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CENTRALE NANTES



Master
City and Urban Environments

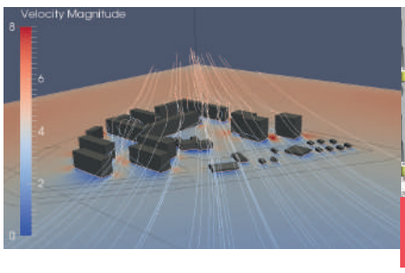
Graduate programme | **Master** in Sciences, Technologies and Health

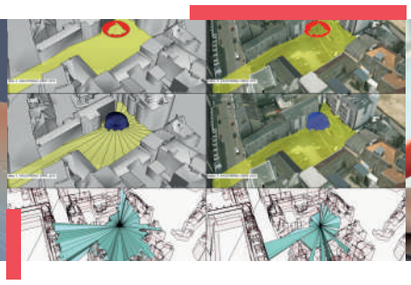
ARCHITECTURE, AMBIANCES, URBANITY

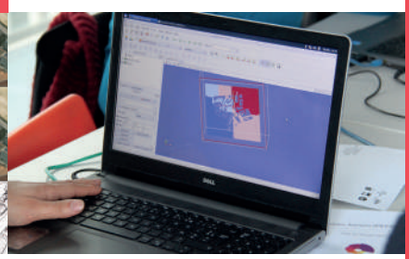
OBJECTIVES

This Master develops skills for addressing environmental and health issues in the context of sustainable urban development, in research and in urban design.

The programme is designed to provide the scientific theoretical knowledge and tools necessary to understand and address the environmental physical problems resulting from the ever increasing urban population. Various key disciplines such as urban microclimatology, wind and ventilation in urban areas, human ecology of urban spaces, sunlight and illumination are taught through advanced lectures and research work in laboratories which are renowned in these fields.







SKILLS

Specialism-specific

- Understand and master the theoretical and methodological foundations of urban environments through the problematic of ambiances
- Master the physical phenomena that contribute to the comfort and to the sensitive perception of the developed or built environment
- Know how to characterise urban ambiances

General

- Express assumptions to solve and analyse a problem
- Communicate comprehensive results in a meaningful way
- Undertake bibliographic surveys from international research and professional literature
- Carry out an urban project through its environmental challenges

JOB PROSPECTS & FURTHER PHD STUDIES

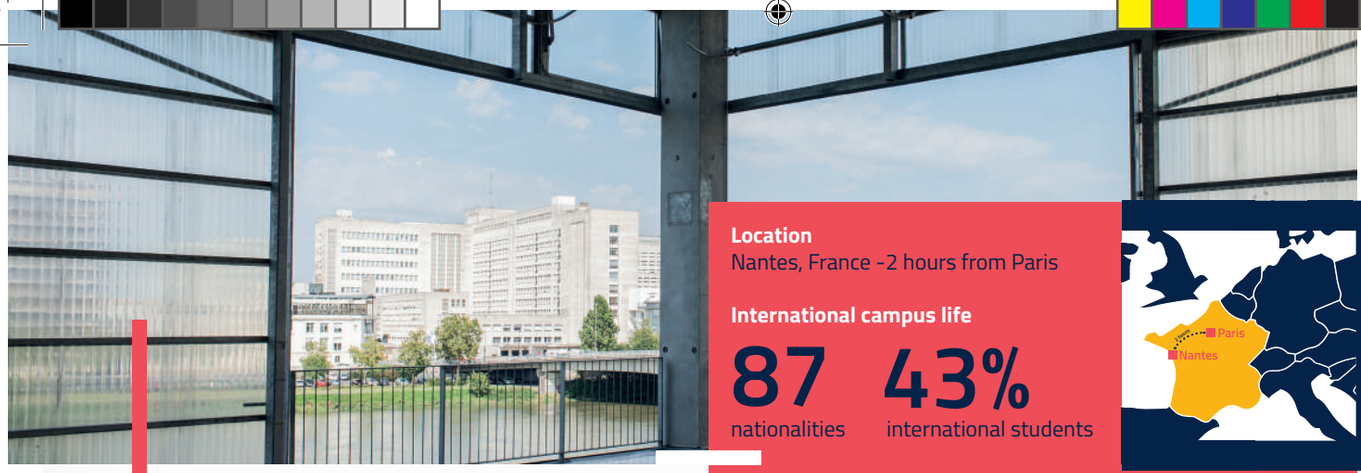
SECTOR: Urban planning and design, Urban environment, Architecture.

FIELDS: Urban planning, Microclimatology, Comfort conditions in urban areas.

JOB POSITIONS: Urban planner/architect in consulting office or groups specialized in environmental engineering; assistance to contracting authorities; Research and academic career (post PhD).

www.ec-nantes.fr
CENTRALE GROUP

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Location
Nantes, France -2 hours from Paris

International campus life

87 nationalities

43% international students

Master in Sciences, Technologies and Health

EXAMPLES OF FINAL YEAR PROJECTS

5 to 6 month internship in Industry

> Considering exterior air quality during urban design
> Housing comfort conditions analysis in rural areas (district of Bogota, Colombia)

5 to 6 month thesis in Research Labs

> Lumiducs: history and challenges in modern cities
> Collective manufacturing of space: between urban initiatives and risks
> Architectural angle at the cross-roads: the urban angle as an object of study of the urban space

FACULTY, INDUSTRIAL PARTNERS AND RESEARCH LABS

This Master relies on the Centrale Nantes' faculty and the School of Architecture of Nantes (Ensa Nantes) staff and research facilities of the LHEEA Laboratory, the AAU laboratory and the IRSTV (Research Institute on Urban Sciences and Technology). Centrale Nantes and Ensa Nantes have several professional partnerships such as with EDF, Veolia, ENERCON, Nantes Métropole, Air Pays de la Loire, CEREMA...

PARTNERSHIP

Ensa Nantes

OTHER PROGRAMME INFORMATION

> Length of Studies: 2 years
> Language of instruction: First year English and French, second year French
> 3 semesters of courses and 1 semester of Master's thesis

Tuition & Fees - Scholarships - Application process - Deadlines

MORE INFORMATION AND FULL PROGRAMME:
www.ec-nantes.fr/masters

CONTACT: Ms Sarah Alami
master.admission@ec-nantes.fr

CONTENT AND COURSES

(A Master Degree requires the validation of 120 ECTS credits)

M1 - AUTUMN SEMESTER	ECTS
Fluid Mechanics 1	5
Programming and Algorithm	4
Energetics and Building heat transfers	4
Introduction to Geographic Information Sciences	5
Introduction to research	4
Business Environment	4
Modern Languages	4
M1 - SPRING SEMESTER	**ECTS**
Hydrology and transfers in soils	4
Introduction to Computational Fluid Dynamics	5
Urban Realities Review	4
Urban Management and Planning	4
History of the city	5
Social Sciences for the city	4
Modern Languages	4
M2 - AUTUMN SEMESTER	**ECTS**
Research methods and practice	4
Ambiance, ambiances	5
Urban project 1: theoretical approach and environmental indicators	4
Urban project 2: design and evaluation	5
Urban environment 1: sunlight & sound environment	4
Urban environment 2: wind & microclimate	4
Modern Languages	4
Conferences	-
M2 - SPRING SEMESTER	**ECTS**
Master Thesis or Industrial Internship	30

NB Course content may be subject to minor changes

Ecole Centrale de Nantes, Direction de la communication, July 2019

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MINISTÈRE DE L'ÉDUCATION NATIONALE, DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE

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