

## **COURSE OF STUDY Statistical Sciences**

## **ACADEMIC YEAR** *2024 2025*

## ACADEMIC SUBJECT Geographical analysis of spatial data

| General information         |   |  |
|-----------------------------|---|--|
| Year of the course          | Second                                    |  |
| Academic calendar (starting | 15 september2024 -20 december2024         |  |
| and ending date)            |   |  |
| Credits (CFU/ETCS):         | 6   |  |
| SSD                         | M-GGR/02 Economic-and Political Geography |  |
| Language                    | Italian                                   |  |
| Mode of attendance          | Attendance not mandatory but recommended  |  |

| Professor/ Lecturer            |   |
|--------------------------------|---|
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| Department and address         | Department of Economics and Finance-Largo Abbazia di Santa Scolastica,        |
|                                | Bari  |
| Virtual room                   | TEAMS codice <b>alwcnjl</b>   |
| Office Hours (and modalities:  | The reception will take placein presence on Mondays and Tuesdays from 9 to 11 |
| e.g., by appointment, on line, | a.m. at the Department of Economics and Finance and on line by appointment    |
| etc.)                          | via emal  |

| Work schedule |          |   |  |
|---------------|----------|---|--|
| Hours         |          |   |  |
| Total         | Lectures | Hands-on (laboratory, workshops, working groups, seminars, field trips) | Out-of-class study<br>hours/ Self-study<br>hours |
| 150           | 35       | 7   | 108  |
| CFU/ETCS      |          |   |  |
| 6             | 5        | 1   |  |

| Learning Objectives  | Provide the theoretical knowledge, operational skills and practical skills |
|----------------------|--|
|                      | required to detect, analyze and process data in order to describe and      |
|                      | interpret the underlying geo-spatial phenomena. The graduate in            |
|                      | Statistical Sciences acquires a solid formal and methodological            |
|                      | preparation based on statistics, mathematics, probability, and an equally  |
|                      | solid preparation in the disciplines applied economic statistics,          |
|                      | demography, social statistics, financial mathematics essential to address  |
|                      | the study of phenomena affecting the population and society.               |
| Course prerequisites | No prior knowledge is required   |
|                      |  |
| Teaching strategie   | - Frontal lessons carried out with the support of slides in pptx,          |
|                      | cartographic material, audiovisual aids updated                            |
|                      | - Reading and interpretation of audiovisual, graphic and cartographic      |
|                      | material guided and coordinated by the teacher                             |
|                      | - Individual and/or group work guided and coordinated by the teacher       |



|                               | - Seminars held by industry experts   |
|-------------------------------|---|
|                               | - Preparation of studies and research                                       |
|                               | - Case analysis and simulations   |
|                               | - Use of telematics supports  |
| Expected learning outcomes in | Know and know how to apply, critically, keys of interpretation and          |
| terms of                      | interpretation of the territory to the different spatial scales in function |
|                               | of spatial data (quantitative and qualitative); to be able to communicate   |
|                               | effectively the meaning of spatial data and to use them to explain the      |
|                               | spatial evolution of phenomena  |
| DD1 Knowledge and             | • Knowledge and analytical ability to understand methods, theories,         |
| understanding on:             | models and key concepts of geographic science aimed at                      |
|                               | understanding territorial dynamics.   |
|                               | • Knowledge and ability to use conceptual and methodological tools          |
|                               | for the examination of territories at all levels of intervention, from      |
|                               | local to global through the selection and use of qualitative and            |
|                               | quantitative.   |
| DD2 Applying knowledge and    | • Ability to apply the theoretical and methodological perspectives of       |
| understanding on:             | political economic geography in order to be able to read, interpret         |
|                               | and clearly trasmitte the spatial dynamics and the territorial              |
|                               | attractiveness  |
|                               | • Ability to use in an appropriate way methods and tools for data           |
|                               | analysis to read the spatial evolution of the phenomena of the              |
|                               | contemporary world  |
| DD3-5 Soft skills             | Making informed judgments and choices                                       |
|                               | Know how to collect and analyze, with traditional and IT tools, data and    |
|                               | geographic information of quantitative and qualitative type, interpreting   |
|                               | them critically; be able to assess in full autonomy of judgment the         |
|                               | problems connected with the territorial organization at different spatial   |
|                               | scales, clearly motivating the choices and approaches related to the        |
|                               | methodologies of geographical science and of statistical science            |
|                               |   |
|                               | • Communicating knowledge and understanding                                 |
|                               | Ability to communicate and argue, whit a personal style and use             |
|                               | appropriate terminology, the meaning of spatial data; Abillity to argue,    |
|                               | with a personal style and using appropriate terminology, specific to the    |
|                               | geographical area, the content learned during the course; ability to        |
|                               | interact with colleagues and/or experts on global and local perspectives    |
|                               | to generate proposals for territorial analysis                              |
|                               | Canacities to continue learning   |
|                               | At the end of the course, the student will have acquired the necessary      |
|                               | competence and skills to search independently for geographical              |
|                               | information from different sources (bibliographic maps. graphics.           |
|                               | photographs) to deepen facts and phenomena that require a                   |
|                               | geographical interpretation and will have gained knowledge to apply         |
|                               | territorial analysis tools aimed at interdisciplinary dialogue              |



| Syllabus                    |  |
|-----------------------------|--|
| Content knowledge           | The concept of territory and territorialization; The concept of territorial attractiveness and its declinations; the relationship between geography and statistics; Research, collection, organization, analysis and coding of data; Representation, processing and interpretation of qualitative quantitative data. Analysis of territorial attractiveness as a function of quantitative and qualitative geo-territorial data |
| Texts and readings          | ROMAGNOLI L., Metodi statistici elementari per la ricerca geografica,  |
|                             | Bologna, Patron 2002   |
|                             | VALDEMARIN S., LUCIA M.G., Geografia dell'attrattività territoriale,   |
|                             | Milano-Torino, Pearson, 2022.  |
| Notes, additional materials | The recommended texts allow to deepen the main themes related to the   |
|                             | course and constitute the primary reference.   |
| Repository                  | During the lessons will be made available teaching material aimed at   |
|                             | applying geographical methodologies aimed at developing the ability of   |
|                             | students to apply the acquired knowledge.  |

| According                       |   |
|---------------------------------|---|
| Assessment                      |   |
| Assessment methods              | During the course there will be intermediate practical tests aimed at             |
|                                 | evaluating the knowledge and ability to understand applied, the                   |
|                                 | autonomy of judgment, communication skills and the ability to learn.              |
|                                 | These tests can contribute to the final assessment that will be carried           |
|                                 | out through an oral exam related to all the topics covered.                       |
| Assessment criteria             | The following criteria shall be used for the assessment of learning:              |
|                                 | Knowledge and understanding   |
|                                 | Ability to present, argue and synthesize, in a critical way and with a clear      |
|                                 | and appropriate language, the contents and the acquired disciplinary              |
|                                 | knowledge   |
|                                 | Applying knowledge and understanding  |
|                                 | Ability to identify territorial areas in which to apply geographical              |
|                                 | content and knowledge   |
|                                 | Autonomy of judament  |
|                                 | Ability to autonomous analysis and ability to critically rework                   |
|                                 | qualitative-quantitative data and content with respect to economic-               |
|                                 | territorial issues  |
|                                 | Communication skills  |
|                                 | Communication skins Ability to present content and ideas in clear and conversions |
|                                 | Ability to present content and ideas in clear and appropriate scientific          |
|                                 | language  |
|                                 | Capacities to continue learning   |
|                                 | Demonstrate commitment to deepening independently of topics and                   |
|                                 | disciplinary content; retrieve independently bibliographical sources              |
|                                 | adequate for cognitive and professional updating                                  |
| Final exam and grading criteria | The final grade is awarded out of thirty. The exam is passed when the             |
|                                 | grade is equal to greater than 18   |
| Further information             |   |
|                                 |   |