Master Double Degree
l’X - TUM

TUM – Informatics,
Elena Murè, 26 June 2018
GUIDED BY PUBLIC INTEREST

MILITARY AND HUMANIST HERITAGE

1794
École Polytechnique is founded at the height of the Age of Enlightenment

A humanist and progressive approach to science to address the key challenges of the 21st century

1804
Military status
L’X under the authority of the Ministry of the Armed Forces

Civic and military training to shape responsible and committed leaders
A WORLD-CLASS INSTITUTION

1st (France)
best Grande École of science and technology
In all French rankings

6th (world)
top university for the number of Nobel prizes per graduate
NATURE 2016

4th (world)
best university for the education of Fortune 500 executives
THE 2017

22nd (world)
best university for graduate employability
THE 2017
Bachelor of École Polytechnique

Ingénieur Polytechnicien program (Master’s level degree)

Masters’ programs

Degree from École Polytechnique

TUM-Informatics Double Degree

Master’s degree

PhD or Doctoral Program of l’X

2080 students

550 students

450 students
RESEARCH

CUTTING-EDGE RESEARCH AT THE INTERSECTION OF SCIENCES...

570 researchers and professors-researchers

22 laboratories

1600 research staff

FIELDS OF RESEARCH

- Markets, innovation and relations between science and society
- Nanosciences, innovative materials and efficient processes
- Energy, transports and the environment
- Bioengineering, biology and health
- Universal laws and structures
- Concepts and methods for the digital society
- Modelling and optimizing complex systems
- Matter and light in extreme conditions
- Nanosciences, innovative materials and efficient processes
LA FIBRE ENTREPRENEUR – DRAHI X NOVATION CENTER

Complete support for projects with a strong technological dimension

- EDUCATION
  3 masters

- ACCELERATION
  X-UP

- INCUBATION
  X-TECH

- PROTOTYPING & EXPERIMENTATION
  X-FAB

- NETWORKING
  Meetings with investors, coworking…

- DRONES
- BIG DATA
- DEEPLearning
- ENERGy
- IoT
- CLEANTECH
He revolutionized the modern automotive industry and democratized the use of automobiles, so men and ideas could circulate better.
Carlos Ghosn is the Chairman and CEO of France-based Renault, Chairman and former CEO of Japan-based Nissan, and Chairman of Mitsubishi Motors.
TUM-Informatics
Double Degree
L’X-TUM DOUBLE DEGREE IN INFORMATICS

5 semester Program

Flexible scheme

Specific scientific courses

Optional courses on professional skills, innovation and entrepreneurship, languages, ...

A specific track on Complex Computerized systems → COMASIC

Other available tracks

TUM
Master in Informatics
60 ECTS

1 year

L’X - Université Paris Saclay
Master in Informatics
60 ECTS

1 year

Additional
30 ECTS

6 months
Our “technological society” relies on computerized systems which are embedded, interconnected and more and more complex.

Our life is more and more in the hands of “cyberphysical systems”, i.e. interconnected control systems: ATM, Smart Buildings, Autonomous cars.
COMASIC - SECOND YEAR TRACK

Design, Modelling and Architecture of Complex Computerized Systems

**High scientific level and level of selectivity**

Both for **academic research** and for the **industry**: alumni at both important technical positions in big industrial groups (Thalès, Airbus etc.) and in the academia (thesis, postdoc, academic positions);

**Main competencies**: mathematical modelling and simulation of discrete-time and continuous-time systems, embedded systems, architecture, compilation, synchronous programming, distributed systems, fault-tolerant protocols, formal methods, validation etc.
COMASIC - SECOND YEAR TRACK

Track partially sponsored by the “Complex System Engineering” chair.

MODELING AND OPTIMISATION OF COMPLEX SYSTEMS

• Modeling the fog to transmit a signal (Josselin Gamier)
• Research and Education (COMASIC track)
Main Scientific Themes:

- Systems engineering and model-driven engineering
- Distributed systems
- Security
- Signal processing, optimization and control
- Hardware and software platforms
- Verification and validation
- Continuous time models and simulation
- Applications

Courses from leading researchers in their field at École Polytechnique, ENSTA ParisTech, Télécom ParisTech, Atomic Energy Commission, Paris-Sud, CentraleSupélec etc.
Organization of the curriculum

- 10 courses among the main scientific themes (2.5 ECTS each)
- 3 compulsory courses: foreign language (in general, scientific english), project, “academic life” or “life in industry” (2.5 ECTS each)
- Internship between 4 and 6 months in an academic laboratory or in industry (25 ECTS)
- Seminars, reading groups, courses by an invited professor (UNAM, Boulder etc.)
AN INTERNATIONAL ENVIRONMENT
AN INTERNATIONAL INSTITUTION

30% of international students

39% of international teaching staff

+60 of nationalities present on the campus
INTERNATIONAL STUDENTS AT L’X

Regular registration and Double Degrees

Bachelor Program
Cycle polytechnicien
Master Programs
Phd and Phd tracks

Academic Exchange

20-25 students per year

Several English taught classes at Graduate level

2019: more positions at Undergraduate level, entirely in English

Research Internship

23 research laboratories

35-40 internship subjects

20 fully financed positions + partially funded opportunities

Dedicated Office for International Student Services

On-campus accommodation
Sport facilities and Language classes