

AWARENESS-RAISING FOR EUROPEAN TERRITORIAL COHESION IN PLANNING EDUCATION - WITH REFERNECE TO ITALIAN AND GERMAN EXAMPLES

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Abstract

In recent years the “territorial cohesion concept” found its way to the centre of the debate over European spatial planning, until its inclusion in the recently ratified Treaty of Lisbon as a supplement to the economic and social dimension of the EU cohesion objective (Treaty on European Union, Art. 3 (3)). In turn, this strengthened the importance of spatial planners among the experts in this field of action, putting them in charge of the realisation of territorial cohesion. The fact that planning professionals are more and more involved in EU initiatives in their everyday practice and have the chance to take over leading roles in related EU policies and programming should find adequate expression in spatial planning study programmes. This contribution aims to explore whether and to what extent young planning professionals are nowadays trained to play a role within the European territorial cohesion process and related programmes and projects. It shortly introduces the actors that may potentially play a role within the heterogeneous European spatial planning network, and analyses the appropriate knowledge they should bring if they have to contribute to the realization of EU territorial cohesion. Selected Italian and German spatial planning education programmes are analysed in the light of these information. A mixture of both quantitative and qualitative analyses is adopted, focussing both on the number of obligatory and facultative study courses dealing with EU spatial planning related issues in Bachelor and Master Programmes as well as on the different ways EU-related issues are accommodated and integrated within these course and programmes. The provided evidences suggest that, despite the progressive homogenisation of the organizational framework of spatial planning education programmes in the EU as a consequence of various pan-European initiatives – e.g. the Bologna process – a real ‘European turn’ in terms of contents is still far from occurring.

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1. Introduction

Graduates in Spatial Planning are active in the public service, in semi-public and private institutions as well as in professional and non-governmental organizations. They work on different spatial levels (from city neighborhoods to regions, to the state level, to the transnational and global contexts) and in different professional fields (land use planning, urban design, urban development, regional development and formal regional planning, sector planning disciplines e.g. transport, landscape planning, promotion of businesses, real estate management, etc.). Within the public sector they are employed in a highly heterogeneous set of bodies (e.g. planning departments, environmental departments, promotion of businesses, etc.) of municipalities, county administrations, regional authorities, national and federal ministries as well as European institutions. In private institutions they may hold positions in large companies as well as in small planning, architecture or engineering offices, in real estate companies, housing associations, consultant firms, site select consultants, research institutions etc.

Despite the lack of formal competences on the matter, the influence of the EU on the spatial development of its member states and regions is enormous. On the one hand, such influence is exerted through the continuous production and re-production of ideas, concepts and storylines by mean of an ever-expanding set formal and informal strategies and documents that are then often taken on board by Member states' actors (at the various territorial level) during the formulation of domestic policy documents and initiatives.³ On the other hand, the EU contribute to influence Member States planning and development through economic conditionality, i.e. by providing economic rewards attached to the fulfillment of specific substantive and procedural conditions (as for instance through the former Community Initiatives and through the EU Cohesion Policy. Cf. Schimmelfenning and Sedelmeier, 2005; Adams et al. 2011). Last but not least, additional pressure derives from those EU's sectoral policies that, despite not being strictly 'spatial' in their focus, results in a series of planning and development constrains and impact once they are taken on board in the various Member States' domestic contexts (Cf. Dühr, S. Colomb, C., Nadn, V., 2010)

Keeping in mind the above considerations, it is possible to agree with Dühr et al. when they argue that "the European dimension in spatial planning has become an essential part of the work of planning practitioners and academics" (Dühr, S. Colomb, C., Nadn, V., 2010, p. 1). It is therefore relevant to explore whether young planning professionals are nowadays trained to play a role within the described ever-Europeanized professional scenario, in other words to what extent are they equipped with the necessary means to interface with the whole set of implications brought about by the consolidation of the EU territorial cohesion process. To shed some light

³ For a detailed analysis of the process of discursive integration and the influence of the European spatial planning discourse in the Member States see: Bohme 2002; Adams et al. 2011; Stead and Cotella, 2011.

on this issue, the present contributions briefly introduces the possible professional careers of spatial planners focusing on their European dimension as well as on the related necessary knowledge that should be provided by universities (section 2). It then presents some general information on the present situation of planning education in Europe (section 3), to provide the background for the empirical analysis that follows. Sections 4 and 5 analyse the activities of four planning education faculties (two from Germany and two from Italy) focusing both on the number of obligatory and facultative study courses dealing with EU spatial planning related issues in Bachelor and Master Programmes as well as on the different ways EU-related issues are accommodated and integrated within these courses and programmes. A conclusive section rounds off the contribution, reflecting on how the analysed spatial planning education programmes meet the introduced requirements, and suggesting possible ways forward.

2. There is nearly no way around EU initiatives for planning professionals!

Spatial Planners working in public services on local, regional or national levels in the above mentioned positions need to deal with the spatial impact of EU policies, as well as with the operational implications that EU programming initiatives have in their everyday practice. There are some sectoral policies with direct impacts on spatial planning and development, like e.g. environmental policy and its transformation in legislations with impacts on all spatial levels, competition policy and its impact on building activities etc. Additionally, there are sectoral EU policies with an indirect influence on spatial decisions like e.g. energy and transport policy. And a strong influence on spatial planning and development is exerted by the EU through its regional policy as well as through its territorial cooperation initiatives and urban programmes.

Concretely, due to the increasing internationalization of location decisions of residents and companies they need to manage the competition between cities and regions and elaborate strategic concepts about the positioning of their area of competence. To be able to succeed in these new tasks, they need profound knowledge about how to develop, manage and implement those strategies, in other words to prove able to attract funding and to manage them effectively in times of ever-decreasing public budgets. Because of increasing opportunities to participate in consultation processes in the elaboration of objectives and regulations e.g. concerning the new cohesion policy period 2014-2020, planners active within the various domestic contexts also need to know the architecture of this policy area. Additionally, as numerous local and regional authorities and respective spatial planners are partners in transnational, cross-border or interregional cooperation projects developed within the framework of the European territorial cooperation objective, in order to be able to participate in those projects one needs to know how to network with the other partners active within a potential cooperation area as well as how to prepare projects' applications and to successfully manage projects as well as their implementation and financing.

Practitioners active in the private sector work either in specific fields like real estate development, housing associations etc. or act as external experts or consultants for public administrations. In the latter case they need the same knowledge that spatial planners being employed in public administrations plus perhaps knowledge about the management of projects in the European Territorial Cooperation because often public lead partners of the projects contract private consultants to conduct the project management. As practitioners in a specific sector they should be able to assess the impacts of EU policies on the sector and know basic rules for accessibility to EU funding. This extends to spatial planners working for non-governmental organizations too.

The short review of fields of work, possible positions and functions of graduates in spatial planning on the one side and of the corresponding necessary knowledge in EU issues shows, that there is a certain need for spatial planning education programmes to provide at least the basis for a preliminary understanding of the new opportunities and constraints brought forward by the EU in the field. Despite one could always argue that not everything can be covered by university courses and that training activities and actual work may fill-in the gap, the provision of some fundamentals should indeed be present.

2. A brief glimpse at the planning education in Europe

In 1995 AESOP recommended a list of core requirements for a high-quality European planning education based on the understanding that AESOP should provide “orientation for the elaboration of programmes or defining core qualifications which need to be achieved in individual programmes” (Ache, 2008). An orientation for the restructuring of degree courses following the Bologna 3+2 or 4+1 cycle was regarded as useful not only to ensure a certain quality of education but also to ease mobility of students. The list is divided in three parts:

- acquisition of due knowledge in e.g. the nature, purpose, theory and method of planning; the history of planning; cultural differences in planning in Europe and international, economic and social impacts of planning; the political, legal and institutional context of planning practice at national and EU level; instruments of planning and planning implementation.
- development of practical competences in e.g. methods for problem definition and problem-solving in multidisciplinary settings; thinking in terms of concepts, instruments and measures; techniques for data collection, for data analyses, valuation etc.
- development an attitude i.e. a feeling for the cultural embedding, the value dimension of planning, the orientation towards solving the needs of the society etc. (Geppert and Verhage, 2008).

For the purpose of this article, it is important to stress the point that AESOP recommended that students in planning education programmes should acquire due knowledge in “cultural differences in planning on a European and international

level” and in the “political, legal and institutional context of planning practice both at the national level and at (evolving) international i.e. European level” (Geppert, and Verhage, 2008, p. 24).

At this point, it should not be discussed whether the implementation of the Bologna Process in planning faculties lead to better or worse education programmes and graduates or whether the Bologna objectives were achieved or not. More relevant is that, while restructuring the degree courses to Bachelor and Master according to Bologna, the European planning faculties should also define new, consistent education programmes aiming at providing graduates for professional life after three or four year courses with the option of an additional two or one year Master. The question here is whether in those new education programmes the two above named qualifications are considered or not.

In 2006 and 2008 AESOP realized two surveys mapping the experiences AESOP member schools had had with the new structured degree courses according to the Bologna Declaration (Ache, Jarenko, 2010). The 2008 survey results in the reported advantage of the process, the need to rethink and the possibility to internationalize curricula. On the other hand, a reported negative effect is that in several cases the domestic, cultural flavour resulted of the programmes resulted severely weakened (Ache, 2010). These two issues stressed in the report’s summary give rise to the assumption that cultural aspects in planning on European level and the political, legal and institutional context of planning at European level is part of the education programmes and planning graduates have due knowledge to be active parts in the implementation of European territorial cohesion, to shape European policies and programmes and to use those programmes in planning practice.

In order to verify this assumption, planning education as it manifests within four different university institutions (two from Germany and two from Italy respectively) will be reviewed in the following sections, paying particular attention to the obligatory and facultative contents offered in the respective Bachelor and Master degree course.

3. The EU dimension of planning education in Germany – Evidences from Dortmund and Kaiserslautern

Two spatial planning education faculties in Germany will exemplarily be reviewed concerning to European Spatial Planning and European Cohesion Policy contents of the provided study courses. The faculties are introduced briefly before the provided study courses are short and crisp displayed and analysed whether there are obligatory or facultative offers for students in the regarding field.

The reason for the selection of the two case studies is motivated by the fact that each of these two Universities host a faculty of spatial planning offering distinct study courses in spatial planning since more than 40 years. Both have some years of

experience with the Bachelor and Master system, so that Master courses are already running.

4.1 Education in Spatial Planning in Dortmund⁴

The Faculty of Spatial Planning at the University of Dortmund consists of fourteen departments. Measured against number of students and number of departments the faculty is currently the largest educational institution for spatial planning in Germany. Its educational profile is characterized by a multidisciplinary and integrated understanding of spatial planning and is organized as a so called “project study” course. In the winter semester 2010/2011 the faculty had 1,260 registered students, where circa 150 students start each winter semester.

In implementation of the Bachelor –Master system, the Faculty of Spatial Planning at the University of Dortmund decided for a 4+1 cycle format. The Bachelor of Science in Spatial Planning is a four years (eight semesters) programme in which the students need to mature 240 Credits according to the European Credit Transfer System (ECTS). Graduates which wish to proceed with a Master at the Faculty have the choice between a one year Master of Science in Spatial Planning with six different areas of specialization, a two year Master in Spatial Planning for Regions in Growing Economies (SPRING) and a one year Master in Spatial Planning in Europe.

4.1.1 Bachelor of Science in Spatial Planning at the University of Dortmund

The Bachelor of Science in Spatial Planning at the University of Dortmund covers all spatial levels (neighbourhood, city, region, state etc.) and content areas of spatial planning. It qualifies students for working in the field of spatial planning and accomplishes the requirements to subsequently register to the Chamber of Architects (Urban Planner). It enables students also for further studies in a Master degree course. The Bachelor degree course is structured in basics, sector planning issues, cross-section modules, methodological and practical modules. Currently the Bachelor is structured in a four year course, subdivided in a first part (1st till 4th semester) and a second part (5th till 8th Semester) and is completed by a Bachelor Thesis.

Table . Bachelor of Science Spatial Planning at the University of Dortmund - Structure

	Modules		ECTS
Part I Semester 1 to 4	1	Introduction in Spatial Planning	8
	2	A-project	19
	3	Basics in Spatial Planning I: law and environment	11
	4	Basics in Spatial Planning II: Society	9
			125

⁴ All information concerning the Bachelor and Master degree courses underlain this chapter, are published on the web page of the faculty <http://www.raumplanung.tu-dortmund.de/rp/wichtigbsc.html>, (accessed 5 May 2012).

	5	Basics in Spatial Planning III: Economy	10			
	6	Empirical analysis and inquiry	10			
	7	Computer graphics and analysis	11			
	8	Regional planning	9			
	9	Urban and regional concepts	12			
	10	Land policy and management	9			
	11	Concepts for city quarters	12			
	12	Study fundamental	5			
	Part 2 Semester 5 to 8	13	F-project		22	115
		14	Research methods in spatial planning		8	
		15	Cross-section module: theory of spatial developments		9	
		16	Cross-section module: planning theory and planning processes		12	
17		Cross-section module: methods, processes and instruments	9			
18		Sector planning	12			
19		Current challenges for spatial planning	8			
20		Urban design	11			
21		Spatial planning from experience (internship, excursions etc.)	12			
22		Bachelor Thesis	12			

During the first part students receive an introduction in spatial planning and work in groups with average twelve to fourteen members in a so called A-project to solve a problem- and practice-oriented spatial question (Module 1, 2). The basic modules (3, 4, 5) explain fundamental relations between landscape ecology, environmental protection and spatial planning, introduce students in juridical, sociological and economic issues of spatial planning. In Module 6 and 7 attain knowledge in choosing and implementing suitable inquiry and analysis approaches and in computer graphics and analysis (GIS, CAD and cartography). The development of regional and city quarter concepts is core topic of modules 8, 9 and 11, while in module 10 necessary aspects for implementation of these concepts is imparted. In module 12 students can choose any courses that are provided at the university according to their interests.

The second part of the degree course is different structured. During the fifth and sixth semester, students work on the F-project (advanced project). In the cross-section modules the specific and methodological competences are trained according to the needs of planning processes in real live. Sector planning is provided as an offer of six possible areas (e.g. landscape planning, transport planning, gender planning etc.) from which three needed to be chosen. Urban Design is obligatory and covers also urban design history and cultural heritage preservation.

It has become apparent that – analyzing the information material in the internet – the Bachelor degree course at the University of Dortmund contains not directly a lecture or course in European Spatial Planning or European Cohesion Policy. Nevertheless especially the F-project (advanced project) offers the possibility to integrate those contents in the Bachelor programme.

4.1.2 Master of Science in Spatial Planning at the university of Dortmund

As already described above, the faculty currently offers three different Master degree courses:

- A. Master of Science Spatial Planning (one year programme, 60 ECTS) with six possible areas of specialization:
 1. Strategic urban- and regional development
 2. Urban design
 3. Local and regional economic policy
 4. Real estate management
 5. Comparative European Planning studies
 6. Planning in developing countries
- B. Master of Science Spatial Planning for Regions in growing Economies (SPRING), two year programme (4 Semester)
- C. Master of Science Spatial Planning in Europe (one year programme).

Unfortunately the Master Spatial Planning with the specification in Comparative European Planning studies will not be offered from winter semester 2012/2013 on. The Master of Science Spatial Planning in Europe is not yet running and no information material is provided on the web page. The Master Spatial Planning for Regions in growing Economies (SPRING) has a different focus and is a cooperation project with partner universities in Tansania, the Philippines, Ghana, and Chile and closely linked to growing Economies.

The Master Spatial Planning should prepare students for leading positions on all planning and decision making levels. It enables students to take over the leadership in multidisciplinary teams and allows students a research career and the possibility to make a PhD. It consists of four modules in which 60 ECTS need to be acquired. The new description of the modules for students which will start the Master degree course Spatial Planning in winter semester 2012/2013 contains a new structure and provides not any longer the possibility to choose the specialization in “Comparative European planning studies”. It will be structured as follows:

- Module 1 impart knowledge of current spatial research and planning on regional, national and international level (8 ECTS)
- Module 2 is the master project or master concept (selection of project or concept) in which complex problems in spatial planning should be solved with scientific methods. The master project put am emphasis on theoretical-analytical or conceptualization of a current question in spatial research and planning. The master concept stresses more the conceptualization and a practical design task. (12 ECTS)
- Module 3 is the specialization module in which students can select: transformation of post-industrial regions, strategic urban- and regional development, urban design, environmental planning, spatial and mobility research, real estate management, renewable energies.



- Module 4 is the Master thesis (20 ECTS).

The module manual of this new structure is not fully developed and described so far, so that only rough information about contents of the specializations is provided. Currently only in the specialization module transformation of post-industrial regions the description of contents names “European experience in transformation processes”. But it is likely that the facultative offered courses of today will be offered from winter semester 2012/2013 on, too. In this list of facultative courses one can find: Urban Regeneration in European Countries, European Spatial Planning, national planning systems in Europe.

The number of ECTS and related the effort students put to European contents in this Master of Spatial Planning with the specification in “transformation of post-industrial regions” cannot be quantified yet. The number of students dealing with EU contents can be much higher than the number choosing the specialization, considering the fact that also Master project and Master thesis can deal with European issues.

4.2 Education in Spatial Planning at the University of Kaiserslautern

The Faculty of Spatial and Environmental Planning at the University of Kaiserslautern consists of ten departments and educates students in spatial planning since 1971. It provides multidisciplinary and cross-section oriented study courses in spatial science: Bachelor of Science Spatial Planning, Master of Science Urban and Regional Development, Master of Science Environmental Planning and Law, Bachelor of Education Geography (the last one will be not part of the review in this article). People with their spatial requirements which find expression in the basic needs like working, living, recovering and supplying are central for the degree course design. Since the winter semester 2007/2008 the faculty have provided the Bachelor Spatial Planning, since the winter semester 2010/2011 the Master in Urban and Regional Development and since winter semester 2011/2012 the Master in Environmental Planning and Law. Currently circa 450 students are registered while the Bachelor usually starts with circa 90 students, and the Masters with 25.

In implementation of the Bachelor – Master system, the Faculty of Spatial and Environmental Planning at the University of Kaiserslautern decided on a 3+2 cycle format. The Bachelor of Science in Spatial Planning is a three years, six semester programme in which the students need to get 180 Credits according to the European Credit Transfer System (ECTS). Graduates which want to proceed with a Master at the Faculty have the choice between the two already mentioned two years Master of Science (120 ECTS). The review will focus on the Bachelor Spatial Planning and the Master Urban and Regional development, because the Master Environmental planning and Law is conceived as a specialized Master, educating experts in environmental planning, concepts and resource protection. Nevertheless, students studying this Master obligatory need to attend a lecture in European Regional Policy.

Graduates are like the ones from the University of Dortmund active in public, semi-public and private institutions and have jobs not only in traditional planer contexts but also in the real estate market, in promotion of trade and industry, in transport, research etc. But it should be mentioned, that Bachelor Graduates prefer to proceed with a Master because the new graduation system is not fully accepted by the employers, yet.

4.2.1 Bachelor of Science in Spatial Planning at the University of Kaiserslautern

The Bachelor of Science in Spatial Planning at the University of Kaiserslautern should equip the students with competences as planning professionals for all spatial levels and for formal as well as informal planning cases. Additional to the basic skills for spatial planers knowledge in planning and environmental law, environmental protection, real estate management, and sociology are also gained as sector planning issues, like transport, sewage etc. The Bachelor degree is a first qualification for the planning profession and enables students also for further studies in a two year (or 120 ECTS) Master degree course.

The Bachelor course is structured in 17 modules (two of which are facultative), one study project and the Bachelor Thesis. The modules are divided in urban planning, regional planning, general conditions and key qualifications.

Table 2: Bachelor of Science Spatial Planning at the University of Kaiserslautern - Structure

	Modules		ECTS	
Spatial planning at urban level	I	Planning methods, concepts, basics in landscape planning	10	40
	II	Basics in architecture, urban environment, urban land-use planning	10	
	III	Design, concepts, strategic environmental assessment	10	
	IV	Informal planning instruments, governance, urban planning and law	10	
Spatial planning at regional level	I	Settlement development, socio-economic changes and demographic development, basics in spatial planning	9	27
	II	Spatial planning law, concepts and instruments, new informal instruments	9	
	III	Analyses of spatial structures, processes, locations, valuation methods, basics in regional economic	9	
International spatial planning		international urban planning (1,5), international planning systems (1,5), European Regional Policy (3), planning in developing countries(3) (students need 6 from 9 ECTS)	6	
Legislation	I	Land use planning, European law, administrative law	11	21
	II	Urban planning legislation, environmental law	10	
Economy		Regional economy, regional policy	7	59
Sociology		Regional and urban sociology, empirical research	8	
Environmental		Ecology of/in settlements, green space concepts	9	

planning			
Infrastructures		Transport, sewage, water supply systems, waste management	11
General conditions for spatial planning		Real estate developments and financing, climatic geography, climate modeling	8
Key competences	I	Presentations, press release, media, moderation, mediation	6
	II	CAD for urban and regional planning, statistics, GIS in urban and regional planning	10
Bachelor project			13
Bachelor Thesis			14

In the modules spatial planning at urban and regional level necessary knowledge is imparted concerning methods, instruments and conceptualization of spatial planning inclusive links to sector plans. Multidisciplinary aspects are included in exercises and the Bachelor project. In the Bachelor project students apply the gained competences and knowledge to solve a practical planning problem in a group of up to ten persons. In this context students should also train social competences, team management and presentation techniques.

During the Bachelor degree course at the University of Kaiserslautern students have the opportunity in the module international spatial planning to choose facultative a course in European Regional Policy. This is the only offer with reference to European issues. But the Bachelor project offers the opportunity to integrate European spatial planning issues in the study programme, also the Bachelor thesis.

4.2.2 Master of Science Urban and Regional Development at the University of Kaiserslautern

The Master Urban and Regional Development is the consecutive continuation of the Bachelor Spatial Planning. The four semester course prepares students for high-qualified jobs, the leadership of teams, a research career and is the precondition for a doctoral dissertation. It is structured in ten modules, a master project and the master thesis. Students need to collect 120 ECTS.

The modules are structured in spatial planning specific modules concerning urban and regional planning and development to deepen and round out the already gained knowledge. Scientific methods, the design of adapted planning processes in different spatial contexts (from rural areas to metropolitan areas and from urban to European levels) and the implementation of urban and regional development strategies and concepts are the main focus. Additional economic, social and legislative aspects to deal with multidisciplinary tasks in spatial developments are imparted.

Table 3: Master Urban and Regional Development at the University of Kaiserslautern – rough structure

	Modules	Contained European or international contents	ECTS
	Urban development	International urban development	27
	Regional development	Spatial development in Europe	18

	Economy		8
	Sociology	International developments	8
	Legislation		10
Facultative (1 of 3)	Economy 2	European Regional Policy	9
	Real estate developments		9
	Mobility and transport		9
	Key competences		12
	Master project		12
	Master Thesis		16

In one of the modules in regional development one lecture is about “spatial development in Europe”. One of the ten modules is to be chosen out of a choice of currently three (from summer semester 2013 on four) facultative modules: economy 2, real estate developments, mobility and transport, (international planning systems from 2013 on). The module economy 2 contains one course in European Regional policy. The planned module “international planning systems”, starting in summer semester 2013, will consist of three courses: international urban and regional development lab, European Spatial Development: Policies, Concepts, Strategies and methods of comparative planning.

The number of ECTS and related the effort students can put to European contents are in obligatory courses 2 ECTS (from 120 ECTS – 1,7 %) and in facultative courses currently 4 ECTS (together 6 ECTS – 5,1%), (from 2013 on 5 ECTS are possible – together 7 – 5,8%).

5. The EU dimension of planning education in Italy - evidences from Torino and Milano

Following the presentation of the spatial planning Bachelor and Master programmes activated by the above German universities, the present section focuses on two Italian universities: Politecnico di Torino and Politecnico di Milano, this being both the main Technical University of the country as well as among the few Italian University institutions running both Bachelor and Master programmes related to the field of spatial planning⁵. As with the German cases discussed in the section above, the provided study courses are presented after a short introduction of the institutional contexts they are active in. In particular, the extent to which Bachelor and Master programmes in these institutions includes elements related to European Spatial Planning and European Cohesion Policy will be explored.

However, before moving to the case studies, it is necessary to mention that the contextual conditions for spatial planning education (as well as for spatial planning profession) in Italy substantially differ from the German context. Here the planning

⁵ In the academic year 2001/2012, as few as XX University institutions were running autonomous bachelor and master programmes in planning (Together with Politecnico di Torino and Politecnico di Milano: XXXXX)

field developed as a declination of the professional figure of the architect and continues to be strongly attached to, and competing with the latter. Since its inception, the emancipation of the urban planner as an autonomous professional figure has been subjected to more or less open conflicts, and the first planning courses appeared in Italian universities only since the end of the 1970s. Within this context, Architecture faculties become the stage of a more or less explicit clashes focusing on the opportunity to revise the role of urban planning within or outside architecture education. Beside its cultural roots, this position is also underpinned by issues related to professional accreditation, as within the Italian legal framework, architects are officially entitled to redact and sign urban plans.

5.1 Education in spatial planning at Politecnico di Torino

As far as the Politecnico di Torino is concerned, spatial planning education is promoted within the two former Faculties of Architecture (Faculties were abolished as a consequence of the Higher Education reform on 2011) through two different channels: (i) through specific Teaching Units that constitute essential part of the pedagogical experience of the Bachelors and Masters degrees in Architecture and (ii) through a Bachelor and a Master course specifically dedicated to the education of spatial/urban planners (respectively accounting for XX and XX students in the academic year 2011/2012). A synthetic description of the main features and elements that characterize the latter is provided in the text below.

5.1.1 Bachelor of Science in Territorial, Urban, Environmental and Landscape Planning at Politecnico di Torino

The course is intended to train “territorial technicians” able to collaborate in all activities of territorial, urban, landscape, strategic and environmental planning, using the tools – programmes, plans and design projects – that serve to define and manage the organisation of a city or territory, and that guide the use of resources, environment and landscape⁶. Taking into account the expanding changes that urban, territorial and landscape planning must address, students graduated from this course are expected to work together with different specialists, and hence needs a multidisciplinary background that enables them to understand the languages of the various specialists and work with them in an integrated manner. Course graduates will be able to collaborate in the preparation of plans and programmes, to undertake the necessary analyses semi-autonomously, with particular attention to environmental and landscape aspects, to manage technical and administrative procedures, and design and manage territorial information systems which are today an indispensable means for the conduct of any planning activity.

⁶ For full syllabus see:

https://didattica.polito.it/pls/portal30/gap.a_mds.espandi?p_a_acc=2011&p_id_cdl=&p_sdu=82&p_cds=5&p_header=&p_anno=0&p_info=&p_lang=EN

Graduates seek employment with local authorities (municipalities, provinces, regions), municipal utilities and companies, professional firms and engineering firms operating in the field of territorial, urban, landscape and environmental planning. They can also pursue free-lance activities and enroll, after passing a state exam, in section B of the professional order of Architetti, pianificatori, paesaggisti e conservatori with the title of " junior planner", and are qualified to conduct research on or to apply existing knowledge to planning, conservation, restoration and renewal of urban areas, territory and landscape.

The programme follows three tracks, providing core modules on key disciplines as well as practical hands-on experience: (i) territorial government and town and land-use planning, (ii) landscape and environment and (iii) geographic Information Systems. It is organised in two series of teaching modules:

- a) Teaching units, which cover foundation subjects of a mono or multidisciplinary nature;
- b) Teaching units consisting of multidisciplinary ateliers. These focus on activities relating to actual local situations, allowing students to apply knowledge acquired in the Teaching Units. The ateliers are coordinated by a central disciplinary area, but contain other subject input as well. They last one semester and conclude with a single examination.

The relationship between core knowledge provided in the Teaching units and its application in the Atelier characterises the approach of the degree course.

The objective of the first two semesters is twofold: i) to teach the student that territory, city, landscape and environment are complex phenomena, the product of different forces, to be investigated from various disciplinary viewpoints, and ii) to provide the first analytical tools. The necessary background in the evolution of urban thinking, in planning tools and the institutional system for territorial government, is accompanied by history and geography studies addressed to the analysis of landscape and environmental characteristics, the fundamentals of mathematical tools, representation and cartography. The first year studies conclude with a practical experience in the Atelier, which allows students to apply the knowledge gained. The third and fourth semester activities provide students with skills in urban design (proportionate to the employment opportunities provided by the three-year BSc degree), an understanding of the field of territorial planning and its practices, and the other needed skills. These include the ability to set up a statistical survey and interpret the results, and the techniques and methods of spatial analysis using GIS. Urban design skills and knowledge relating to territorial planning practices are developed through two interdisciplinary ateliers, the first dedicated to urban design, with input from the fields of infrastructure planning and urban morphology, the second dedicated to regional planning, with elements of ecology and hydrogeology. These experiences are supported by two multidisciplinary modules providing basic knowledge, one in energy efficiency of human settlements and their environmental impact, the other in mobility and transport. The fifth and sixth semester activities help students to understand the complexity of implementation processes and to

acquire the necessary skills in this field, to experience real working conditions through an internship, and to develop a capacity for independent work in the final exam. The experience gained in the interdisciplinary atelier about local development and urban regeneration programmes is supplemented by units providing skills for evaluation of economic feasibility and strategic environmental assessment of plans and programmes, and basic knowledge of social factors that influence the territorial organisation and of the role of social participation in defining and implementing programmes.

The actual number of ECTS credits devoted to European/International issues is hardly quantifiable. However, some modules touch upon these issues and contribute to provide at least for some basic elements of EU and international planning, often in relation to their local declination. For instance, the module “institutional system for urban and territorial governance introduce the different territorial level somehow having a say in the planning activities among which the EU. Furthermore, the Atelier “Integrated programmes for local development and urban regeneration” focus on programmes of clear European inspiration. Additional insights on EU Environmental regulation are provided by the unit focusing on strategic environmental assessment.

Table 4: Bachelor of Science in Territorial, Urban, Environmental and Landscape Planning at Politecnico di Torino - Structure

Year (term)	Module	ECTS
1(1)	Planning Thought and Practice	6
1(1)	History of architecture and cities	6
1(1)	Geography, environment, landscape	6
1(1)	Representation	6
1(1)	English Language 1st level	3
1(2)	Calculus	6
1(2)	Cartography	6
1(2)	Institutional system for urban and territorial government	6
1(2)	Describing, Analysing , Interpreting (Atelier) <ul style="list-style-type: none"> • Analysis of the settlement and infrastructure system • History and interpretation of territorial processes • Geographic and economic factors in cities and regions development 	14
2(1)	Energetic efficiency of the built environments	8
2(1)	Statistics	6
2(1)	Urban Design (Atelier) <ul style="list-style-type: none"> • Urban design • Urban morphology analysis and design • Mobility infrastructures analysis and design 	14
2(2)	Mobility and land use	12
2(2)	Spatial analysis using GIS	6
2(2)	Territorial Planning (Atelier) <ul style="list-style-type: none"> • Territorial planning • Landscape Ecology 	14

	• Hydro geological issues in territorial planning	
2(2)	Free choice course	6
3(1)	Plan and Project Appraisal	8
3(1)	Urban sociology	6
3(1)	Strategic environmental assessment	6
3(1)	Integrated programmes for local development and urban regeneration (Atelier) <ul style="list-style-type: none"> • Integrated programmes and urban regeneration • Architectural aspects of urban regeneration • Territorial resources for local development 	14
3(2)	Free choice course	6
3(2)	Professional Training	8
3(2)	Final essay	7

5.1.2 Master of Science in Territorial, Urban, Landscape and environmental Planning at Politecnico di Torino

The Master-level course trains "planners" able to coordinate design teams engaged in territorial, urban, landscape, strategic and environmental planning⁷. As most of the key issues concerning people's lifestyles and development prospects nowadays involve urban, territorial, environmental and landscape planning and their ability to respond to crucial problems in the environment, planners' training focuses on the development of a solid multidisciplinary background that may provide them with the capability to facilitate cooperation among the various approaches, integrating the contributions of each and managing the resulting complexities. Besides, the growing importance of development models that enhance local identities in response to globalization processes, requires that planners develop strategies, policies and projects for urban and territorial transformation focusing on a proper use of local resources and involving all stakeholders (institutional, economic, social). The planner must therefore also be able to interact with non-experts and encourage their participation in the planning process. Thus the course objective is to train a figure with a broad, multidisciplinary background and a solid awareness of all the economic, social, institutional, environmental and ethical factors involved in a planning process. Graduates must pay particular attention to innovations in the institutional and regulatory frameworks governing the activities of administration, planning and design of cities, territory and landscape in both national and European Community contexts, as well as the consequent redefinition of planning processes and tools and their relationship with local development programmes.

The typical fields of activity for MSc-level graduates are free-lance practice and employment in public, private and non-profit organisations involved in the transformation and government of cities, territory and environment. Employment opportunities include local authorities (municipal, provincial, regional), municipal

⁷ (For full syllabus see:

https://didattica.polito.it/pls/portal30/gap.a_mds.espandi?p_a_acc=2011&p_id_cdl=&p_sdu=82&p_cds=9&p_header=&p_anno=0&p_info=&p_lang=EN)

companies, engineering firms operating in the fields of territorial, urban, landscape and environmental planning, as well as free-lance professional practice. The programme trains professional figures able to undertake research activities, or to apply existing knowledge in the fields of planning, conservation, restoration and renewal of cities, territory and landscape, performing functions that involve supervision, management and coordination of activities.

The programme centres around two formative experiences: urban planning and landscape and territorial planning. The professional profile outlined above requires the training programme to provide students with a variety of disciplinary input, as well as develop their capacity to integrate these into a global vision of complex problems. With this aim the programme is organised in two teaching modules:

- a. Teaching units providing systematic knowledge that builds and expands on the diversity of disciplinary approaches needed; these units may be monodisciplinary or consist of integrated multidisciplinary courses leading to a single examination;
- b. Multi-disciplinary ateliers focusing on the definition of tools for planning at different scales, and simulating, by means of input from various subject areas, the integration of a plurality of viewpoints which is required of planning teams. The ateliers have strict attendance requirements and lead to a single examination.

The activities in the first semester are designed to give students a solid background in areas closely related to the formulation of local planning policies: regulatory issues associated with planning activities, urban and regional geography and sociology of the environment. Students must also understand aspects of network and single-point infrastructures linked to solving energetic, acoustic and environmental issues, and how to integrate these infrastructures into the urban fabric. In the second semester students will simulate a process for drawing up a plan at the local level, in addition to completing their knowledge in subject areas closely related to the formulation of planning tools, such as transport planning, and gaining a solid understanding of the role of the European Union in urban and territorial policies.

During the third semester, students will gain specific knowledge in the field of land protection and water management, allowing them to address regional and landscape planning issues and interact with specialists. They will also expand their knowledge of policies and processes for territorial and strategic planning, and will simulate a process for drawing up a territorial and landscape plan. The fourth academic period is wholly dedicated to thesis preparation. Students are given an alternative between a theoretical thesis or a practical thesis which entails an internship period.

Also in this case the focus on EU and International planning issue is spread among several modules. However, it is interesting to notice how, the Master programme features also specific modules with a clear EU and International focus, as for instance *Urban and Territorial Policies in Italy and Europe* and *Policies and tools for environmental sustainability* (suggested).

Table 5: Bachelor of Science in Territorial, Urban, Environmental and Landscape Planning at Politecnico di Torino – Structure

Year (term)	Module	ECTS
1(1)	"Inclusive planning and environmental sociology"	6
1(1)	Urban and territorial geography	6
1(1)	Energetic and environmental sustainability of the territory <ul style="list-style-type: none"> • "Sostenibilità energetica ed ambientale del territorio" A • "Sostenibilità energetica ed ambientale del territorio" B 	8
1(1)	Planning rules and institutional context	6
1(1)	<i>Free choice course</i>	8
1(2)	Urban planning Studio <ul style="list-style-type: none"> • Urban planning • Evaluation and economic feasibility • Urban morphology analysis and design • History and critics of urban and territorial heritage 	14
1(2)	Urban and Territorial Policies in Italy and Europe	6
1(2)	Transports Planning	6
2(1)	Landscape and territorial planning Studio <ul style="list-style-type: none"> • Landscape and territorial planning • Landscape analysis and design • Landscape Ecology • Mathematical models for decisions 	16
2(1)	Territorial and Strategic Planning	6
2(1)	Soil defence and water management	8
2(2)	Thesis research/Internship or Theoretical thesis	30
2(2)	Public Policies Analysis (suggested)	6
2(2)	Policies and tools for environmental sustainability (suggested)	6

5.2 Education in spatial planning at Politecnico di Milano

5.1.1 Bachelor of Science in XXX at Politecnico di Milano

5.1.2 Master of Science XXX at Politecnico di Milano

6. Do the reviewed Spatial Planning education programmes meet the requirements concerning necessary EU knowledge? Conclusive remarks and future perspectives

Before formulating some conclusive remarks, it is worth to shortly assess and compare whether EU spatial planning and regional policy issues matter in the reviewed education programmes in a way that they provide graduates with basic knowledge.

An overview about obligatory and facultative contents about required knowledge in “cultural differences in planning on a European and international level” in “political,



specifically dedicated modules. Whereas this provides graduates with a solid knowledge background on EU Cohesion Policy and related programmes and projects, it has to be noted that only one module is characterized by a broader perspective that goes beyond the EU borders. In respect of leadership roles of Master graduates in spatial planning working, it is strongly advisable to provide obligatory due knowledge in European spatial planning and regional policy.

In conclusion, the contents of the reviewed spatial planning study programmes seem to stress the need for specific, methodological, multidisciplinary and national legislative knowledge and turned so the scales of European contents in the new Bachelor – Master programmes. This is partly also a result of existing and binding standards study programmes need to meet concerning national associations and standards for public careers.

Nevertheless, at the next opportunity it is advisable to check whether European content could be strengthened in the curriculums. Evaluations of degree courses and graduates-surveys are good opportunities to ask students and graduates if and if yes how contents could be changed to have space for obligatory European contents. Especially graduates-surveys should be used to get to know if they missed European issues or if training on the job was an appropriate approach.

A short-term realizable approach to get degree courses more strengthened in terms of European issues, is to provide targeted Bachelor and Master projects and thesis topics linked with European spatial planning and cohesion policy

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