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THE SPATIAL PLANNING AND ENVIRONMENT DEPARTMENT OF POLYTECH TOURS

1.B

PREFACE

I **N** France, the design and planning of inhabited spaces is covered by four professional disciplines which match with four educational establishments:

- Urbanism, urban and regional planning in Schools of Engineering and University departments
- Civil engineering, urban engineering in Schools of Engineering
- Architecture, Landscape in Schools of Architecture and Landscape
- Economics and social studies in Faculties

Embracing those four disciplines plus Environment Studies, the programme offered in the Planning and Environment Department at the Polytechnic School of the University of Tours (EPU-DAE) is unique in France. It is the sole Engineering degree in Territorial Planning accredited by the Engineering Title Committee (CTI), and has been reassessed recently and accredited by the CTI for the next 6 years (Sept 2014 - Sept 2020). The EPU-DAE is also recognised by the French speaking association of Schools in Urban and Regional Planning (APERAU), and is actually one of the founding members of both APERAU and AESOP.

The EPU-DAE programme aims to help students acquire technical and practical knowledge and competences for addressing contemporary planning challenges faced by cities and urban regions in the context of climate change and the need for designing and implementing workable models and approaches toward more sustainable urban and regional development dynamics.

The nearly 100 graduates/year are young professionals in urban and regional planning and in environmental engineering. They are trained for planning projects management, implementation and evaluation. The main places of employment local and regional governments, urban planning offices, transport networks, energy providers, environment agencies, consultancy and specialized business service companies.

The training is based on complementary units and pedagogical activities in:

- Natural and formal sciences: mathematics, liquid mechanics and hydrology, ecology, earth sciences, information and system processing science
- Technical sciences of planning: ecological engineering and environmental sciences, transport systems, urban engineering, scientific approach of urban project, energetics
- Economics, management, law and human sciences: environmental regulations and policies, town planning laws, spatial economy, water management laws, sociology, geography, political sciences
- Labour laws, public relations
- Project design and management
- English and foreign languages

The programme is based on a balance between lectures in theory and methodology, practical training, workshops, case studies, international exchanges, research methods and an internship in a private or public organization.

The target of the programme is to combine scientific and technical knowledge, savoir-faire and social skills.

The knowledge and the contents of the programme are related to two disciplines - spatial planning and environmental engineering:

- connected to strong changes and characterized by ruptures, heightening of economic disruptions, managing and sharing limited resources, the need to protect our natural environment
- aimed at planning, ranging from the conceptual level (which makes up the possible alternatives) to the operational level (which designs and achieves the plan and the programmes it underlies)
- combining the different types and scales of spaces, from the block to the expansive, and even the very large scale of spaces or territories
- anticipating the next stakes, liveability of spaces and places, exchange, share and manage resources, design and assist the stakeholders of a project.

Applying the savoir-faire and competences to project management and design the trained planner will be able to:

- develop future-orientated approaches and strategies, apply study and design tools, contribute to studies in urban or territorial projects at different scales
- lead a project combining observation, design and management
- drive and animate a project
- be creative and inventive

In addition, social skills are taught, linked with teamwork directed towards a broad number of stakeholders through:

- Listening and dialogue abilities
- Organizational capabilities
- Professional convictions and affirmed professional ethics.

The teaching team is composed of 24 Full Faculty members, 6 Faculty contractual professional associate professors, 3 part-time lecturers, and 50 teaching practitioners. Besides conventional lectures and applied classes, the programme also offers various innovative methods of teaching: field work and reports, project teamwork, workshops, seminars and discussions, professional internships, individual project learning. Individual learning is introduced during the first year of the programme and becomes more and more important later in the study. Teaching methods focus on the student and the cumulative development of his/her professional and individual capabilities, especially toward improving motivation, involvement and the application of the acquired knowledge and capabilities in practice in the “real world”.

All professors and lecturers are members of a CNRS (National Scientific Research Centre) research unit, the UMR 7324 CITERES (Cités, Territoires, Environnement et Sociétés), mostly belonging to the IPAPE (Ingénierie du

Projet d'Aménagement, Paysage et Environnement) team. In addition, the faculty members regularly cooperate in international research projects (e.g. ESPON, EU Framework programmes). They also teach in a fully English language international research master course (accredited by the Ministry of Higher Education), called "Planning and Sustainability: Urban and Regional Planning", provided by the EPU-DAE.

Finally, in the framework of Erasmus Plus bilateral agreements (about 23) and other cooperation arrangements around the world (Canada, USA, China, India, Brazil, etc.), the Department welcomes every year 5-6 foreign visiting professors who offer lectures and seminars in the Master programmes.

The school also has 11 Administrative and technical staff and a network of 3,100 alumni.

The EPU-DAE is one of the 5 specialities offered by the Ecole Polytechnique de l'Université de Tours, the Engineering School of the François Rabelais University of Tours. It is a five year course which educates in total about 300 engineers every year, after two years of general scientific or technological courses.

Created on the 2nd July 2002, Polytech Tours is co-founder of the Polytech network. This network of 13 schools represents nearly 14,000 students and apprentice engineers in training and graduates annually more than 3,100 in more than 80 specialties covering all major scientific and engineering fields.

Polytech Tours continues its policy of strengthening engineering courses in the university, focussing particularly on the creation of specialisms in an area where skills are scarce and issues important. This will provide access to emerging professions in the fields of Engineering, Spatial Planning and Environment (GAE). This specialism, built on the basis of the present 'Urban and Regional Planning' and an Aquatic Environment Engineering university department, 'Ingénierie des Milieux Aquatiques et des Corridors Fluviaux' (IMACOF) is organised around a common core (66% of lessons) and two pathways - Planning and Territorial Engineering and Aquatic Environment Engineering. This newly created specialism will strengthen the position of Polytech Tours in the area of spatial planning and environment.

To sum up, the curriculum in spatial planning and environmental engineering benefits from 45 years of experience in planning and environment teaching and research at the University of Tours since its foundation. It also relies on the competences and potential of 30 full position teachers, about 50 professional lecturers and a regular flow of international visiting professors and researchers and more and more foreign students. In addition, the 'International Research Master in Planning and Sustainability: Urban and Regional Planning', entirely taught in English, is increasingly targeted by high-level foreign students from all continents. Finally, the strong openness and involvement of the Planning and Environment Department members, researchers and students in European and international networks and projects is a key ingredient of the capability of the Department to welcome students, PhDs and young researchers in planning and environment, especially from Europe, but actually from virtually everywhere, as the incoming students' records of origin show.