

Detailed Course Syllabus

ZAGRABIA							
Academic Year			20	25/2026	9	Semester	Summer
Study	ociologija, Povijest, nunikologija,	Special ization / Major in	Povijes Diplom studij F (nastav Komun Interku komun novinar Komun Znanstr	iski sveučilišni dovijest nički) (R), ikologija - lturalna ikacija i estvo (R), ikologija - veno istraživan i odnosi s	3	lear of Study	1-2
I. BASIC COUR			Space: Do	emographic Pa	terns in Eur	one	
Abbreviation			Code	279901		ope	
Status			ECTS			6	
Prerequisites			Leio				
Total Course Wo	orkload						
Teaching Mode		Total Hours	Teachi	ng Mode		Tot	al Hours
Lectures		30	Exercis	es PK			15
Class Time and Place CUC according to published timetable			etable				
II. TEACHING	STAFF						
Course Holder							
Name and Surname	Roko Mišetić						
Academic Degree	PhD			Professional Title	Full Profe	essor	
Contact E-mai				Telephone	+ 385 (0) 1	370 66 91	
Office Hours	According to	published	timetab	e Office	105		

Course Collaborator			
Name and Surname Tomislav Belić			
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Office Hours According to published timetable Office 114			

III. DETAILED COURSE INFORMATION

Teaching Language

English

Course Description

The course examines demographic processes from a spatial perspective, combining theoretical concepts and quantitative methods of population analysis. Special emphasis is placed on spatial demography methodology, including data collection, processing, and visualization, as well as spatial statistics and regression analyses. In addition to fundamental demographic skills, students will acquire practical experience in using GIS tools and spatial analysis software to study demographic patterns in Europe. The course is methodologically oriented and equips students with the skills needed to analyze demographic data in a spatial context, preparing them for research work and the application of acquired knowledge in academic and professional settings.

- 1. Identify and describe fundamental demographic concepts and processes and explain their spatial aspect.
- 2. Select and collect relevant demographic data from various sources in the European context and prepare them for spatial analysis.
- 3. Calculate key demographic indicators and demonstrate proficiency in creating population projections using cohort component method.

Expected Educational Outcomes

- 4. Operate software tools (QGIS, Geoda), create spatial visualizations, and analyze spatial patterns of demographic phenomena.
- 5. Organize research on a selected demographic phenomenon, applying appropriate spatial analysis methods.
- 6. Present research findings in written and visual formats, including maps, graphical representations, and analytical reports.
- 7. Evaluate the results obtained from spatial analyses and critically interpret them in the context of demographic research.
- 8. Apply ethical standards in the research process and academic writing.

Textbooks and Materials

Anselin, L., Syabri, I., & Kho, Y. (2006). *Exploring spatial data with GeoDa*TM: *A workbook*. GeoDa Press.

Elhorst, J. P. (2014). Spatial econometrics. Springer.

Goodchild, M. (1986). Spatial autocorrelation. Geo Books.

Required

Graser, A., & Olson, U. (2021). *QGIS Map Design* (2nd ed.). Locate Press. Rowland, D. T. (2003). *Demographic methods and concepts*. Oxford University Press.

Watkins, S. C. (1991). From provinces into nations: Demographic integration in Western Europe, 1870–1960. Princeton University Press.

Anselin, L. (1988). *Spatial econometrics: Methods and models*. Kluwer Academic Publishers.

Campisi, N., Kulu, H., Mikolai, J., Klüsener, S., & Myrskylä, M. (2020). Spatial variation in fertility across Europe: Patterns and determinants. *Population, Space and Place*, 26(e2308).

Supplementary

Fox, J., Klüsener, S., & Myrskylä, M. (2019). Is a positive relationship between fertility and economic development emerging at the sub-national regional level? Theoretical considerations and evidence from Europe. *European Journal of Population*, 35(4), 487–518.

Klüsener, S., et al. (2013). Spatial aspects of the rise of nonmarital fertility across Europe since 1960: The role of states and regions in shaping patterns of change. *European Journal of Population*, 29(2), 137–165.

Matthews, S. A., & Parker, D. M. (2013). Progress in spatial demography. *Demographic Research*, 28, 271–312.

Newbold, K. B. (2021). *Population geography*. Rowman & Littlefield. Tobler, W. R. (1970). A computer movie simulating urban growth in the Detroit region. *Economic Geography*, 46(sup1), 234–240.

Voss, P. R. (2007). Demography as a spatial social science. *Population Research and Policy Review*, 26(5), 457–476.

Examination and Grading			
To Be	Exclusively Continuous	Included in	
Passed	Assessment	Average Grade	
Prerequisites to	1. Class Attendance: Mandatory 70% attendance is required.		
Obtain	2. Research Paper (written)		
Signature and	A minimum of 35% of the grade should be acquired through regular		
Take Final Exam	course activities: research paper and one midterm exam.		
	Grading Scale:		
	Failure (1) - 0 do 49.9%		
	Satisfactory (2) – 50 do 64.9%		
	Good (3) - 65 do 79.9%		
	Very Good (4) - 80 do 89.9%		
Examination	Excellent (5) - 90 do 100%		
Manner			
	Final Grade Calculation:		
	1) In-class Activities – 70%		
	1a Research Paper - 40%		
	1b Midterm Exam - 30%		
	2) Final Exam – 30%		
	Course activities:		
Grading Manner	Research Paper (written), Midterm	Exam (practical);	
	Final Exam (oral)		

Detailed Overview of Grading within ECTS

ACTIVITY TYPE	ECTS Student Workload Coefficient	GRADE PERCENTAGE (%)
Class Attendance	1.5	0
Research Paper	1.8	40
Midterm Exam	1.35	30
Total in Class	4.65	70
Final Exam	1.35	30
TOTAL ECTS (Classes + Final Exam)	6	100

Midterm Exam Dates	Midterm Exam: Final week of the semester
Final Exam Dates	According to published timetable

IV. WEEKLY CLASS SCHEDULE

Week	Topic
1.	Introduction to Demography, Spatial Demography, and Population Demography.
2.	Sources of population data.
3.	Population dynamics. Population composition.
4.	Mortality.
5.	Life tables.
6.	Fertility.
7.	Population projections and estimates.
8.	Methodological approaches in spatial demography.
9.	Data Visualization in QGIS.
10.	Linking spatial and non-spatial data. Data harmonization and standardization.
11.	Spatial analysis. Spatial statistics.
12.	Geostatistical methods in population research.
13.	Spatial Patterns of Fertility in Europe.
14.	Spatial Regression Analysis.
15.	Midterm exam.

Exercises

Week	Topic
1.	Student task allocation.
2.	Collection and processing of demographic data.
3.	Population change. Construction of population pyramids.
4.	Mortality indicators. Standardization.
5.	Construction of life tables.
6.	Measures of reproduction. Period and cohort fertility.
7.	Calculating cohort component projections.
8.	Introduction to QGIS. Basics of spatial data handling.
9.	Thematic maps.
10.	Data preparation for GIS. Other types of visualizations of demographic data. Isomorphic maps.
11.	Introduction to Geoda. Exploratory Spatial Data Analysis.
12.	Spatial autocorrelation indicators (Geoda and QGIS).
13.	Spatial patterns of demographic indicators (Geoda and QGIS).
14.	Spatial regression models (Geoda and QGIS). Interpreting spatial regression results.
15.	Midterm exam.