

Ecole Polytechnique France



www.polytechnique.edu



A multidisciplinary research centre

21 laboratories 1,600 people

Biology

Chemistry

Computer Science

Mathematics

Applied Mathematics

Mechanics

(Solid Mechanics, Fluid Dynamics, Meteorology)

Economics

Humanities and Social Sciences



Physics and Applied Physics

(Theoretical, Condensed Matter, Solid-State, Particle, Nuclear, Plasma, Materials, Electronics, Lasers, Optics)



- Fundamental Interactions (High-energy physics, particle physics, astrophysics)
- Lasers, Optics, Plasmas, Energy (High-performance short-time lasers, quantum optics, nuclear fusion)
- Condensed Matter, Soft Matter, Bio- and Nanostructures
- Electrical Engineering (micro- and nanoelectronics)



An outstanding campus

- ◆ 15 km away from Paris, 200 hectares



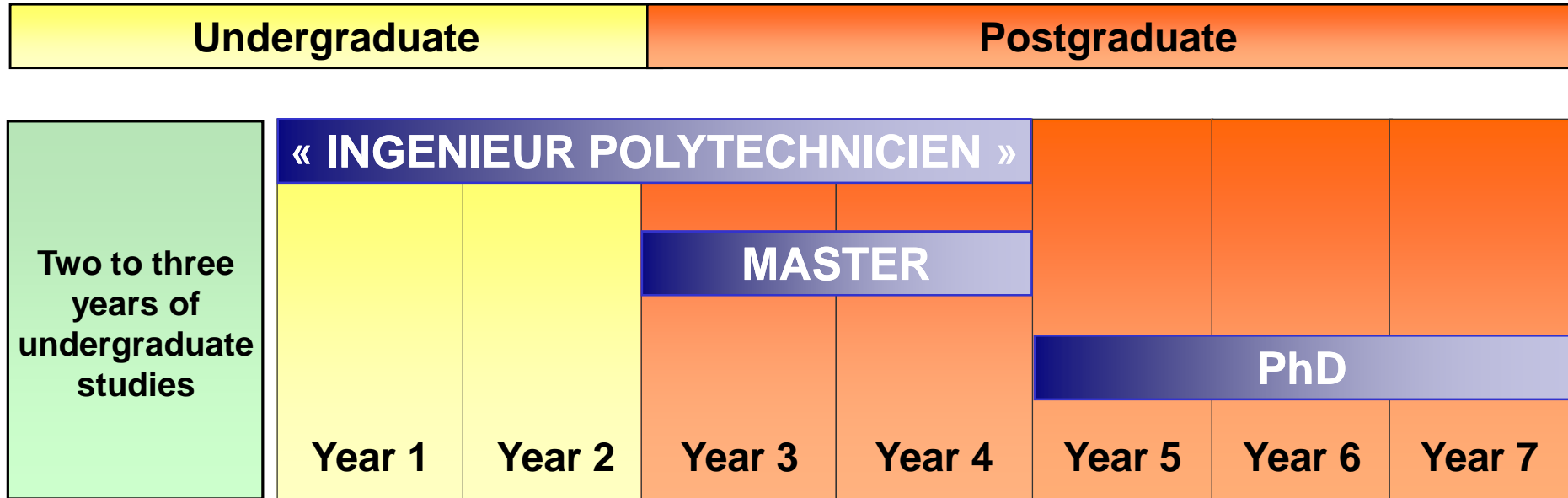
- ◆ 9,000 m² of sports facilities:
rugby, soccer, riding, swimming,
climbing, golf, fencing, athletics...



- ◆ 59 lecture halls and classrooms
- ◆ 1,500 individual dorm rooms



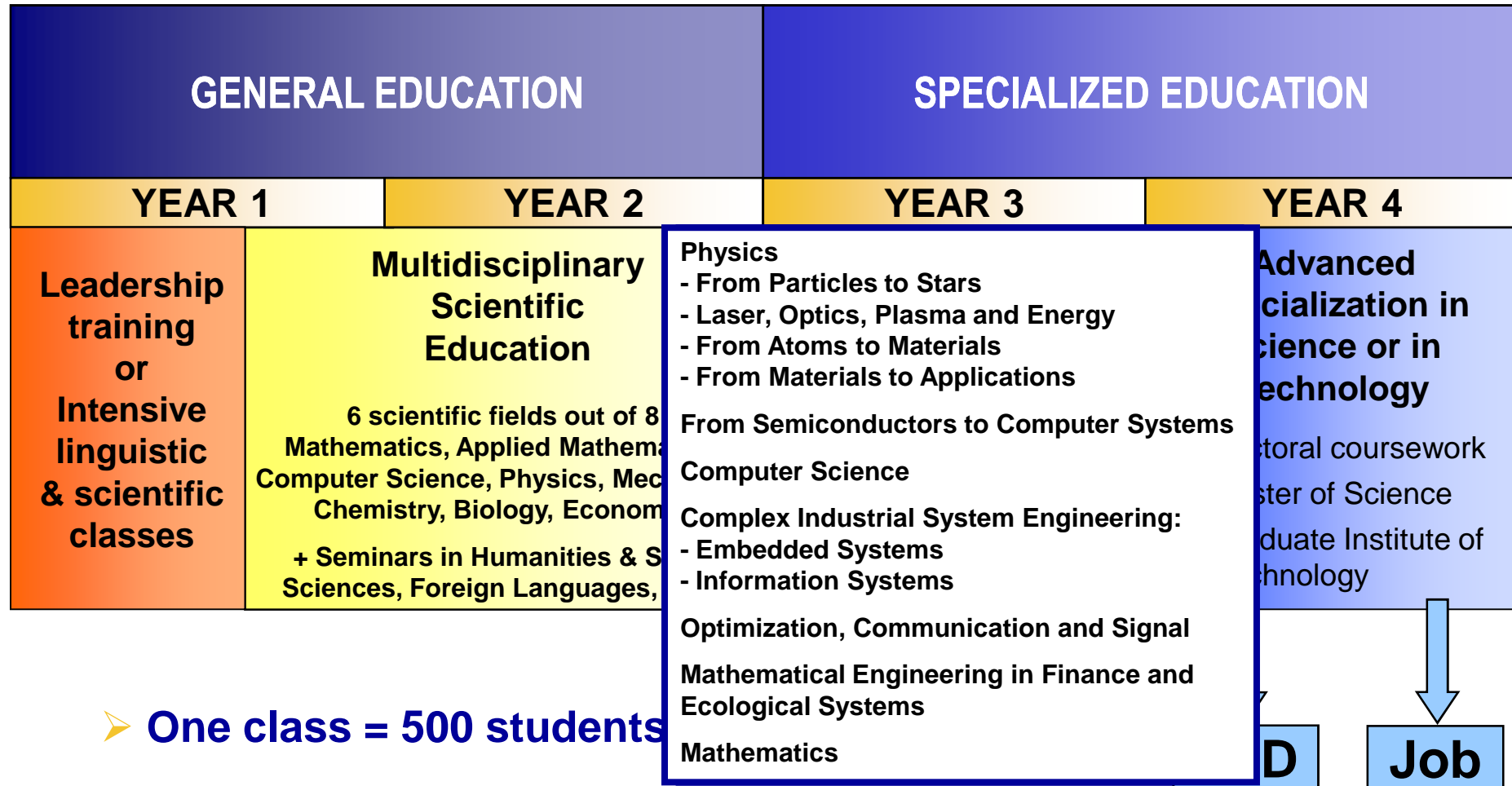
Education



- > « Ingénieur Polytechnicien » 2,000 students 20% international
- > Master Program 200 students 50% international
- > PhD Program 460 students 40% international



The « Ingénieur Polytechnicien » curriculum, an Advanced Master in Science & Technology



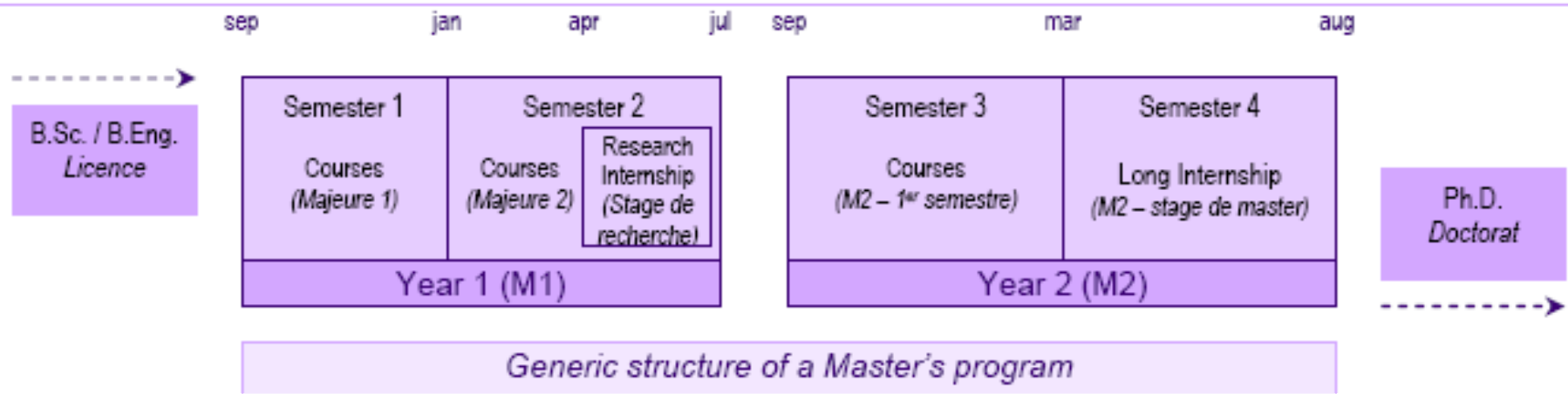
➤ **One class = 500 students**

400 French

100 International



Master of Science



Prerequisite: Bachelor's degree

Duration: 2 years - Possibility to be admitted directly to the 2nd year

Tuition fees: from €440 to €11,000 depending on the duration of the program and the type of scholarship awarded

Financial support:

- Research Assistantships, Teaching Assistantships,
- Excellence Fellowships
- Corporate Fellowships (Alcatel, Thales...)



Master of Science

Mathematics

“Analysis, Arithmetic and Geometry”

Applied Mathematics

“Mathematics and Modelling”

“PDE and Numerical Analysis”

“Optimization, Game Theory & Modelling
in Economics”

“Mathematics, Vision, Learning”

“Probability Theory and Applications”

“Probability Theory & Finance”

“Applied Probability Theory”

Computer Science

“Fundamental Computer Science”

System Engineering

“Engineering of Complex Industrial Systems”

Mechanics

“Materials for Structures and Energy”

“Fluid Mechanics and Energetics”
(in English)

“Oceans, Atmosphere, Climate and
Teledetection”

Economy and Business Management

“Quantitative Economics & Finance” (M1)
(in English)

“Project, Innovation, Conception”

“Economic Analysis and Policy”
(in English)

“Economy of Energy, Environment and
Sustainable Development”



Physics and Applications

“Fundamental Concepts in Physics”

“Theoretical Physics”

“Quantum Physics”

“Solid State Physics”

“Liquid & Soft Matter Physics”

“Optics, Matter and Plasmas”

“Laser / Matter”

“Optics & Photonics”

“Plasma Physics”

“Optoelectronics”

“Physics & Technology for Large Instruments”

“Materials Science and Nano-Objects”

“Nanostructures & Interfaces”

“Materials: Experimentation & Modelling”

“Fusion Sciences”

“Inertial Confinement Fusion”

“Magnetic Confinement Fusion”

Environmental Engineering

“Transportation and Sustainable Development”

Chemistry

“Molecular Chemistry” *(in English)*

Molecular and Cellular Biology

“Structural and Functional Engineering of Biomolecules”



PhD Program

- ◆ Internationally recognized degree
- ◆ Duration: 3 years
- ◆ Admission after a Master of Science by Research
- ◆ 460 PhD students: 40% international
- ◆ 100% of PhD students have financial support
- ◆ 120 PhD defences in 2006
- ◆ PhD Awards: 8 prizes per year



Practical Information-1

“Ingénieur Polytechnicien” (3-4 years)

- The deadline for on-line application for 2011: **01/10/2010**
Exams: end of November – beginning of December 2010
Final decision: January 2011
Education starts: October 2011 (exceptionally April 2011)
- Requirements (http://www.polytechnique.fr/concours/voie2_et/etranger/english/angl_require.php)
Candidates cannot apply more than once
- Application: **CV, official records, diplomas, recommendation letters, etc.**
- Exams: **Mathematics (50%), Physics (33%), General Scientific Knowledge (17%)**
in French or in English
- French Language: **4 months intensive courses (October – January) + courses**
- Scholarships: **~750 e/month for 3/4 years**
- Further Information: **international-v2@polytechnique.fr**



Master Programs (2 years)

- The deadline for on-line application for 2010-2011: 15/03/2010 or 15/05/2010
Exams: no exams, academic records or 15/08/2010
Final decision: variable, typically June
Education starts: September 2010
- Requirements: Bachelor of Science
Good knowledge in French, expect for Masters taught in English
Candidates can apply for several Master programs
- Application: CV, records, diplomas, recommendation letters, etc.
- Subject: more than 20 master programs (8 in English), see on the web
- French Language: obligatory courses, qualification exam at the end
- Scholarships: ~800 e/month
- Further Information: masters@polytechnique.fr



PhD Program (3 years)

- The deadline for subscription for 2010-2011: **30/11/2010 (BUT: Scholarships!)**
- Application: **Candidate must first identify a laboratory and a research subject**
 - List of laboratories: <http://www.polytechnique.edu/page.php?MID=44>
 - List of proposed topics: <http://www.adum.fr/as/ed/proposition.pl?site=polytech>
- Requirements: **Master of Science**
- Scholarships: **Candidate and his future supervisor should find a scholarship**
 - EDX Research Scholarship: 3 years (~ 1650 e/month), ~20 scholarships per year
deadline for application: end of May 2010
 - DRE Scholarship: 3 years (~ 1650 e/month), ~4 scholarships per year
deadline for application: end of May 2010
- French Language: **recommended but not necessary (courses offered)**
- Further Information: directeur.edx@polytechnique.edu



Practical Information-4

International Exchange Program (1 year or less)

- The deadline for on-line application for 2009-2010: 01/04/2010 or 31/10/2010
Final decision: end of May 2010 still possible!
Education starts: Mid-September 2010 or January 2011
- Admission: Academic qualification (no exams)
- Requirements: 3-4 years of education, good records (especially in Mathematics)
- Duration: from 3 to 9 months (academic year)
- Modality: Y2 or Y3 (level of M1): trimester + trimester + research internship
in one of laboratories in Ecole Polytechnique
- French Language: good knowledge; courses offered
- Scholarships: ~600 e/month
- Further Information: cecile.vigouroux@polytechnique.edu



Practical Information-5

Internship Program for International Students (3-6 months)

→ THIS IS A VERY FLEXIBLE PROGRAM FOR RESEARCH EXCHANGES

Release of internship topics: December 2010

Deadline for application: January 2011

Arrival: March-May 2010

→ Admission: Jury decision on academic qualification (no exams)

→ Dedicated to: 3rd and 4th years of Bachelor, 1st and 2nd years of Master, PhD

→ Duration: from 3 to 6 months

→ French Language: not necessary

→ Scholarships: ~600 or 800 e/month (according to the diploma)

→ Further Information: cecile.vigouroux@polytechnique.edu



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Elisabeth Crépon, Vice president for External Relations