Detailed Course Syllabus

Academic year: 2026/2027	**Semester:** Summer semester
Year of study: 1	**Study Program:** Sociologija (dvopredmetni) (R) (elective) (Diplomski) Komunikologija - Interkulturalna komunikacija i novinarstvo (R) (elective) (Diplomski) Povijest (R) (elective) (Diplomski) Sestrinstvo (I) (elective) (Diplomski) Sestrinstvo (R) (elective) (Diplomski)

I. BASIC COURSE INFORMATION

Name: Population and Space: Demographic Patterns in Europe

Abbreviation: IZBD276

ECTS: 6	**Code:** 279901

Prerequisites: No

Total Course Workload

Teaching Mode	**Total Hours**
Lecture	30
Practicum exercise	15

Class Time and Place: HKS - according to the published schedule

II. TEACHING STAFF

Course Holder

Office Hours: According to the published schedule

Course Assistant

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.

Educational Outcomes	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. 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	
Required	Anselin, L., Syabri, I., & Kho, Y. (2006). *Exploring spatial data with GeoDa™: A workbook*. GeoDa Press. Elhorst, J. P. (2014). *Spatial econometrics*. Springer. Goodchild, M. (1986). *Spatial autocorrelation*. Geo Books. 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.
Supplementary	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). 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 Passed DA	**Exclusively Continuous Assessment** NE	**Included in Average Grade** DA

Prerequisites to Obtain Signature and Take Final Exam	1. Class Attendance: Mandatory 70% attendance is required. 2. Research Paper (written) A minimum of 35% of the grade should be acquired through regular course activities: research paper and one midterm exam.

Examination Manner	Course activities: Research Paper (written), Midterm Exam (practical); Final Exam (oral)
Grading Manner	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% Excellent (5) – 90 do 100% Final Grade Calculation: 1) In-class Activities – 70% 1a Research Paper – 40% 1b Midterm Exam – 30% 2) Final Exam – 30%
Detailed Overview of Grading within ECTS	

IV. WEEKLY CLASS SCHEDULE

[Predavanja]

#	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.

[Vježbe u praktikumu]

#	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.