Program Description
The Doctoral Program in Urban Studies and Regional Science is a four-years scientific program leading to the degree of Doctor of Philosophy (Ph.D.), the highest degree awarded by universities in the Italian education system. The goal of the program is to train doctors capable of doing independent and original research that contributes to the wellbeing of people and the society, and that enhance our understanding of relevant problems in the fields of urban studies and regional science. The program is hosted by the Social Sciences Unit of the Gran Sasso Science Institute (GSSI), a school of advanced studies and a center for research in the areas of Social Sciences, Physics, Mathematics and Computer Science, located in L'Aquila, the capital city of the Abruzzo Region in Central Italy.

Structure of the Academic Calendar
The Doctoral Program in Urban Studies and Regional Science is structured around three main activities:

1. **disciplinary courses** (with compulsory final exam);
2. **methodology courses**;
3. **seminars**.

Disciplinary courses are related to the main disciplinary fields of the doctoral program; they aim at providing all the students, regardless of their background, with a basic knowledge in these fields. Methodology courses refers to fundamental qualitative and quantitative research methods. Seminars concern specific advanced research topics and projects and are delivered by external experts and scholars.

Some of these activities are compulsory, some others are optional (see following sections). Proof of attendance can be required (e.g. by signing the attendance sheet circulated in class). For lectures, seminars and training session, a syllabus will be circulated on the first day of class. At-home assignments will be given at the discretion of the lecturers. Students will have access to the online academic calendar, where the schedule of all academic activities will be posted. New activities could be added during the year. Hence students are required to check the calendar periodically.

During the academic year, PhD candidates are required to stay at the GSSI from Monday to Friday, with the exception of Italian holidays and academic breaks.

The Academic Calendar for 2019/2020 is as follows:
1. **First term**: November 4th - March 13th
2. **Second term**: March 16th – July 17th
3. **Third term**: July 20th – November 2nd

There will be three breaks:
1. Christmas break: December 21st to January 6th (included)
2. Easter break: April 8th to 15th
3. Summer break: August 1st – September 6th (included)

Major Italian holidays will be observed (April 25th, May 1st, June 2nd, November 1st, December 8th)

**Disciplinary courses**

**Regional Science**
The Regional Science coursework provides students with a basic understanding of the main theories and facts about the social and economic organization of regions, regional growth dynamics and the rationale behind regional development policies. The main questions addressed by the teaching core on Regional
Science are the determinants of the location decisions of firms and industries; the drivers of inter-regional migration and the consequences of factors’ mobility for regional growth and regional inequality. The course is structured around three main units:
- The location and agglomeration of people and economic activities;
- The functioning and consequences of interregional migration;
- Theories of regional growth and development, and regional policy options.
For the academic year 2019/20, the course will be taught by Professor Alessandra Faggian (course convenor). **The course is compulsory.**

**Economic Geography**
Why do some territories and regions perform better than others in terms of economic growth and development? How can local and regional development policies foster economic activity and socio-economic development in lagging areas? The Economic Geography coursework will provide students with an in-depth understanding of the determinants of spatial economic disparities and of the evolution of the attendant geographic perspective, examining the main theories and approaches to local and regional economic development. The final part of the course will focus on the regional development policy of the European Union, illustrating its rationale and discussing its evaluation and results. The last lesson will be devoted to a debate exercise: students will be divided into two groups defending contrasting policy positions on a pre-established topic. The course will be taught by the course convenor, Dr. Giulia Urso, with the help, when necessary, of other faculty members. **The course is compulsory.**

**Critical approaches to the City**
The “Critical approaches to the City” course aims at introducing students to key theoretical foundations and to the empirical practice of qualitative research approaches to the study of the city. While discussing the tradition and prevailing contemporary developments in urban theory, ranging from urban sociology to urban geography, the course will discuss a selection of relevant research topics such as housing, neighborhoods, urban movements. Using a critical lens, lecturers will address each research topic and the surrounding scientific debates. The course will be taught by the course coordinator, Dr. Margherita Grazioli, with lectures by Dr. Audrey Lumley-Sapanski. The course is structured in a series of reading seminars. Students will be invited to read and present assigned readings that will be discussed collectively in class. **The course is compulsory.**

**Urban Planning**
The teaching core of urban planning explores regulatory, institutional, social and ethical aspects of spatial planning. The course covers the main aspects of both planning theory and practice. In particular, the course is devoted to the investigation of the complex nexus between technical knowledge and political knowledge in planning, and of the connection among spatial regulation, power and social regulation lato sensu. Several historical and contemporary case-studies are explored at this aim. The course will be taught by the course convenor, Dr. Francesco Chiodelli, with lectures by Dr. Sara Caramaschi. Students will be invited to read and present assigned readings that will be discussed collectively in class. **The course is compulsory.**

**Contemporary debates in Urban Studies and Regional Science**
This course aims at familiarizing students with the main topical issues in current debates using material not just from textbooks but also from media and other sources. All the faculty will contribute to this course with the course coordinator Dr. Marco Modica. **The course is compulsory.**
Methodological courses

**Introductory Quantitative Research Methods**

Introductory Quantitative Research Methods is a course mainly aimed at students with no prior knowledge of statistics. The course provides basic statistical concepts and methods, emphasizing the principles of data collection and analysis rather than theory. Practical exercises are an integral component of the course and are intended at getting the students familiar with the use of a popular statistical package (Stata). Topics to be addressed in the introductory quantitative methods course include:

- Graphical and numerical summaries to describe the distribution of a variable and the relationship between two variables;
- Data collection and management;
- Concepts of probability and probability distribution;
- Statistical inference and hypotheses testing;
- The univariate and multivariate linear regression models.

The course will be taught by the course convenors Dr. Masood Gheasi and Dr. Daniele Mantegazzi. **The course is compulsory.**

**Introductory Qualitative Research Methods**

Introductory Qualitative Research Methods introduces students to the basic theoretical and practical elements of qualitative research applied to Social Sciences. The course has a strong focus on applied methodologies, and touches the following topics: theoretical orientations and traditions in qualitative research; qualitative research applications; qualitative research design; the nature of qualitative data collection: sampling strategies, fieldwork strategies, participant observation, interviews, focus groups; surveys: how to construct questionnaires and qualitatively assess quantitative data.

The course will be taught by the course convenors Dr. Giuseppe Carta and Dr. Audrey Lumley Sapanski, and will include several class exercises. At the end of the course, students are invited to present an assigned research project that will be discussed collectively in class. **The course is compulsory.**

**Research Papers: From Design to Publication**

This course presents the academic publishing journey from structuring the paper, designing a research question, and core structural components (methodological, empirical, theoretical), to the use of databases for bibliographic searches and the selection of “the right” journal for submission, to academic paper drafting and, finally, to addressing journal editors and referees. Focus will be on the distinctive character of a research paper, highlighting the differences between academic research and other typologies like policy reports and monographies. Students will receive an introduction into writing for an international journal, focusing on standards and requirements. Secondly, the course will explore how to utilize tools to build a robust and well-focused literature review, suggesting strategies to find useful and relevant references. Thirdly, the course will explain the academic journal process, including an overview of the complete double-blinded peer review process. Academic ethics, as well as basic copyright issues to be considered when submitting papers, will be introduced. The course will be taught by the course convenor Prof. Alessandra Faggian with lectures by Dr. Giuseppe Carta and Dr. Margherita Grazioli. **The course is compulsory.**

**Principles of Public Policy & Policy Evaluation**

This course introduces the key approaches to the analysis of public policies and seeks to encourage a critical and comparative approach to the study of trends in contemporary public policy. Specifically, the students will consider how and why public policies emerge, the role of citizens and organized interests in the formulation of public policy, why things go wrong in public policy, the challenges that face policymakers in handling scientific evidence and regulating societal and economic risks. The course will encompass topics such as agenda-setting, public opinion, science, risk regulation and trends in public management.
The main methodologies employed to evaluate policy programs will also be introduced, including cost/benefit analysis, case-studies comparison, meta-studies, participatory action research. The aim of the course is to teach the students how to design, implement a variety of impact evaluation frameworks that combine multiple evaluation methodologies in a coherent way. It will be organised around the following series of overarching questions:
- What is a public policy?
- Where do policies come from?
- How do we evaluate public policies?

The course will be taught by the course convenor Dr. Alessandro Crociata. The course is compulsory.

Spatial Econometrics
Spatial econometrics deals with methods to model spatial data considering spatial interaction (spillover) effects and spatial heterogeneity. The course aims at introducing the basic concepts and techniques of spatial statistics and econometrics, along with the main issues posed by the statistical treatment of geo-referenced data and by the construction, estimation and interpretation of spatial econometric models. Students will gain an up-to-date and accessible overview of the relevant theory as well as exposure to empirical applications of spatial econometric models in economics.

The course will include 10 contact hours taught by the course convener, Prof. Roberto Basile (University of L’Aquila). The course is optional.

Internet and Societies
The intensive course Internet and Societies introduces students to the theoretical and practical elements of qualitative research applied to online environments, in a mixed methods perspective. The course touches the following topics: applications of qualitative research methodologies online; web-based ethnography: understanding social interactions in contemporary digital communications contexts; internet cultures and inequalities; networked ideas and economics. The course will include 10 contact hours, taught by the course convener Dr. Maria Giulia Pezzi (previously postdoc at the GSSI and currently project manager at Ventiseidieci), along with Dr. Daniele Mantegazzi and will include class exercises. The course is optional.

Advanced Quantitative Research Methods
This course will provide students with an overview of the different disciplinary traditions and theoretical underpinnings of quantitative research. It will train students in a range of core methods relevant to the social sciences subdisciplines, including an appraisal of their respective strengths and weaknesses, with a focus on the challenges of data analysis. Students would be able to grasp the relevant knowledge and theory, and develop research skills as detailed below:
- Knowledge and Theory. Capability to: understand the assumptions behind statistical techniques; select and apply appropriate statistical techniques for testing hypotheses; confront with a range of statistical techniques and choose and implement appropriate statistical techniques for research; interpret statistical outputs and think through the meaning and implications of statistical findings.
- Research Skills. Capability to: carry out statistical analyses; use STATA to record and program statistical analysis; manage and analyze large cross-sectional survey datasets; generate, interpret and present statistics and charts to describe the distributional characteristics of variables; explore the relationships between two or more variables; write up statistical findings appropriately.

The course will include 10 contact hours taught by the course convenors Dr. Masood Gheasi and Dr. Daniele Mantegazzi. The course is optional.

Visualizing Data: Theory and Praxis
The course will enable students to develop visual communication skills in the field of urban studies and regional science. The focus is twofold: on the one hand, the course will provide an overview on the variety of tools and techniques adopted over time to convey information by means of visuals, with a more detailed description of selected examples of charts, timelines, maps and the design process behind
them; on the other hand, students will familiarise themselves with the essential image making/manipulation software used in the creation of information graphics through a sound introduction to the capabilities of Adobe Photoshop and Adobe Illustrator, followed by a series of tutorials. The course will include 10 contact hours taught by the course convenor Dr. Sara Caramaschi. **The course is optional.**

**Methods of Geographical Analysis**

The Methods of Geographical Analysis course is aimed at providing students with an introduction to the analytical methods and tools for handling spatial data. The emphasis of this course is on the choice and application of appropriate methods for the analysis of spatial phenomena of relevance in the fields of applied Regional Science and Urban Studies. The theory behind the different methods will be presented and discussed. The course has also a strong practical orientation, providing the students with the basic knowledge for handling geographic information systems (GIS) and other relevant tools in contemporary geographical analysis. The students are expected to become familiar with these methods, so that they can develop an understanding of their potential and of its limitations. The course will include 10 contact hours taught by the course convenor Professor Rachel Franklin, Newcastle University, US along with Dr. Sara Caramaschi. **The course is optional.**

**Tourism and Culture**

Tourism and Cultural Economics will provide students with an in-depth understanding of the more recent debates related to tourism and cultural themes. The final aim is to analyze and critically examine which are the most important characteristics, issues and policy implications of these two related sectors. The course is structured in two main parts: The first part of the course will focus on tourism and its impact at national, regional and local level by taking into account the complexity of the phenomenon. Then, it will be analyzed the tourism as driver of economic growth in peripheral regions and inner areas; positive and negative externalities in tourism destinations; tourism taxation and tourism policies at European and national level. Finally, a little part on a recent phenomenon called over-tourism will be illustrated as well as the most relevant case studies on this topic will be discussed.

The second part will provide the theoretical basis of cultural economics. The rational behaing the consumption and the production of cultural goods. The multidimensional aspects of culture will be considered to understand the role of culture within the urban development trajectories.

The course will include 10 contact hours taught by the course conveners, Dr. Maria Giovanna Brandano and Dr. Alessandro Crociata. **The course is optional.**

**Complex Network Analysis**

Networks are everywhere, from the internet and social networks to financial markets and biological systems. During recent years network science has emerged as a holistic approach used to analyze the structure and evolution of complex systems in social and economic sciences. The first part of the course aims to explain the basics of graph theory and provides an introduction to the modern field of network science to an interdisciplinary audience. In the second part of the course, students learn the conceptual tools and a wide array of statistical metrics used to characterize the structure and dynamics of networks in the context of economic complexity science. Extensive online resources, including software and packages for network analysis, make this a multifaceted course for anyone with an interest in network science. The course will include 10 contact hours taught by the course convenor Dr. Gloria Cicerone. **The course is optional.**

**Natural Disasters**

Natural disasters represent both a shock and a challenge for the people involved. Indeed, recent literature highlights that, given that the socio-economic system may change its structure adapting to the new scenario, natural disasters are also opportunities. Furthermore, in the light of the ecological literature, the socio-economic system has to be retained is integral to nature – e.g. human activities are spontaneously
influenced by the course of nature. Accordingly, the socio-economic disturbances generated by natural disasters need to be taken carefully into account. To this purpose, several aspects need to be considered in evaluating the impact of natural disaster on the economy, such as socio-economic exposure, vulnerability, resilience, and risk.

The aim of this course is to provide students with the basis for the identification of any disaster cycle, namely all the phases that take into account the interaction between natural events and socio-economic system: a pre-event situation (e.g. preserving the status quo or preparing to the natural event), followed by the actual occurrence of the natural event, and concluded by the post-event situation that is the emergency and recovery phase. The course will include 10 contact hours taught by the course convenor, Dr. Marco Modica. The course is optional.

**Economics of Innovation**

The course will set out from the pervasive relevance that innovation has been ascertained to have at the micro, meso (e.g. sectoral and regional) and macroeconomic levels of analysis. Students will be then introduced to the main definitions, concepts and theoretical models through which the economic drivers and effects of innovation processes are investigated at different levels of analysis. The course will then move to the measurement of innovation, presenting and discussing the most adopted “proxies” of its occurrence and the main available datasets for their construction and application. A special focus will be placed on both the theoretical approaches and empirical methodologies through which the localization of innovation across places, that is the geography of innovation, can be investigated. The course will include 10 contact hours taught by the course convenor Professor Sandro Montresor. The course is optional.
Seminars
Lectures will be complemented with a series of seminars, where leading international experts from a variety of disciplinary fields will present results from their research and share their knowledge with participants. The seminars are conceived of as an opportunity to discuss key topics in contemporary regional sciences and urban studies. For a complete list of seminars and visiting lecturers, please refer to the GSSI website.

Faculty advisors
It is not only allowed, but also recommended, that each doctoral student be advised by two co-advisors (one internal and one external). The internal advisor must be chosen among the members of the Teaching Committee (http://www.gssi.infn.it/people/professors/lectures-social-science-gssicities). External advisors must be approved by the Doctoral Program Coordinator. The internal supervisor needs to be selected, at the latest, by the beginning of the second year (November 2020) while the external supervisor should be proposed and agreed with the internal supervisor soon after.

Rules for progression

First year requirements

In the first year the students are required to pass **ALL the exams in the compulsory courses**. There will be one possibility of re-sitting the exam for students who failed the first attempt. Failure in the re-sit will mean automatic exclusion from continuing in the program. In addition to formal assignments throughout the PhD program, students must be in contact with their supervisor and the PhD coordinator on a regular basis and inform them on their study path and research progress.

At the end of the first year (November 2020) the students will sit a Doctoral Candidacy which consists of a written and an oral part. The written portion of the Candidacy Examination consists in a draft of their doctoral proposal (guidelines will be circulated in due time). The oral portion is a 30 minute oral presentation that may focus on the dissertation proposal, but may cover any aspect of the student’s doctoral program. Successful completion of the Candidacy Examination requires a unanimous vote of the Examination Committee and admits the student to the second doctoral year.

Second year: requirements and doctoral candidacy examination

A report on the activities carried out during the PhD program and a final draft of at least one paper (or one chapter) of the PhD thesis (see requirement for the PhD dissertation below) must be delivered by the end of the second year. A meeting with all the faculty members will be organized half way through the year (around May) to check and discuss the progress of each student’s research. Students will be asked to prepare a 20-minutes presentation about the current stage of their research. Detailed information will be provided in due time. The Doctoral Candidacy Examination to be admitted to the third year will follow the same rules of the examination for the admission to the second year.

Third year: requirements and doctoral candidacy examination

Each student is expected to have a final version of two papers and a draft of the third paper (or 3-4 chapters) by the end of their third year. A report on the activities carried out during the third year of the PhD program must be delivered as well. The Doctoral Candidacy Examination for the admission to the fourth year will follow the same rules of the examination for the admission to the second and third years. A meeting with all the faculty members will be organized half way through the year (around May) to check and discuss the progress of each student’s research. Students will be asked to prepare a 20-minutes presentation about the current stage of their research. Detailed information will be provided in due time. In order to be admitted to the final exam, each student must prove s/he attended at least 20 academic or departmental seminars in total during the second, third and fourth year.
Fourth year. Final exam: thesis defense
The final exam consists of the thesis defense in front of a Committee composed of three professors (one member of the teaching committee and two external members) who will decide about the student’s graduation. In order to proceed to the thesis defense, the candidate has to submit the whole dissertation manuscript for internal and external examination prior to defense. In particular, the Ph.D. candidate has to:
- Submit a complete draft of the dissertation to two external referees during the first days of September, 2023. By the end of October, 2023, the assigned referees will provide their evaluations of the thesis. The Doctorate Board, once received an evaluation by the referees and a report by the student’s supervisor, will decide about the admission to the final thesis submission.
- To be admitted to the defense, students will have three weeks to revise the thesis according to the reviewers' comments.
- Students will have to submit the Final Thesis to the Examination Committee 1 month before the expected graduation date, together with a report on the activities carried out during the PhD program. Information on timing of the defense sessions will be circulated when officially scheduled.
Requirements of the Ph.D. Thesis

Students can choose between two different thesis formats: Papers Collection and Monograph.

Papers Collection

Students can choose to structure a collection of three papers focused on a topic whose theoretical, methodological and empirical dimensions must be addressed. The common thread across the papers has to be explained and discussed in an Introduction to the collection. Accordingly, the dissertation manuscript is composed of three distinct papers and one introduction. A concluding chapter may also be included at the request of the supervisor, external reviewers and/or the student’s own will. Co-authorship is admitted for one or two papers provided that the individual contribution by the PhD candidate is significant and fully acknowledged in the paper. That is, co-authorship is allowed up to two papers out of three only if the PhD candidate is evidently the principle author of the project.

Each paper has to be conceived as an article that meets international publication standards, that is: it is around 8,000 to 10,000 words and should include title, abstract, up to six keywords, introduction, literature review, methodology, findings, discussion and conclusion, and reference list (including only in-text citations). Appendices for reporting e.g. photographic materials, tables, data elaborations can be included, out of the word count. The introduction should not exceed 7,000 words. The collection can be concluded with a full bibliography, including all the references used for the thesis production, even if not cited within the texts. A template for the Paper Collection formatting will be circulated.

Monograph

A Monograph consists usually of 5 chapters including an introduction, literature review, methodology, findings/discussion of results and conclusion. It opens with an abstract of about 1,000 words, followed by up to six-eight keywords. The length of the monograph should be around 50,000 to 80,000 words. Appendices for reporting e.g. photographic materials, tables, data elaborations can be included, out of the word count. A template for the Monograph formatting will be circulated.

Research ethics and plagiarism

The GSSI is committed to research ethics. Any form of plagiarism is not accepted. The PhD thesis will be verified with antiplagiarism systems, and supervisors and lecturers will carry out control over papers and essays. Sanctions will be defined for rules infringements and exclusion from the PhD program may be decided.

International mobility

Study and research abroad are encouraged by the GSSI and all students are invited to discuss this opportunity with their supervisors. Once agreed with the supervisors, the mobility period has to be approved by the Coordinator of the PhD program and the Area Director.

At least two months before departure, the student has to formally communicate the mobility project by email to the Area Director, the PhD Coordinator and the Administration Office to request approval, by providing complete information on destination (University, Department), visiting duration, reference person at the host institution (including contact details) and a brief summary of the research agenda. The supervisor, previously informed, has to be included in the communication. During the period abroad, the yearly amount for the incoming cohort remains € 16,159,91 gross and an additional 50% on a monthly basis may be awarded, if the visiting period is previously approved by the GSSI. Overall, the research period abroad can last from 3 to 9 months.

Research Budget

All doctoral students will be awarded an annual research budget (about the practicalities and a detailed list of allowed expenses, please be in touch with the Administration Office):
- first year doctoral students: €1,500 to be used for education only, e.g. summer schools;
- second year doctoral students: €2,000 (research missions, conference/workshop participation, English proofreading, etc.);
- third year doctoral students: €2,000 (research missions, conference/workshop participation, English proofreading, etc.).
- fourth year doctoral students: €2,000 (research missions, conference/workshop participation, English proofreading, etc.).

Before spending the research budget, students have to inform their supervisor/s and, with their agreement, they have to follow the GSSI administrative procedure, to request formal approval by the Director of the Area (alessandra.faggian@gssi.it).

**The GSSI website and communication**

Students are required to provide all information needed for their personal page on the GSSI website and to update their profiles regularly (updates on e.g. conference participation and published papers). Every three months, each student has to review his/her webpage and send any request for updates to Sara Caramaschi (sara.caramaschi@gssi.it).