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1. Synopsis of the Program

The Doctoral Program in “Regional Science and Economic Geography” 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 enhances our understanding of relevant problems in the fields of regional science and economic geography.

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.

2. Coordinator, Teaching Committee and Staff

From the academic year 2020-2021, the Doctoral Program is coordinated by Sandro Montresor (sandro.montresor@gssi.it) with the assistance of Chiara Burlina, who will take care of and eventually forward him students’ requests about the program using the email address: rseg@gssi.it. Unless for messages directed to specific members of the faculty/staff, Ph.D. candidates are warmly recommended to use this email address for their communications.

The Teaching Committee of the Doctoral Program is made up of 25 members among professors and researchers. 10 of them are part of the GSSI Social Sciences faculty board: Andrea Ascani, Maria Giovanna Brandano, Fabiano Compagnucci, Alessandro Crociata, Alessandra Faggian, Marco Modica, Sandro Montresor, Alessandro Palma, Ugo Rossi, and Giulia Urso; 5 are external faculty board affiliated to other Italian universities: Bianca Biagi (University of Sassari), Roberto Basile (University of L'Aquila), Valeria Costantini (University of Roma Tre), Ugo Fratesi (Polytechnic of Milan), and Francesco Rentocchini (University of Milan); 10 are external faculty board affiliated to foreign universities and other research institutions: Ron Boschma (University of Utrecht, NL), Rachel Franklin (Newcastle University, UK), Simona Jammarrino (London School of Economics and Political Science, UK), Philip McCann (University of Sheffield, UK), Andrea Membretti (EURAC Research, Bolzano), Sami Moisio (University of Helsinki, FIN), Mark Partridge (Ohio State University, US), Andrés Rodriguez-Pose (London School of Economics and Political Science, UK), Paolo Veneri (OECD, Paris, FR), and June Wang (University of Hong Kong, HKG).

The Doctoral Program will also benefit from the teaching and tutorial activities of other GSSI faculty and post-doctoral staff: Chiara Burlina, Sara Caramaschi, Gloria Cicerone, Masood Gheasi, Martina Dal Molin, Margherita Grazioli, Benjamin Jara, Audrey Lumley-Sapanski, Valeria Pica, and Adriana Pinate.

3. Academic Calendar and Premises

During each and every academic year of the Program, Ph.D. candidates are required to stay at the GSSI premises from Monday to Friday, with the exception of Italian holidays and academic breaks,
unless they have been allowed to go on mission, for conferences and summer schools, or to stay abroad for a visiting research period (see Section 6).\(^1\)

The Academic Calendar for 2020/2021 is as follows:

- **First term:** November 2\textsuperscript{nd}, 2020 - March 12\textsuperscript{th}, 2021
- **Second term:** March 15\textsuperscript{th} – July 16\textsuperscript{th}, 2021
- **Third term:** July 19\textsuperscript{th} – October 29\textsuperscript{th}, 2021

There will be three breaks:

- **Christmas break:** December 21\textsuperscript{st}, 2020 to January 6\textsuperscript{th}, 2021 (included); **Easter break:** March 31\textsuperscript{st} to April 7\textsuperscript{th}, 2021 (included)
- **Summer break:** August 2\textsuperscript{nd} – September 5\textsuperscript{th}, 2021 (included)
- **Italian holidays** will be observed (April 25\textsuperscript{th}, May 1\textsuperscript{st}, June 2\textsuperscript{nd}, November 1\textsuperscript{st}, December 8\textsuperscript{th})

Once enrolled, 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.

## 4. Courses and Academic Activities per Year

### 4.1. First Year

#### 4.1.1. First Year Activities

During the first year of the Program, students are required to attend a set of courses aimed at providing them with knowledge, competencies, tools, and skills, which are necessary to carry out the research work of their Doctoral Thesis.

First-year courses are of two kinds: disciplinary and methodological. 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 basic knowledge in these fields. Methodology courses refer to qualitative and quantitative research methods.

Seven of the courses in the program are compulsory: five disciplinary – three in the first term, and two in the second term – and two methodological – both in the first term – and students are required to attend them and take the relative examinations. Four courses – all in the second term – are instead optional, as students are asked to actively participate in the relative classes, but without taking an exam. In particular, two disciplinary and two methodological optional courses will be activated among a set of nine (or eight) offered courses - four disciplinary and five (or four) methodological - on the

\(^1\) Until the risk of diffusion of Covid19 is definitively controlled, students will have to stick to detailed guidelines about how to access and stay at the GSSI, and about how to attend classes of the Ph.D course, which will be provided to them once they have enrolled.
basis of the students’ preferences, collected at the end of the first term (March 2021) by filling a
dedicated on-line form.2

Examination methods of compulsory courses can vary between them (see the list below) and are
decided by the course’s convenor. The grading system is instead uniform across them and is based
on the ECTS grading scale: the grading system defined in the European Credit Transfer and
Accumulation System (ECTS) framework by the European Commission.3

For both kinds of courses, compulsory and optional, proof of attendance will be required, by signing
the attendance sheet circulated in class. For each and every course, a syllabus will be made available
on-line before their start, with detailed information about readings and accessibility of study material
and, for compulsory courses, exam modalities. At-home assignments will be given at the discretion
of the lecturers.

List of courses

Compulsory Disciplinary Courses: a1) – a5)

a1) Regional Science I
a2) Economic Geography I
a3) Policy Evaluation
a4) Regional Science II: Disasters and Resilience
a5) Economic Geography II

Compulsory Methodological Courses: b1) – b2)

b1) Introductory (Track 1) or Advanced (Track 2) Quantitative Research Methods.4
b2) Introductory Qualitative Research Methods

Optional Disciplinary Courses: c1) – c4)

c1) Economics of Innovation

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2 The number of optional methodological courses available for selection (five rather than four) depends on the eventual
activation of Track 2 of the compulsory methodological course in Quantitative Research Methods (see below).

3 The ECTS grading scale is based on the class percentile of each and every student in the relative examination and looks
at how he/she performs relative to other students in the class. Following this logic, ECTS system classifies students into
the following broad groups: A (10%): outstanding performance without errors; B (25%): above the average standard but
with minor errors; C (30%): generally sound work with some errors; D (25%): fair but with significant shortcomings; E
(10%): performance meets the minimum criteria; FX: Fail – some more work (i.e. re-sit) required before the credit can
be awarded; F: Fail – considerable further work is required.

4 Track 2 will be activated and run soon after Track 1 (both in the first term), only if a minimum number of students
appear already equipped with fundamentals in the subject, according to a survey carried out at the beginning of the course.
These students are required to take only the Track 2 exam, and could attend Track 1 with no exam, if they wish. Similarly,
students who have been recommended to follow Track 1, because in need of fundamentals, are only required to take
Track 1 exam and could opt to attend Track 2 if they wish, with no exam.
c2) Environmental Economics and Geography  
c3) Globalisation and Local Economies  
c4) Tourism and Culture  

Optional Methodological Courses: d1) – d5)  
d1) Advanced Quantitative Research Methods  
d2) Network Analysis and Complexity  
d3) Spatial Econometrics  
d4) Advanced Qualitative Research Methods  
d5) Visualizing Data: Theory and Practice  

In addition to the previous set of courses, during the first year, Ph.D. candidates should attend a dedicated set of “interdisciplinary courses” offered by the different research institutes at GSSI, that is, in addition to Social Sciences: Computer Sciences, Mathematics, and Physics. The list of these interdisciplinary courses will be made available on the academic calendar and students are encouraged to regularly check for their insertion.

The previous course activities will be complemented by the students’ participation in the Webi-Seminar series of GSSI Social Sciences, where external members of the Teaching Committee and leading international experts from a variety of disciplinary fields will present results from their research and share their knowledge with participants. Participation to Webi-Seminar series will be monitored through attendance sheets. Considering that this series is an ordinary activity at the GSSI Social Sciences, running all along the academic calendar of the Ph.D., students should consider that, in order to be admitted to the final exam, they must prove to have attended at least 20 academic or departmental seminars in total during the first, second, third, and fourth year.

During their first year, Ph.D. candidates are also expected to work on their doctoral proposal. In particular, benefiting from their course studying and from the interaction with the staff of GSSI Social Sciences - which they are strongly recommended to search - students are expected to write a draft of their doctoral proposal, which they will have to submit for the sake of their progression to the second year (see below).

On the basis of the draft of their doctoral proposal, by the end of the first year (October 2021), the Teaching Committee will meet and assign to each student an internal supervisor to the committee itself, by trying to take into account his/her eventual preferences, to be expressed in occasion of the first-year Doctoral Candidacy (see Section 4.1.2). In addition to an internal supervisor, students are not only allowed, but also recommended, to be advised also by a second advisor, external to the Teaching Committee. Students are therefore encouraged to search for an external supervisor, under the guidance and with the approval of the internal one, and should propose it for approval by the

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5 The course will be offered upon selection among the optional ones, providing Track 2 of the compulsory course Quantitative Research Methods does not run in the first term.
Teaching Committee by writing an email to the Ph.D. coordinator by the end of the second year at the latest (October 2022). Soon after this time, the Teaching Committee will meet and formalize the assignment of the external advisor to the students who will have requested it.

4.1.2. Rules of Progression to the Second Year

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

At the end of the first year (October 2021), 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. 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 - represented by the staff of GSSI Social Sciences in the Teaching Committee - and admits the student to the second doctoral year.

4.2. Second Year

4.2.1 Second Year Activities

During the second year of the Program, students are required to follow a set of transversal activities aimed at developing their “readiness” to research and making them equipped to start implementing their doctoral thesis. Transversal activities are “exam-free”, but attending them is compulsory for all Ph.D. candidates.

Transversal Courses: e1) - e2)

e1) Academic Writing and Presenting

e2) Research Papers: From Design to Publication

e3) Reading Groups in Regional Science and Economic Geography

In addition to the previous set of courses, during the second year, Ph.D. candidates are expected to attend a dedicated set of “interdisciplinary courses” offered by the different research institutes at GSSI, that is, in addition to Social Sciences: Computer Sciences, Mathematics, and Physics. The list of these interdisciplinary courses will be made available on the academic calendar and students are encouraged to regularly check for their insertion.
The previous course activities will be complemented by the students’ participation to the Webi-Semi-Nar series of GSSI Social Sciences, where external members of the Teaching Committee and leading international experts from a variety of disciplinary fields will present results from their research and share their knowledge with participants. Participation to Webi-Semi-Nars will be monitored through attendance sheets. Considering that this series is an ordinary activity at the GSSI Social Sciences, running all along the academic calendar of the Ph.D, students should consider that, in order to be admitted to the final exam, they must prove to have attended at least 20 academic or departmental seminars in total during the first, second, third and fourth year.

In addition to the previous course and seminar activities, during the second year, Ph.D. candidates are expected to keep on working on their doctoral thesis. In particular, benefiting from their course studying and from the interaction with the staff of GSSI Social Sciences - which they are strongly recommended to continue - students are expected to draft a report of 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 Section 5).

4.2.2. Rules of Progression to the Third Year

In order to be admitted to the third year, students will have to sit a Doctoral Candidacy, consisting of a written and an oral part, according to the same rules of the examination for the admission to the second year. As for the written part, a report on the activities carried out during the Ph.D. program and a final draft of at least one paper (or one chapter) of the Ph.D. thesis (see Section 5) must be delivered by the end of the second year. As for the oral part, the final year presentation will have to refer to the previous deliverables.

Before of the Doctoral Candidacy, an “Intermediate 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. On the basis of this presentation, students will receive feed-backs about how to eventually fine-tune the contents, methodologies, and the timing of their research work.

4.3. Third Year

4.3.1 Third Year Activities

During the third year of the Program, students are expected to work intensively at their doctoral thesis and to look for feed-backs about its constitutive material by presenting their work in progress at seminars, workshops and conferences. With the same aim of obtaining comments and suggestions, students are encouraged to benefit from the “virtual office time” (normally via skype) that the external members of the Teaching Committee will make available, at least once per term, according to a calendar that will be provided to students at the beginning of the academic year. In order to attend this virtual office time, interested students will have to book it by following a request-form (tbd available soon) and by sending it to Chiara Burlina at rser@gssi.it

Benefiting from these “external” feed-backs and from the interaction with the staff of GSSI Social Sciences – which they are strongly recommended to continue – students are expected to draft a report
of the activities carried out during the PhD program and 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 (see Section 5).

The Webi-Semi-Nar series of GSSI Social Sciences will still be available during the third year for students to benefit from presentations by external members of the Teaching Committee and leading international experts, and for students to fill the requested attendance of at least 20 academic or departmental seminars in total during the first, second, third and fourth year. Also during their third year, Ph.D. candidates are expected to attend a dedicated set of “interdisciplinary courses” offered by the different research institutes at GSSI, that is, in addition to Social Sciences: Computer Sciences, Mathematics, and Physics. The list of these interdisciplinary courses will be made available on the academic calendar and students are encouraged to regularly check for their insertion.

4.3.2. Rules of Progression to the Fourth Year

In order to be admitted to the fourth year, students will have to sit a Doctoral Candidacy, consisting of a written and an oral part, according to the same rules of the examination for the admission to the third and second year. As for the written part, a report on the activities carried out during the PhD program and a final version of two papers and a draft of the third paper (or 3-4 chapters) must be delivered by the end of the third year. As for the oral part, the final year presentation will have to refer to the previous deliverables.

Before of the Doctoral Candidacy, an “Intermediate 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. On the basis of this presentation, students will receive feed-backs about how to eventually fine-tune the contents, methodologies, and the timing of their research work.

4.4. Fourth Year

4.4.1 Fourth Year Activities

During the fourth year of the Program, students are expected to work at the last stages of their research work in order to be able to finalize their doctoral thesis and to be admitted to the final exam of their thesis defense.

The Webi-Semi-Nar series of GSSI Social Sciences will still be available during the fourth year for students to benefit from presentations by external members of the Teaching Committee and leading international experts, and for students to fill the requested attendance of at least 20 academic or departmental seminars in total during the second, third and fourth year. Also during their fourth year, Ph.D. candidates are expected to attend a dedicated set of “interdisciplinary courses” offered by the different research institutes at GSSI, that is, in addition to Social Sciences: Computer Sciences, Mathematics, and Physics. The list of these interdisciplinary courses will be made available on the academic calendar and students are encouraged to regularly check for their insertion.

Like in the other years, on their way towards their final exam, an “Intermediate 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. On the basis of this presentation, students will receive feed-backs about how to eventually fine-tune the contents, methodologies, and the timing of their research work.

4.4.2 Rules of Admission to the Final Exam

The final exam consists of the thesis defense (link-to-be-inserted) in front of a Committee composed of five professors (one member of the teaching committee and four 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, 2024, 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.

5. Format of the Ph.D. Thesis

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

5.1 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 main 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.
5.2. 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.

NB: With respect to both kinds of Thesis format, The GSSI is committed to research ethics. Any form of plagiarism is not accepted. The PhD thesis will be verified with anti-plagiarism 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.

6. 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 (sandro.montresor@gssi.it) program and the Area Director (alessandra.faggian@gssi.it).

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.

7. 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: €2,000 to be used for education only, e.g. summer schools;
- second year doctoral students: €2,000 (research missions, conference/workshop participation, …);
- third year doctoral students: €2,000 (research missions, conference/workshop participation, …);
- fourth year doctoral students: €2,000 (research missions, conference/workshop participation, …).

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6The yearly research budget can’t be used for English proofreading.
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).

8. 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).

9. Useful Links

9.1. Courses Synopsis and Syllabus

<table>
<thead>
<tr>
<th>a1) Regional Science I</th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30/30</td>
<td>I</td>
<td>Alessandra Faggian (GSSI Faculty Board)</td>
<td>Fabiano Compagnucci (GSSI Faculty Board)</td>
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</table>

Synopsis

**Aim:** The course 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 course 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 key factors stimulating growth and development. The course is structured around three main units: i) the location and agglomeration of people and economic activities; ii) the functioning and consequences of interregional migration; iii) theories of regional growth and development, and regional policy options.

**Exam:** Students will have to take a written exam, answering a set of questions on the topics developed during the course.

**Syllabus:** available soon…

<table>
<thead>
<tr>
<th>a2) Economic Geography I</th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30/30</td>
<td>I</td>
<td>Andrea Ascani (GSSI Faculty Board)</td>
<td>Giulia Urso (GSSI Faculty Board)</td>
</tr>
</tbody>
</table>
Aim: This course aims at developing theoretical and empirical understanding of spatial economic processes in order to study and evaluate a wide range of issues and policies. Particular emphasis will be put on urban and regional economies, business and worker location decisions, and the link between geography and the competitiveness of firms and industries. Thus, adopting different conceptual perspectives, the course addresses foundational questions in economic geography: Why is aggregate economic activity so unevenly distributed (why do we have rich and poor places); Why are industries concentrated in space (e.g. Silicon Valley, the City, Hollywood, etc.); and What, if anything, can and should we do about it?

Exam: Students will be asked to draft two critical essays (each of 2,000 words) on two research themes discussed during the course.

Syllabus: available soon …

<table>
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<tr>
<th>a3) Policy Evaluation</th>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tr>
<td>30/30</td>
<td>I</td>
<td></td>
<td>Alessandro Palma (GSSI Faculty Board)</td>
<td>Martina Dal Molin (GSSI Faculty Board)</td>
</tr>
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</table>

Aim: The aim of the course is to enable Ph.D. students to reach an operational understanding of the qualitative and quantitative methodologies that are commonly used in policy and program evaluation in the academic domain. Typical questions addressed by the course are: Is the empirical strategy appropriate to identify and quantify the policy effect? What are the theoretical underpinnings behind each methodology, and the benefits and drawbacks of each strategy? How can the main findings be used for an optimal policy design? The course is organized in two modules: (i) evaluation using causal inference methods, (ii) evaluation using qualitative approaches based on interviews, participant observation and case studies. Upon completion of the course, students should be capable of understanding and possibly criticizing state-of-the-art research papers and policy reports, and to choose which is the most appropriate methodology to apply to their own research.

Exam: Students will be asked to draft two reports: one in commenting on an academic paper assigned to them by the lecturer (module (i)); one in commenting on a case study still assigned by the lecturer (module (ii)). In their reports, students should critically discuss the methods employed in the assigned papers.

Syllabus: available soon …
### a4) Regional Science II: Disasters and Resilience

<table>
<thead>
<tr>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
</table>
| 20/20      | II   | Marco Modica  
(GSSI Faculty Board) | Benjamin Jara  
(GSSI Post-Doc) |

**Synopsis**

**Aim:** The aim of this course is to provide students with the theoretical background and analytical tools to study the phenomenon of disasters and to identify its cycles, looking at the phases that unfold through the interaction between catastrophic events and socio-economic systems: a pre-event situation (e.g. preserving the status quo or preparing to the natural event), followed by the actual occurrence of the event, and concluded by the post-event situation (emergency and recovery phases). The course will also provide a framework to address the theory and applications on how the concept of resilience is studied in regional science, as well as presenting the most frequent tools for disaster impact and policy evaluations.

**Exam:** Students will be asked to draft one critical essay and to provide a critical oral presentation. The essay, of about 2,000 words, will be based on research topics discussed during the course. The oral presentation (about 20 minutes presentation + 10 comments/questions) will be based on an application of a case study or paper assigned by the lecturer. In their presentations, students should critically discuss the assigned papers.

**Syllabus:** available soon …

### a5) Economic Geography II

<table>
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<tr>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
</table>
| 30/30      | II   | Ugo Rossi  
(GSSI Faculty Board) | Margherita Grazioli  
(GSSI Post-Doc) |

**Synopsis**

**Aim:** This course aims to provide the foundations for a critical, pluralistic understanding of economic geography. Economic geography is understood here as the investigation of geographical difference in today’s globalisation through the lenses of its varied spatialities: territory, place, space, scale, networks, assemblages. In doing so, the course reviews the different epistemologies, methodologies and theoretical frameworks embraced by contemporary economic geographers, particularly focussing on critical approaches such as heterodox economics, political economy, feminism and poststructuralist social theories. Illustrative examples are drawn from the political economy of urban and regional development, with particular reference to the rise of tech-driven local economies in the aftermath of the 2008 financial crisis. The ultimate goal of this course is to provide a sense of economic geography as an intellectually engaged discipline concerned with the critique of the present as well as with the dissemination of alternative economic practices.
### Exam
Students will be asked to draft two critical essays (each of 2,000 words) on two research themes discussed during the course.

### Syllabus
available soon …

<table>
<thead>
<tr>
<th>b1) Introductory (Track 1) or Advanced (Track 2) Quantitative Research Methods&lt;sup&gt;7&lt;/sup&gt;</th>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tbody>
<tr>
<td>30/30 per Track</td>
<td>I</td>
<td>Masood Gheasi (GSSI Post-Doc)</td>
<td>To be announced</td>
<td></td>
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</tbody>
</table>

### Synopsis

**Aim:**

**Track 1:** This module aims to equip “absolute-beginner” students with (1) knowledge and understanding of basic concepts in statistics and quantitative analysis in social sciences research and in R program, and (2) practical skills to conduct and interpret commonly used statistical methods. In addition to some basic concepts -such as “what is a sample drawn from a population of observations”-, the module introduces some of the most commonly used basic quantitative research methods, e.g., t-tests, ANOVA, correlation, regression. By attending this module students will also learn how to interpret and read results of commonly used statistical tests in academic journals and policy reports that form part of the literature background of a Ph.D. dissertation. **Track 2:** The module is offered to students of various backgrounds who already have some knowledge in basic statistics. The module focuses on the range of possible techniques, their appropriateness for particular circumstances, and their applicability to standard problems arising in everyday research. The module will also provide students with an understanding of the main issues that can arise in applied quantitative studies and should be considered in the research design and execution of a Ph.D. research. Students will gain methodological skills to read, interpret and produce quantitative research of various nature (e.g. academic papers, policy-evaluation documents reports).

**Exam:** Students will be evaluated through a written exam, which will test both their theoretical knowledge of the taught research methods and their capacity of using them in practical exercises.

**Syllabus:** available soon …

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<sup>7</sup> Track 2 will be activated and run soon after Track 1 (both in the first term), only if a minimum number of students appear already equipped with fundamentals in the subject, according to a survey carried out at the beginning of the course. These students are required to take only the Track 2 exam, and could attend Track 1 with no exam, if they wish. Similarly, students who have been recommended to follow Track 1, because in need of fundamentals, are only required to take Track 1 exam and could opt to attend Track 2 if they wish, with no exam.
### b2) Introductory Qualitative Research Methods

<table>
<thead>
<tr>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/30 per Track</td>
<td>I</td>
<td>Margherita Grazioli (GSSI Post-Doc)</td>
<td>Sara Caramaschi (GSSI Post-Doc)</td>
</tr>
</tbody>
</table>

**Synopsis**

**Aim:** This course aims to prepare students for the practicalities of qualitative research. It is intended to introduce the students to the core methodologies, theories and debates pertaining to qualitative research. Use will be made of a variety of teaching methods, especially lectures, group-based exercises and discussions.

**Exam:** Students will have to write a 3500 word essay according to the following guidelines: i) select one article from the proposed list of peer reviewed journal articles pertaining to the regional sciences & economic geography subject areas that exclusively or predominantly employ qualitative research designs; ii) critically assess the chosen article through: 1. A methodological evaluation of the chosen research design and its methods, including assessing the role of theory and the underpinning ontology-epistemology; 2. A critical assessment of the data analysis; the presentation and organisation of data; and the use of data to evaluate and/or build theory.

**Syllabus:** available soon …

### c1) Economics of Innovation

<table>
<thead>
<tr>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/20</td>
<td>II</td>
<td>Sandro Montresor (GSSI Faculty Board)</td>
<td>Francesco Rentocchini (University of Milan, JRC-EC, and GSSI External Faculty Board)</td>
</tr>
</tbody>
</table>

**Synopsis**

**Aim.** The course aims at introducing students 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, dedicating special attention to the use and understanding of patent data and patent-based indicators and analysis. A special focus will be put on environmental technologies and on the localization of (eco-)innovations across places and on their geography.

**Syllabus:** available soon …
<table>
<thead>
<tr>
<th>c2) Environmental Economics and Geography</th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>20/20</td>
<td>II</td>
<td>Valeria Costantini (University of Roma Tre and GSSI External Faculty Board)</td>
<td>Elena Paglialunga (University of Urbino) and Davide Consoli (INGENIO, University of Valencia) (tbc)</td>
</tr>
</tbody>
</table>

**Synopsis**

**Aim:** The course aims at introducing students to the main definitions, concepts and theoretical models through which the multiple issues addressed by the environmental economics literature can be investigated under the lens of a geographical perspective. The course is structured into two parts. The first part is dedicated to the analysis from a conceptual perspective of two specific themes associated to adaptation and mitigation: i) the multiple linkages between climate change and socio-economic vulnerability with a focus on armed conflicts and income inequality (as an example of the debate on adaptation); ii) the role of geographical spillovers in the development, deployment and diffusion patterns of eco-innovation with a focus on clean energy technologies. The second part of the course intends to provide students with quantitative econometric methods applied to the two issues by using both R and STATA for different applications, as spatial econometrics for dynamic panel data, gravity equation models with geographical distances and network analysis applied to the trade and technology relationship.

**Syllabus:** available soon …

<table>
<thead>
<tr>
<th>c3) Globalisation and Local Economies</th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tr>
<td></td>
<td>20/20</td>
<td>II</td>
<td>Andrea Ascani (GSSI Faculty Board)</td>
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</tbody>
</table>

**Synopsis**

**Aim:** This module aims at developing conceptual and empirical understanding of the interplay between globalization processes and territorial development opportunities and challenges. A specific emphasis will be placed on the increasing importance of multinational companies and their localisation strategies, the patterns and impacts of international trade, the unfolding of global value chains and the regional asymmetries in channeling global forces towards local economic development objectives.

**Syllabus:** available soon …
### c4) Tourism and Culture

<table>
<thead>
<tr>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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</thead>
<tbody>
<tr>
<td>20/20</td>
<td>II</td>
<td>Alessandro Crociata (GSSI Faculty Board)</td>
<td>Maria Giovanna Brandano (GSSI Faculty Board)</td>
</tr>
</tbody>
</table>

**Synopsis**

**Aim:** The course aims at providing 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 into parts. The first part will focus on tourism and its impact at national, regional and local level. The second part will focus on cultural and creative industries as well the role of cultural capital accumulation and agents’ behaviors.

**Syllabus:** available soon …

### d1) Advance Quantitative Research Methods

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<tr>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tbody>
<tr>
<td>20/20</td>
<td>II</td>
<td>Masood Gheasi (GSSI Post-Doc)</td>
<td>To be Announced</td>
</tr>
</tbody>
</table>

**Synopsis**

**Aim:** The course is offered to students of various backgrounds who already have some knowledge in basic statistics and in R program. The module focuses on the range of possible techniques, their appropriateness for particular circumstances, and their applicability to standard problems arising in everyday research. The module will also provide students with an understanding of the main issues that can arise in applied quantitative studies and should be considered in the research design and execution of a Ph.D. research. Students will gain methodological skills to read, interpret and produce quantitative research of various nature (e.g. academic papers, policy-evaluation documents reports).

**Syllabus:** available soon …

### d2) Network Analysis and Complexity

<table>
<thead>
<tr>
<th>CFU/hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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</thead>
<tbody>
<tr>
<td>20/20</td>
<td>II</td>
<td>Gloria Cicerone (GSSI Post-doc)</td>
<td>Chiara Burlina (GSSI Post-doc)</td>
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8 The course will be offered upon selection among the optional ones, providing Track 2 of the compulsory course Quantitative Research Methods does not run in the first term.
**Synopsis**

**Aim:** The course will introduce students to the pervasive role and manifold nature that networks play in nowadays life (from the internet and social networks to financial markets and biological systems). The course is structured into two parts. 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. The second part of the course emphasizes network science as a holistic approach used to analyze the structure and evolution of complex systems in social and economic sciences. Students will 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.

**Syllabus:** available soon …

<table>
<thead>
<tr>
<th><strong>d3) Spatial Econometrics</strong></th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tr>
<td></td>
<td>20/20</td>
<td>II</td>
<td>Roberto Basile (University of L’Aquila and GSSI External Faculty Board)</td>
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</table>

**Synopsis**

**Aim:** The course aims at getting acquainted with the techniques of spatial statistics and econometrics, along with the main issues posed by the statistical treatment of geo-referenced data and by the construction and estimation of spatial econometric models. Students participating in the course 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.

**Syllabus:** available soon …

<table>
<thead>
<tr>
<th><strong>d4) Advanced Qualitative Research Methods</strong></th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tbody>
<tr>
<td></td>
<td>20/20</td>
<td>II</td>
<td>Sara Caramaschi (GSSI Post-Doc)</td>
<td>Margherita Grazioli (GSSI Post-Doc)</td>
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</table>

**Synopsis**

**Aim:** The course will provide students working with qualitative data with a series of practical strategies that they can draw on to steer their path towards enlightening and well-founded conclusions. It offers an explanation of how to set up for data collection, analysis and interpretation. The focus is to develop and apply the core practical skills the students will need as to make informed choices about the actual design and conduct of their research.

**Syllabus:** available soon …
<table>
<thead>
<tr>
<th>Course</th>
<th>CFU/Hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
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<tbody>
<tr>
<td>d5) Visualizing Data: Theory and Practice</td>
<td>20/20</td>
<td>II</td>
<td>Sara Caramaschi (GSSI Post-Doc)</td>
<td>Rachel Franklin (Newcastle University and GSSI External Faculty Board)</td>
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<tr>
<td>Synopsis</td>
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<tr>
<td><strong>Aim:</strong></td>
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<tr>
<td>The course will enable students to develop visual communication skills. On the one hand, the course will provide an overview on the variety of tools and techniques adopted over time to convey data and information by means of visuals (charts, timelines, maps, etc.). On the other hand, students will familiarise themselves with the best software for data mapping and visualization.</td>
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<td><strong>Syllabus:</strong></td>
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<tr>
<td>e1) Academic Writing and Presenting</td>
<td>15/15</td>
<td>II</td>
<td>Valeria Pica (GSSI Post-doc)</td>
<td>Audrey Lumley-Sapanski (GSSI Post-doc)</td>
</tr>
<tr>
<td>Synopsis</td>
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<tr>
<td><strong>Aim:</strong></td>
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<tr>
<td>This course will provide students with training in academic writing and presentation skills. The course’s focus will be on fine tuning students’ abilities to succinctly and convincingly communicate research and findings in key deliverables. As such, in a writing intensive format, we will address: the ‘elevator pitch’, abstract composition, conference presentations, and developing and supporting an argument in written form. The intent is to prepare students for publication, and, to increase their competitiveness in the job market.</td>
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<tr>
<td>e2) Research Papers: From Design to Publication</td>
<td>15/15</td>
<td>II</td>
<td>Alessandra Faggian (GSSI Faculty Board)</td>
<td>Adriana Carolina Pinato (GSSI Post-doc)</td>
</tr>
<tr>
<td>Synopsis</td>
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<tr>
<td><strong>Aim:</strong></td>
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| 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.

<table>
<thead>
<tr>
<th>e3) Reading Groups in Regional Science and Economic Geography</th>
<th>CFU/ hours</th>
<th>Term</th>
<th>Convenor</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15/15</td>
<td>II</td>
<td>Andrea Ascani (GSSI Faculty Board) and Ugo Rossi (GSSI Faculty Board)</td>
<td>GSSI Faculty Board and Post-docs</td>
</tr>
</tbody>
</table>

Synopsis

Aim: This course aims at addressing key and current debates in economic geography by focusing on selected themes and readings. Groups will be participated by both students and research staff, who will work on readings that the convenor will indicate to them in advance, by then moderating the debate. Students will be encouraged to critically analyse the focal scientific articles by engaging in conceptual and empirical discussions and by positioning the academic findings into the broader literature and policy debates.

9.2. Doctoral Candidacy Guidelines

9.2.1 First Year

9.2.2 Second Year

9.2.3 Third Year

9.2.4 Link to Final Exam Guidelines (available soon)

9.3. Intermediate Meetings Guidelines

9.3.1 Second Year

9.3.2 Third Year
9.3.3 Fourth Year

9.4 “Virtual Office Time” Guidelines (available soon)