and recovery priorities for Ukrainian regions	2
13		Scenario modelling of spatial development in the context of doctoral research	2
	Total		26

5. Independent Study Assignments

No.	Topics	Type and content of independent study	Number of hours
			full-time study
1	Topic 1	Assignment 1. Conceptualising the Spatial Dimension of Doctoral Research.	16
	Topic 2	Define the spatial object, level and territorial units of analysis in accordance with the doctoral research topic. Critically examine theoretical approaches in spatial economics and justify their relevance to the study. Formulate the research problem, spatial relationships, key assumptions and hypotheses. Develop a conceptual framework for the spatial economic study.	
2	Topic 3	Assignment 2. Developing the Evidence Base and Methodological Design for Spatial Economic Analysis.	18
	Topic 4	Construct a system of indicators and a dataset for the countries, regions, cities, cross-border territories or other spatial units under study. Justify the time horizon, territorial scale, data sources and analytical methods. Conduct an initial diagnosis of spatial differences using cartographic visualisation and measures of inequality, convergence, spatial concentration or autocorrelation. Specify a spatial model and interpret the results obtained.	
3	Topic 5	Assignment 3. Scholarly Justification of Spatial Development Scenarios and Policy Instruments.	17
	Topic 6	On the basis of the analysis undertaken, identify the key spatial problems, resilience factors and institutional constraints affecting the territorial system under study. Evaluate relevant place-based regional policy instruments and experience of their application in Ukraine, the EU or other countries. Develop spatial development scenarios and identify their preconditions, risks and expected implications. Substantiate recommendations and monitoring indicators in line with the doctoral research topic.	
Total			51

6. Individual Assignments

Not provided for in the curriculum.

Individualisation of learning is ensured through practical assignments and independent study based on the subject matter of each student's doctoral research.

7. Teaching and Learning Methods

The academic discipline "Spatial Economics and Regional Development" combines problem-based lectures, research seminars and personalised independent study. Lectures are delivered as conceptual lectures and discussion-based lectures.

Seminars employ critical review of academic publications, comparative and case analysis, problem-oriented discussion, and the formulation and testing of research hypotheses. Discussion of findings is supported by scholarly debate, peer review and evidence-based revision of the materials presented.

The project-based research method is implemented through the sequential completion of three independent study assignments linked to the student's doctoral research topic.

8. Assessment Methods

Learning outcomes are assessed through continuous and final assessment, taking account of the research-oriented nature of the discipline and the individual subject matter of students' doctoral research.

- continuous assessment is conducted during seminars and on the basis of completed independent study assignments;

- final assessment takes the form of a pass/fail assessment and provides a comprehensive evaluation of theoretical and methodological preparation and the ability to apply course concepts within the student's own research.

9. Marking Scheme

Continuous assessment and independent study						Total	Final assessment	Total
T1	T2	T3	T4	T5	T6	60	40	100
15		20		25				

T1, T2 ... – course topics.

Continuous assessment – 60 marks, comprising:

- Assignment 1 "Conceptualising the Spatial Dimension of Doctoral Research" – 15 marks;

- Assignment 2 "Developing the Evidence Base and Methodological Design for Spatial Economic Analysis" – 20 marks;

– Assignment 3 “Scholarly Justification of Spatial Development Scenarios and Policy Instruments” – 25 marks.

The weighting of the assignments increases progressively because each subsequent assignment builds on earlier results and requires a higher degree of research independence.

Final assessment – 40 marks, comprising:

- individual analytical assignment – 20 marks;
- oral discussion of the results – 20 marks.

The individual analytical assignment requires the examination of a spatial economic problem, interpretation of the data, map, indicators or modelling results provided, and formulation of well-founded conclusions.

The oral discussion assesses understanding of the theoretical concepts covered in the course, the ability to explain spatial relationships, justify methodological choices, identify analytical limitations and defend an independent scholarly position.

Assessment Criteria

Assessment criteria for all assignments (continuous and final assessment) are provided in the relevant sections of the discipline’s online course: <https://moodle.karazin.ua/course/view.php?id=2771>

Use of artificial intelligence technologies. The use of AI in this academic discipline is governed by the V. N. Karazin Kharkiv National University Policy on the Use of Artificial Intelligence and the University Code of Academic Integrity.

When preparing for seminars and completing practical, analytical, project-based and research assignments, students may use the “AI as an assistant” model for searching and organising information, preliminary source screening, explaining complex concepts, structuring work, generating ideas and language editing. Materials produced with AI support are supplementary. The final text, calculations, argumentation, analysis, interpretation of findings, conclusions and decisions must be produced independently by the student. AI-generated responses do not constitute scholarly sources, and the student is responsible for the accuracy of all information, references and results presented.

The use of AI is prohibited during oral questioning, the final assessment and other formal assessment activities. Exceptions are instructor-defined tasks that explicitly require the “AI as a tool” model for data analysis, creating visualisations, comparing outputs from different models or conducting learning experiments. The conditions and permitted scope of such use are communicated before the task begins.

Every written assignment must include a disclosure regarding the use of AI. Where no such technologies have been used, the following statement must be included: “No artificial intelligence technologies were used in completing this work.” Otherwise, the student must specify the service or model used, the date, the nature of the assistance received and the elements of the work processed with its

support. At the instructor's request, the student must provide the prompts used, generated responses, intermediate materials, source data or calculation files.

To verify independent authorship and the development of practical skills, the instructor may conduct additional oral questioning or ask the student to explain the sequence of actions, reproduce a calculation, process data, create a visualisation or demonstrate the use of the relevant digital tool. The results of this verification are taken into account in assessment. Outputs from automated AI-detection tools are used solely as supplementary information.

Properly disclosed use of AI within the permitted limits does not affect the mark awarded. Undisclosed or prohibited use, submission of generated material as the student's own work, or inability to demonstrate independent completion of the substantive part of an assignment constitutes grounds for awarding 0 marks and requiring the assignment to be completed again. Decisions are made on the basis of the full body of verification evidence, in accordance with the assessment criteria and the University's internal regulations.

Grading Scale

Total marks for all learning activities during the semester	Result on the pass/fail scale
90 – 100	Pass
70 – 89	
50 – 69	
0 – 49	Fail

Recognition of Non-Formal Education

Students may receive additional marks for learning outcomes acquired through non-formal education, provided that these outcomes are substantively aligned with the subject matter of the academic discipline and its intended learning outcomes. Eligible activities may include online courses offered by leading educational platforms (Coursera, Prometheus and others), certified training courses, seminars, professional education programmes, and learning activities organised by higher education institutions, international organisations, professional associations and other recognised bodies.

For the recognition of non-formal learning outcomes to be considered, the student must provide documentary evidence of successful completion of the relevant course, training programme or other educational activity. Students are advised to consult the instructor before selecting such an activity in order to establish its alignment with the content of the academic discipline, the volume of learning undertaken and the learning outcomes specified in this working programme.

Each application for recognition of non-formal education outcomes is considered individually. Recognition is carried out in accordance with the Procedure for the Recognition of Learning Outcomes Acquired through Non-Formal Education at V. N. Karazin Kharkiv National University. The decision on recognition is made by the Scientific and Methodological Commission of the Educational and Scientific

Institute “Karazin Institute of International Relations and Travel Business” on the basis of the documentation submitted by the student.

The number of marks awarded for non-formal education is determined with reference to the content, volume and level of the learning outcomes achieved. Irrespective of the number of additional educational activities completed, the total number of marks for continuous assessment, including marks awarded through recognition of non-formal education, may not exceed 60.

10. Recommended Reading

Core Reading:

1. Khanova O. V. Online course “Spatial Economics and Regional Development”. URL: <https://moodle.karazin.ua/course/view.php?id=2771>
2. Capello R. Regional Economics. 2nd ed. Abingdon ; New York : Routledge, 2016. 378 p. DOI: <https://doi.org/10.4324/9781315720074>.
3. Fratesi U. Regional Policy: Theory and Practice. Abingdon ; New York : Routledge, 2024. 414 p. URL: <https://www.routledge.com/Regional-Policy-Theory-and-Practice/Fratesi/p/book/9780815364085> (accessed 17 August 2026).
4. Elhorst J. P. Spatial Econometrics: From Cross-Sectional Data to Spatial Panels. Berlin ; Heidelberg : Springer, 2014. 119 p. DOI: <https://doi.org/10.1007/978-3-642-40340-8>.
5. OECD. OECD Regional Outlook 2023: The Longstanding Geography of Inequalities. Paris : OECD Publishing, 2023. 154 p. DOI: <https://doi.org/10.1787/92cd40a0-en>.
6. OECD. Place-Based Policies for the Future. OECD Regional Development Studies. Paris : OECD Publishing, 2025. 147 p. DOI: <https://doi.org/10.1787/e5ff6716-en>.
7. Grover A., Lall S. V., Maloney W. F. Place, Productivity, and Prosperity: Revisiting Spatially Targeted Policies for Regional Development. Washington, DC : World Bank, 2022. 266 p. URL: <https://openknowledge.worldbank.org/entities/publication/10f32dab-3e71-5d4f-a7d4-47b7c35e0a86>.
8. European Commission. Ninth Report on Economic, Social and Territorial Cohesion. Luxembourg : Publications Office of the European Union, 2024. URL: https://ec.europa.eu/regional_policy/information-sources/cohesion-report_en (accessed 17 August 2026).
9. Territorial Development and Regional Policy. Strategising Regional Development on the Basis of Smart Specialisation: research report / scientific ed. I. Z. Storonińska ; State Institution “M. I. Dolishniy Institute of Regional Research of the National Academy of Sciences of Ukraine”. Lviv : IRD NAS of Ukraine, 2020. 141 p. URL: <https://ird.gov.ua/irdp/p20200035.pdf> (accessed 17 August 2026). [in Ukrainian]
10. Challenges to the Economic Development of Ukrainian Regions during the War and Post-War Recovery: research and analytical report / S. O. Ishchuk et al.

Lviv : State Institution “M. I. Dolishniy Institute of Regional Research of the National Academy of Sciences of Ukraine”, 2023. 31 p. URL: <https://ird.gov.ua/irdp/e20230002.pdf> (accessed 17 August 2026). [in Ukrainian]

Supplementary Reading:

1. Krugman P. Geography and Trade. Cambridge, MA : MIT Press, 1991. 156 p. ISBN 978-0-262-11159-1.
2. Fujita M., Krugman P., Venables A. J. The Spatial Economy: Cities, Regions, and International Trade. Cambridge, MA : MIT Press, 2001. 382 p. URL: <https://mitpress.mit.edu/9780262561471/the-spatial-economy/> (accessed 17 August 2026).
3. Capello R., Nijkamp P., eds. Handbook of Regional Growth and Development Theories. Revised and extended 2nd ed. Cheltenham : Edward Elgar Publishing, 2019. 688 p. URL: <https://www.e-elgar.com/shop/gbp/handbook-of-regional-growth-and-development-theories-9781788970013.html> (accessed 17 August 2026).
4. LeSage J. P., Pace R. K. Introduction to Spatial Econometrics. Boca Raton : CRC Press, 2009. 374 p. DOI: <https://doi.org/10.1201/9781420064254>.
5. Pike A., Rodríguez-Pose A., Tomaney J. Local and Regional Development. 2nd ed. Abingdon ; New York : Routledge, 2017. URL: <https://www.routledge.com/Local-and-Regional-Development/Pike-Rodriguez-Pose-Tomaney/p/book/9781138785724> (accessed 17 August 2026).
6. Rodríguez-Pose A. The revenge of the places that don't matter (and what to do about it). Cambridge Journal of Regions, Economy and Society. 2018. Vol. 11, No. 1. P. 189–209. DOI: <https://doi.org/10.1093/cjres/rsx024>.
7. McCann P., Ortega-Argilés R. Smart specialization, regional growth and applications to European Union cohesion policy. Regional Studies. 2015. Vol. 49, No. 8. P. 1291–1302. DOI: <https://doi.org/10.1080/00343404.2013.799769>.
8. Storper M., Venables A. J. Buzz: face-to-face contact and the urban economy. Journal of Economic Geography. 2004. Vol. 4, No. 4. P. 351–370. DOI: <https://doi.org/10.1093/jnlecg/lbh027>.
9. Martin R., Sunley P. On the notion of regional economic resilience: conceptualization and explanation. Journal of Economic Geography. 2015. Vol. 15, No. 1. P. 1–42. DOI: <https://doi.org/10.1093/jeg/lbu015>.
10. OECD. Strengthening regional policy for resilient places: key issues and policy considerations. OECD Regional Development Papers. 2025. No. 148. 25 p. DOI: <https://doi.org/10.1787/ea24eab5-en>.
11. Territorial Development and Regional Policy. Stimulating Regional Development on the Basis of Smart Specialisation: Barriers and Implementation Mechanisms: research report / scientific ed. I. Z. Storonińska. Lviv : IRD NAS of Ukraine, 2021. 155 p. URL: <https://ird.gov.ua/irdp/p20210034.pdf> (accessed 17 August 2026). [in Ukrainian]

12. Cabinet of Ministers of Ukraine. On Approval of the State Strategy for Regional Development for 2021–2027: Resolution No. 695 of 5 August 2020, as amended. URL: <https://zakon.rada.gov.ua/laws/show/695-2020-%D0%BF> (accessed 17 August 2026). [in Ukrainian]

11. Online Information Resources, Video Lectures and Other Teaching Materials

1. State Statistics Service of Ukraine. Data Bank. URL: <https://stat.gov.ua/uk/explorer> (accessed 17 August 2026).
2. State Statistics Service of Ukraine. Regional Accounts. URL: <https://stat.gov.ua/uk/datasets/rehionalni-rakhunky> (accessed 17 August 2026).
3. Ministry for Restoration, Infrastructure and Transport of Ukraine. Regional Policy. URL: <https://mininfra.gov.ua/diialnist/polityka-rehionalnoho-rozvytku> (accessed 17 August 2026).
4. State Institution “M. I. Dolishnyi Institute of Regional Research of the National Academy of Sciences of Ukraine”: official website. URL: <https://ird.gov.ua> (accessed 17 August 2026).
5. Decentralisation. Territorial Communities of Ukraine. URL: <https://decentralization.gov.ua/newgromada> (accessed 17 August 2026).
6. DREAM. State Digital Ecosystem for Reconstruction Management. URL: <https://dream.gov.ua/ua> (accessed 17 August 2026).
7. Eurostat. Regions and Cities: Database. URL: <https://ec.europa.eu/eurostat/web/regions/database> (accessed 17 August 2026).
8. OECD Data Explorer. URL: <https://data-explorer.oecd.org> (accessed 17 August 2026).
9. OECD Regions and Cities Atlas. URL: <https://www.oecd.org/en/data/tools/oecd-regions-and-cities-atlas.html> (accessed 17 August 2026).
10. World Bank. World Development Indicators. URL: <https://databank.worldbank.org/source/world-development-indicators> (accessed 17 August 2026).
11. United Nations Development Programme. Human Development Reports Data Center. URL: <https://hdr.undp.org/data-center> (accessed 17 August 2026).
12. European Commission. Regional Innovation Scoreboard. URL: https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/regional-innovation-scoreboard_en (accessed 17 August 2026).
13. ESPON Database Portal. URL: <https://database.espon.eu> (accessed 17 August 2026).
14. European Commission. Cohesion Open Data Platform. URL: <https://cohesiondata.ec.europa.eu> (accessed 17 August 2026).
15. European Commission. Smart Specialisation Community of Practice. URL: https://ec.europa.eu/regional_policy/policy/communities-and-networks/s3-community-of-practice_en (accessed 17 August 2026).

16. OECD. Implementation Toolkit for the OECD Recommendation on Regional Development Policy. URL: <https://www.oecd.org/en/about/projects/implementing-the-oecd-recommendation-on-regional-development-policy-toolkit.html> (accessed 17 August 2026).
17. QGIS Project. QGIS Training Manual. URL: https://docs.qgis.org/latest/en/docs/training_manual/index.html (accessed 17 August 2026).
18. Center for Spatial Data Science. GeoDa Workbook: An Introduction to Spatial Data Science. URL: <https://geodacenter.github.io/documentation/> (accessed 17 August 2026).