

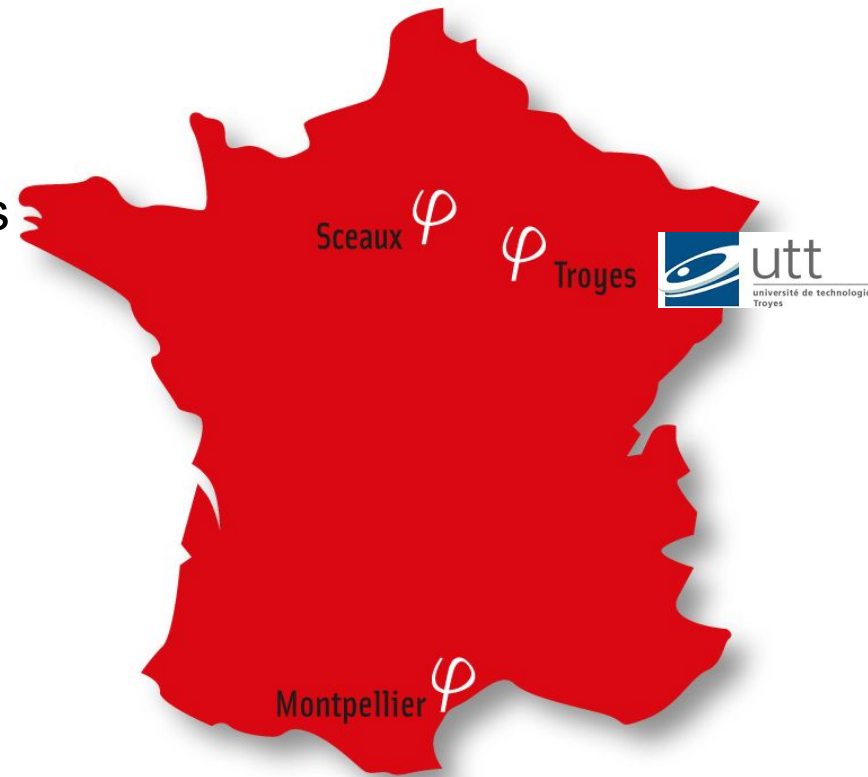
PARIS MONTPELLIER TROYES
FRANCE

Part I

Presentation of EPF Graduate School of Engineering

Three Campuses, One teaching model ...a strategy of partnerships

- >> **1 800** students
- >> **100** permanent staff
- >> **350** teachers and lecturers
- >> **800** partner companies
- >> **150** partner universities
(France / International)



- ⊖ Ecole Polytechnique Féminine was **founded in 1925** by Marie-Louise PARIS: **The School for women engineers**
- ⊖ 1938 : First accreditation by the French Accreditation Board (CTI - Commission des Titres d'Ingénieurs)
- ⊖ 1991: Became a State-approved Foundation
- ⊖ **1994 : Opening to coeducation**
- ⊖ 2009 : Development of the apprenticeship training
- ⊖ 2010 : Strategic partnership with Troyes University of Technology (UTT)
- ⊖ 2010 : New campus in Troyes
- ⊖ 2012 : New campus in Montpellier
- ⊖ 2013 : Renewal of **CTI accreditation for 6 years** (maximum duration)
- ⊖ 2013 : **First accreditation AERES (Research)**
- ⊖ **2015: “90 years” celebration**

- ⊖ EPF « Grande Ecole d'Ingénieurs»
- ⊖ “Private” Higher Education institution
- ⊖ Not-for-profit organization – equivalent to a “Charity” in UK
- ⊖ State approved Foundation

⊖ **EPF is heavily committed to – ESR - Ethics, Responsibility & Sustainability**

- ⊖ Promoting access to Engineering studies to young women nationally and internationally
 - ⊖ Cooperation programmes in Africa
 - ⊖ Preparatory classes in Burkina Faso and Cameroon
- ⊖ Facilitating access to handicapped people in all campuses
- ⊖ Recruiting students coming from diverse social origins; large scholarship scheme
- ⊖ Signatory of the United Nations Global Compact Charter
- ⊖ Committed to sustainable development, green energies and forest protection
 - ⊖ New building in Troyes classified as “green building”
 - ⊖ Specialization programme in Environmental & Innovative Engineering



- ⊖ Board of administration - 3 groups of members:
 - ⊖ Founding industrials members:
 - ⊖ AIRBUS ; EDF ; AREVA
 - ⊖ GRDF ; GIFAS ; GIM ; SAIGEPA
 - ⊖ Official members:
 - ⊖ Home office, Ministry of Research
 - ⊖ Rectors; President of the Region
 - ⊖ President of the Alumni association
 - ⊖ Qualified personalities
- ⊖ Academic Council and Scientific Council
- ⊖ President

φ Specialist Schools

- φ High competencies in a specialization area
- φ Identified professional sector

φ Generalist Schools

- φ Essential link: Personal project/ Professional Project
- φ High scientific and technical versatility and mobility
- φ Professional and sectorial mobility

Public

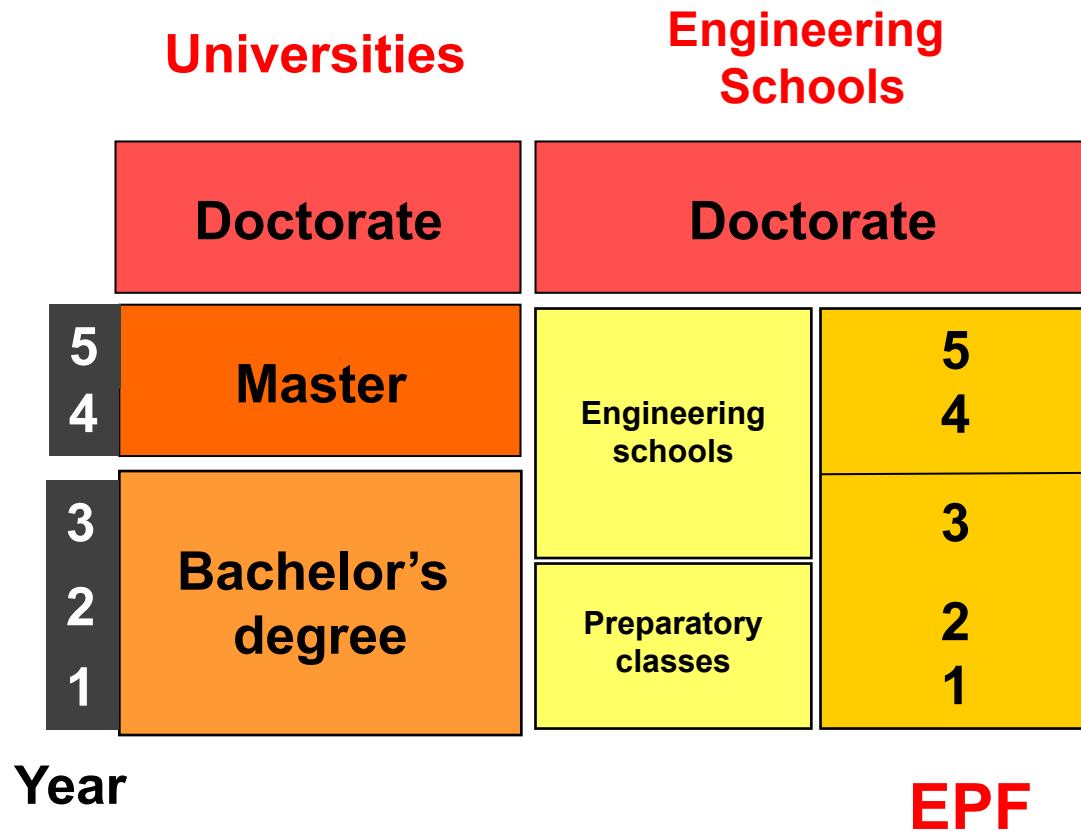


Private



Specialized

Generalist



- ⊖ General engineering degree

- ⊖ Joint degree with the Hochschule München
 - ⊖ EPF engineering degree, specialized in Production & Automatisation
 - ⊖ German Master's degree «Produktion und Automatisierung»

- ⊖ Engineering degree obtained by apprenticeship
 - ⊖ EPF engineering degree, specialized in Computing & Industrial Systems.

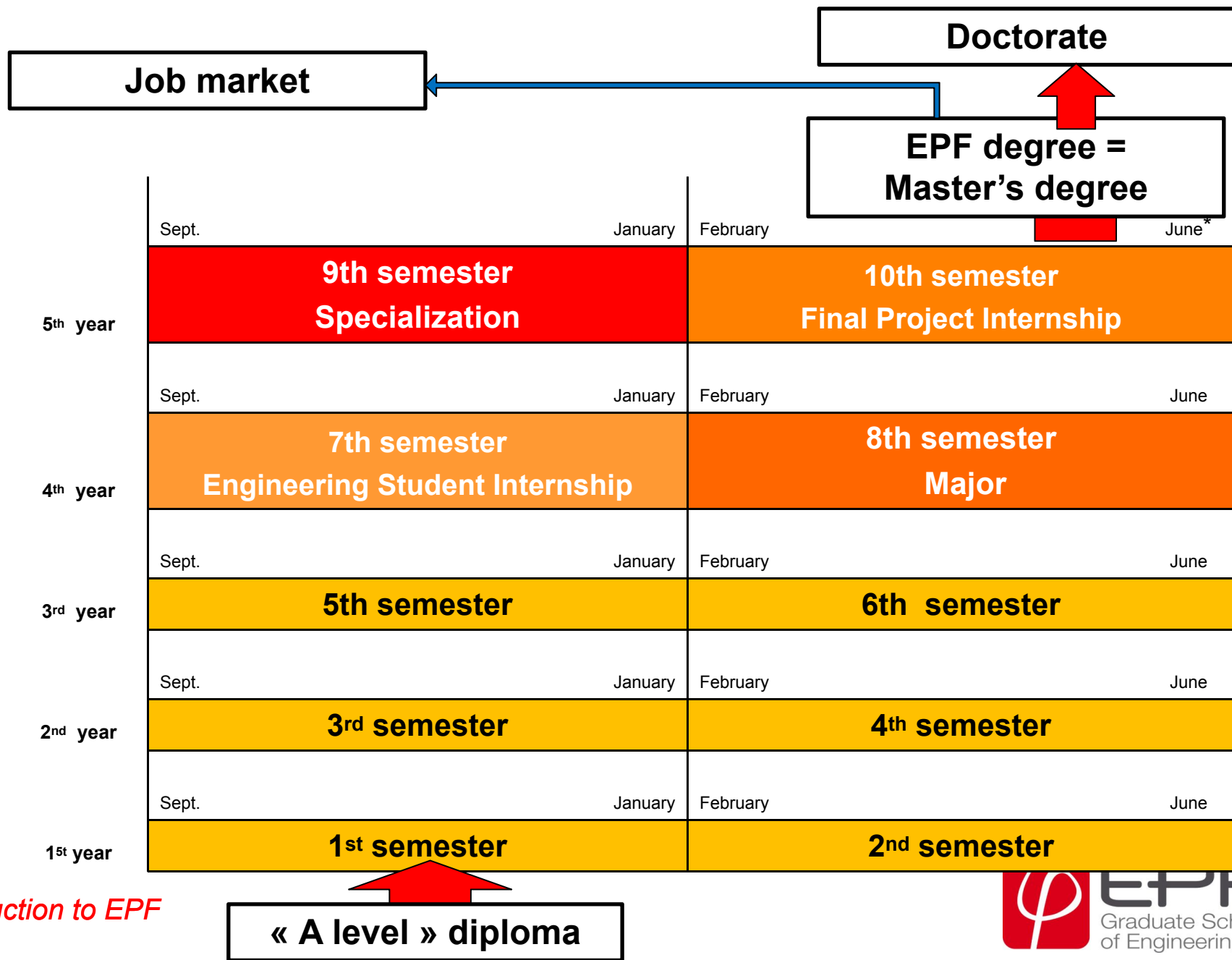
- ⊖ 1st year admissions (yearly intakes):
 - ⊖ Approx. 250 students out of ~3000 applications (competitive entry examination)
- ⊖ A total of 1800 students ; Paris : 1250; Montpellier : 350; Troyes : 200
- ⊖ 27% of female students at Undergraduate level ; 34% at Graduate level
- ⊖ Approx. 200 graduates + 20 to 30 double degree graduates per year
- ⊖ More than 9 200 graduates in 90 years (80 % are women)
- ⊖ 95% of graduates are hired within 4 months after graduation
- ⊖ 55% of contracts are already signed before graduation
- ⊖ Average starting salary: 35.000 € / year ; over 3 years: 45 500 € / year
- ⊖ 2015 rankings; N°1 in France amongst Engineering Schools recruiting after Bac according to the specialized magazine "l'Etudiant".

EPF Engineer - Professional Model

- ⊖ A general, chartered Engineer after 5 years of studies
 - ⊖ Innovative actor, mediator and leader
 - ⊖ Able to manage complexity
 - ⊖ Able to communicate through the organization
 - ⊖ Trained for scientific excellence and research

- ⊖ An Engineer prepared for mobility
 - ⊖ Trained to adapt for a changing world
 - ⊖ Open minded and internationally trained

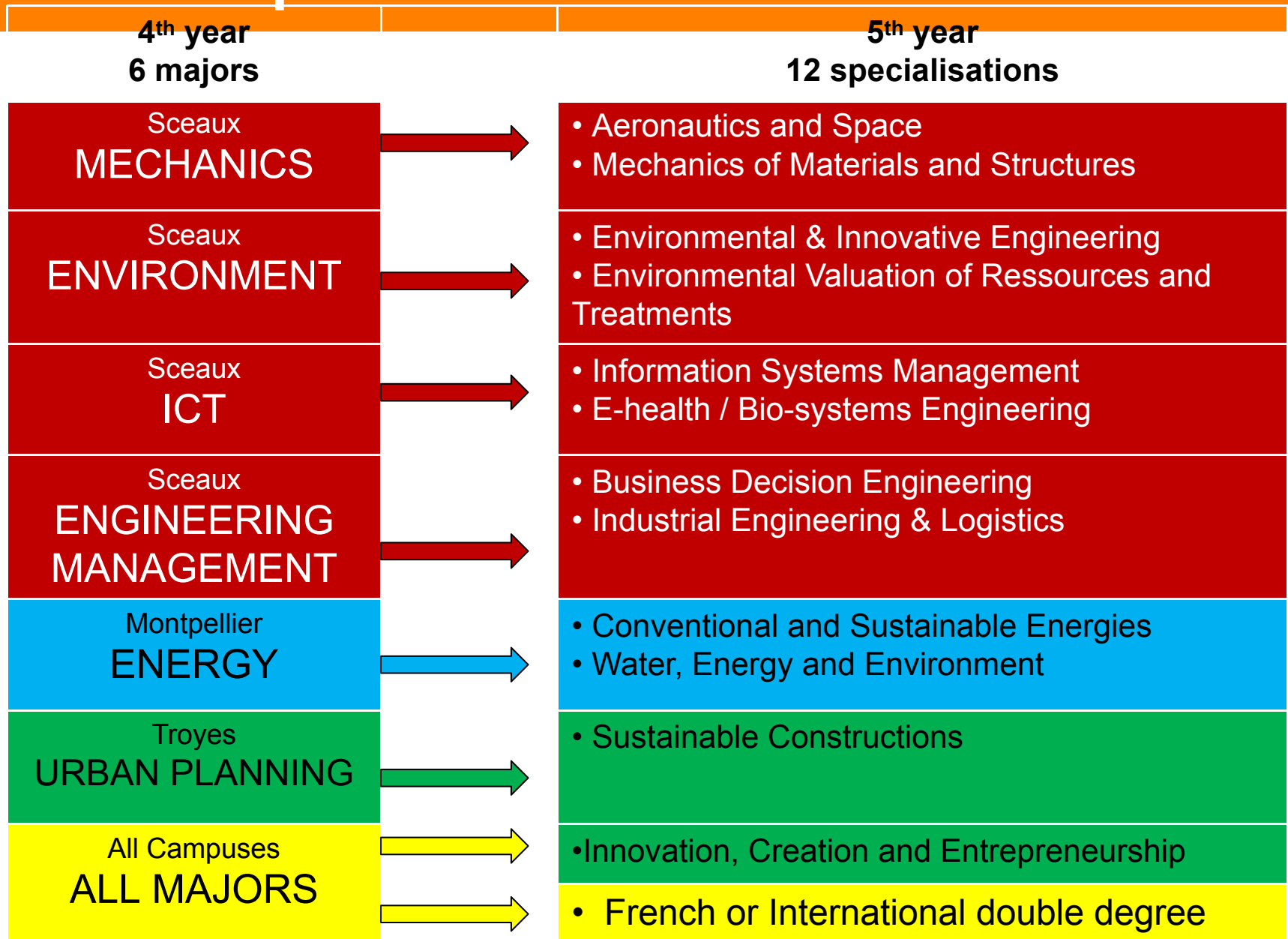
- ⊖ A Responsible Citizen



Introduction to EPF

« A level » diploma

Fields of Specialisation



Internships in the EPF curriculum

⊖ 3 compulsory internships

⊖ Placement in industry or University Research Labs

⊖ 4-week “blue-collar” internship after the 1st year

⊖ 4 to 6-month “engineering student” internship in the 4th year (15 weeks - semester 7)

⊖ 6-month “Final Project” in the 5th year (semester 10 or 11)

⊖ Assessment by company & university supervisors, written report and oral presentation.

Part II

International cooperation

Introduction:

- ↻ Exchange programmes since 1985
- ↻ Double-degree programmes since 1992
- ↻ University partners and exchange networks in Europe, North America, Latin America, Africa, Asia, Australia
- ↻ Students' applications for studies or internships with our international partner universities are severely screened by EPF's "International Jury".

☉ International bilateral agreements :

- ☉ 103 partner universities in 46 countries



☉ Memberships:

- ☉ CGE - Conférence des Grandes Ecoles
- ☉ CDEFI – Conférence des Directeurs d'Ecoles Françaises d'Ingénieurs
- ☉ UGEI – Union des Grandes Ecoles Indépendantes
- ☉ Campusfrance



☉ International Networks

- ☉ N+i (www.nplusi.com)
- ☉ BCI CREPUQ – Québec
- ☉ GE4 exchange network



⇨ Different types of cooperation

⇨ **Exchange semesters**

⇨ Joint or Double Degree programmes

⇨ International recruitment of students

⇨ Study Abroad

⇨ French Language Short Courses

⇨ Professors mobility and international Research

⌘ Exchange semesters

- ⌘ Individual student mobility, if possible on 1/1 basis
- ⌘ Bilateral agreements
- ⌘ Exchange networks
- ⌘ Tuition waiver - tuition is paid at home university
- ⌘ Full credit transfer for approved modules & course

- ⇨ Different types of cooperation
 - ⇨ Exchange semesters
 - ⇨ **Joint or Double Degree programmes**
 - ⇨ International recruitment of students
 - ⇨ Study abroad
 - ⇨ French Language Short Courses
 - ⇨ Professors mobility and international Research

International Degree Programs

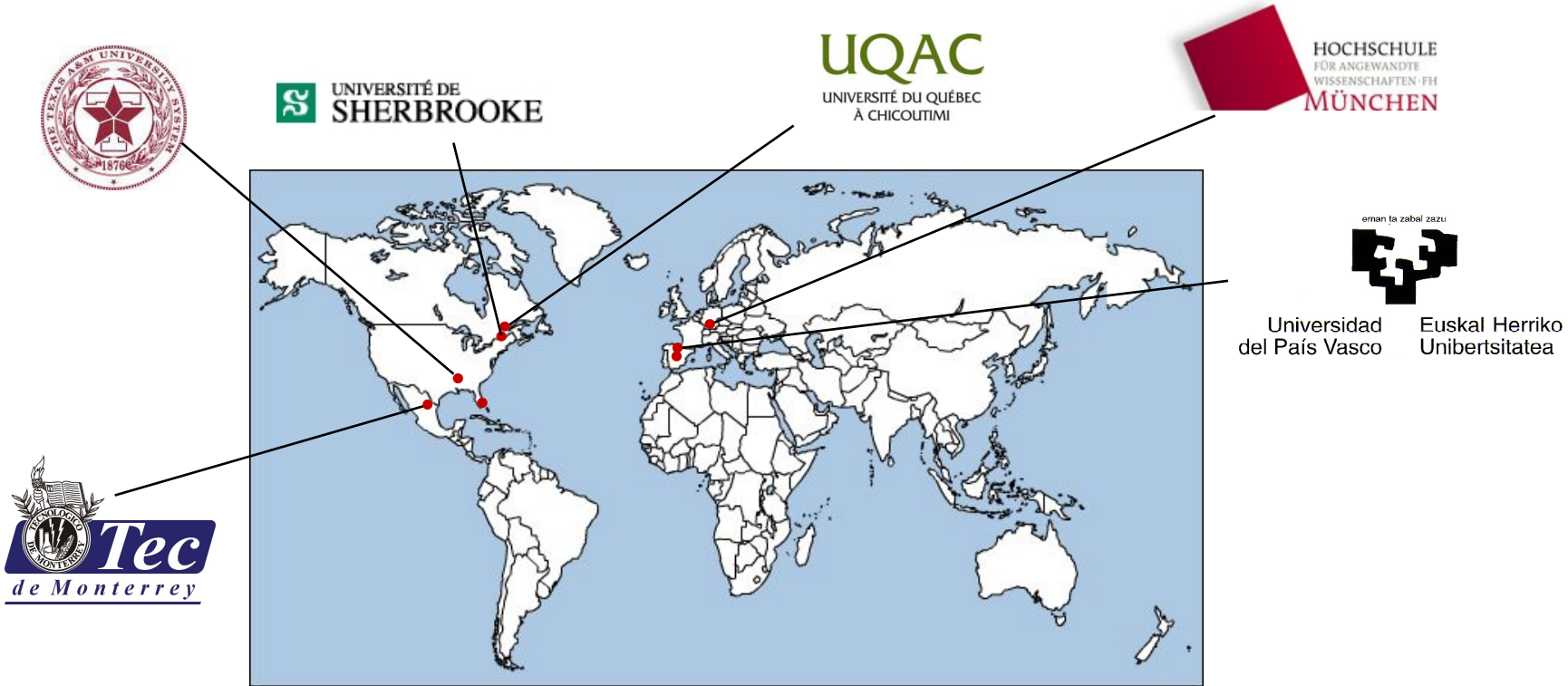
☞ **Joint or Double degrees**

☞ Main objectives:

- ☞ Two degrees in 5 ½ or 6 years
- ☞ Geographic mobility
- ☞ Common curriculum
- ☞ Intercultural Education
- ☞ Better employment and career opportunities

A lot of opportunities

Double degree programs



International Degree Programs

⌘ Latest developments : Double Degree Pathway

- ⌘ Georgia Institute of Technology - Atlanta - USA
 - ⌘ Master of Science in Computer Science
 - ⌘ Master of Science in Electrical & Computer Engineering
 - ⌘ Master of Science in Mechanical Engineering



International Degree Programs

☞ Latest developments : Double Degree Pathway

☞ Heriot Watt University, Edinburg (UK)

☞ MSc Water & Environmental Management

☞ MSc Architectural Engineering



☞ University of Dundee (UK)

☞ MSc Renewable Energy & Zero Carbon Buildings



☞ Abertay University, Dundee

☞ MSc Energy, Water & Environmental Management



⇨ Different types of cooperation:

⇨ Exchange semesters

⇨ Joint or Double Degree programmes

⇨ **International recruitment of students**

⇨ Study abroad

⇨ French Language Short Courses

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Degree pathway for international Students

Bachelor



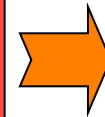
French language
courses

Harmonisation
Cycle

Pre-
specialised
Cycle

Specialised
Cycle

Internship



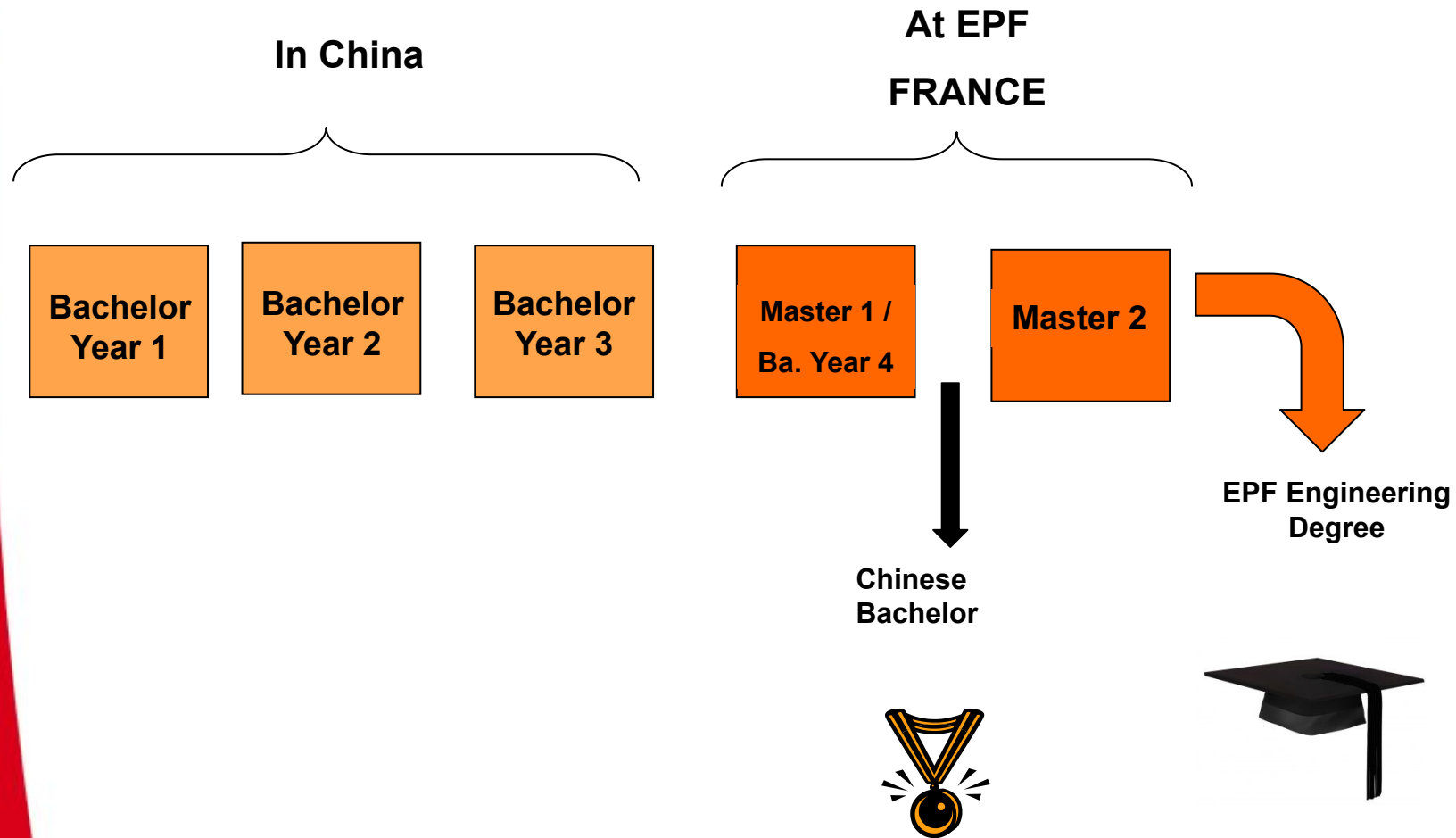
4th year

5th year

EPF
Engineering
Degree

- Prerequisites : Bachelor's Degree in the relevant disciplines
- Duration of studies : 2 years according to EPF & CTI's standards

New Model for Chinese Students



⇨ Different types of cooperation:

- ⇨ Exchange semesters
- ⇨ Joint or Double Degree programmes
- ⇨ International recruitment of students
- ⇨ **Study Abroad**
- ⇨ French Language Short Courses
- ⇨ Professors mobility and international Research

- ⊖ EPF has been receiving « Study Abroad » groups since 1997
- ⊖ US university partners in a view to balance exchange semesters
- ⊖ Study Abroad Programmes are “tailor made” :
 - ⊖ Faculty and students come to EPF to teach their home modules
- Or
- ⊖ EPF organizes the whole programme according to the expectations of the partner

- ⊖ EPF allocates professors and provides rooms, gives support for housing reservations and organisation of field trips, company visits etc.

- ⊖ Average duration : 3 to 6 weeks
- ⊖ Period : May - June – July – August
- ⊖ Students receive ECTS credits with conversion to foreign credits when necessary.

- ↻ Different types of cooperation:
 - ↻ Exchange semesters
 - ↻ Joint or double degree programmes
 - ↻ International recruitment of students
 - ↻ Study abroad
 - ↻ **French Language Short Courses**
 - ↻ Professors mobility and international Research

- ⊖ Launched by EPF in 1992,
- ⊖ ESTP (Grande Ecole specialized in Civil Engineering) partnered in 1998,

- ⊖ Dates;
 - ⊖ Summer: July and August
 - ⊖ Winter: January and February

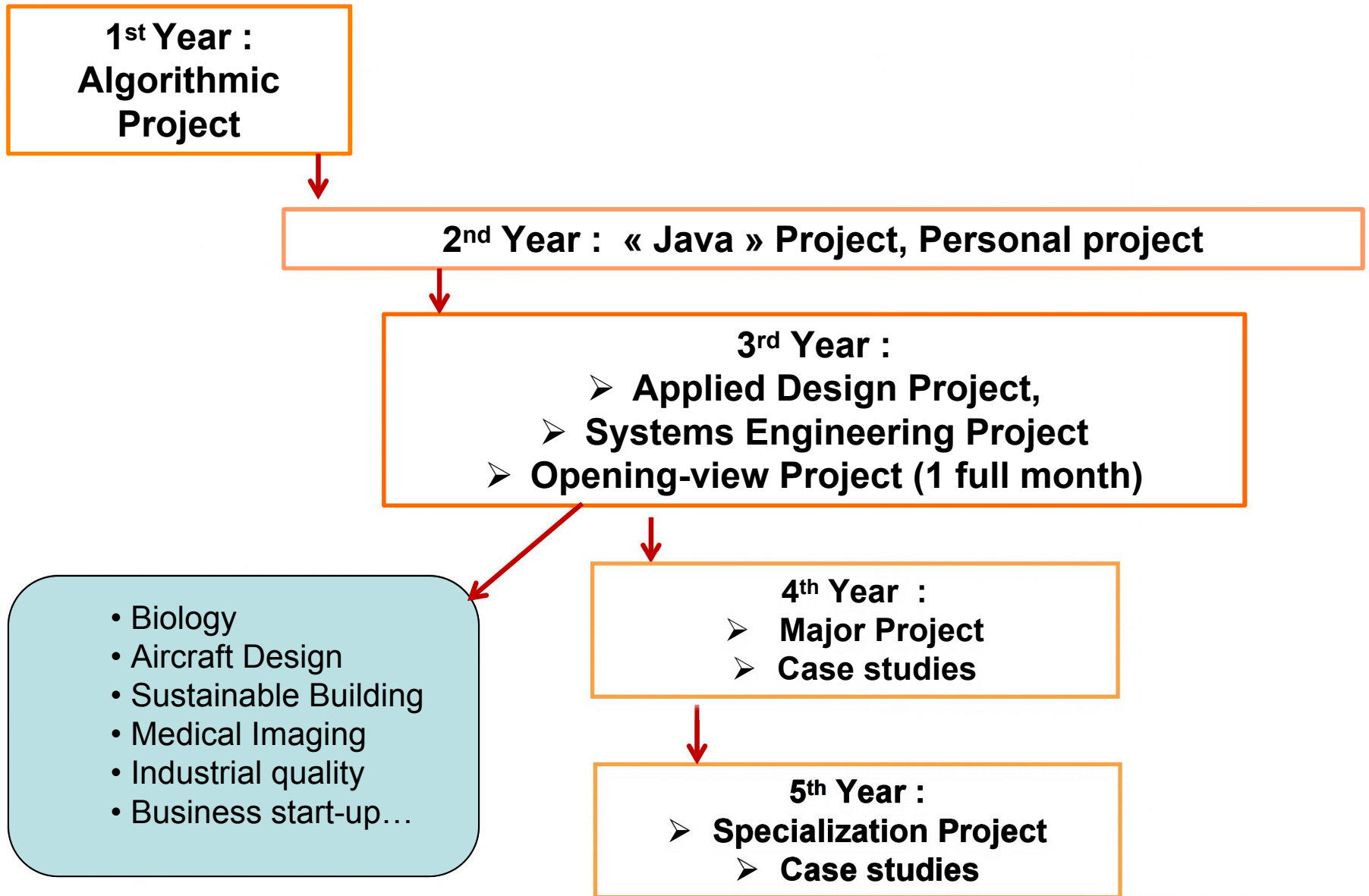
- ⊖ For engineering students - 21 hours/week
 - ⊖ **Complete programme:** French language, Scientific courses, Tutoring sessions, Conversation groups, Cultural and technical visits
 - ⊖ Full credit transfer for approved programmes of courses
- ⊖ French Government and EU qualities labels
- ⊖ Students receive ECTS credits
- ⊖ Students from partner universities get tuition waivers
- ⊖ PADEN (online preparation for international students)

Part III

Cooperation with companies, A global approach.

- ⊖ Participation to the Governance of the School (Part I)
- ⊖ Internships (Part I)
- ⊖ **Project Based Learning**
- ⊖ Visiting professors coming from the Industry
- ⊖ Consultancy projects and case studies. Dissemination of best practices in Industry.
- ⊖ Research
- ⊖ Cooperative Education / Apprenticeship

Project-based learning...



- ⊖ Participation to the Governance of the School (Part I)
- ⊖ Internships (Part I)
- ⊖ Project Based Learning
- ⊖ **Visiting professors coming from the Industry**
- ⊖ **Consultancy projects and case studies. Dissemination of best practices in Industry.**
- ⊖ Research
- ⊖ Cooperative Education / Apprenticeship

- ⊖ Sponsorships & scholarships
- ⊖ Applied industrial projects to motivate students for Research and PhDs
- ⊖ Contribution to teaching:



- ⊖ Up to 80% of our lecturers in the last years come from industry
- ⊖ 50 % in the 3rd year



- ⊖ Real case studies
 - ⊖ Starting from the 3rd year



- ⊖ Management Training
- ⊖ Meetings and conferences
- ⊖ Recruitment fairs, sites visits
- ⊖ In total, 11 to 16 months in industry
- ⊖ « EPF projets » : a Junior Company
- ⊖ Alumni Association (9 200 graduates)

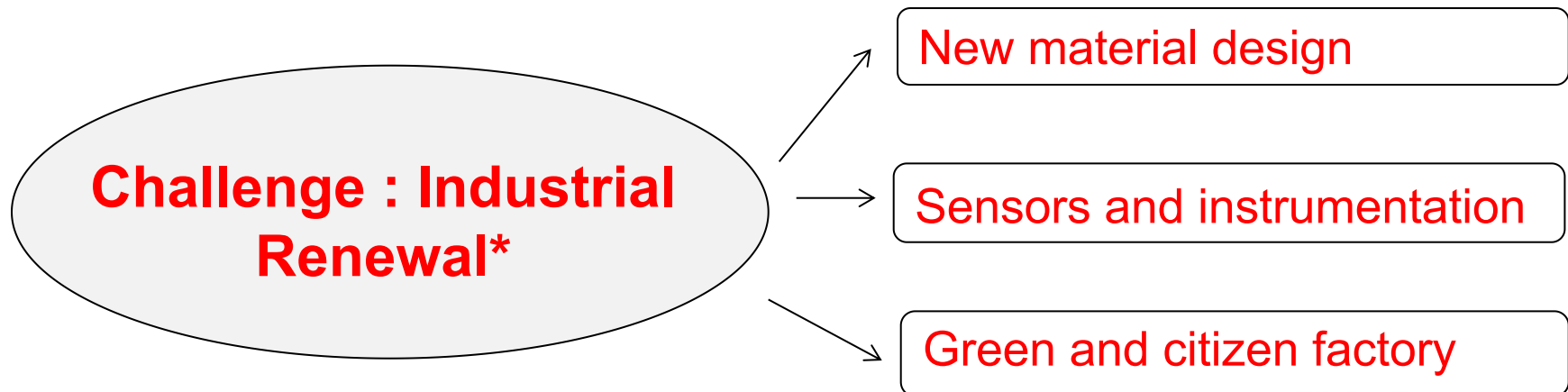


- ⊖ Participation to the Governance of the School
- ⊖ Internships
- ⊖ Project Based Learning
- ⊖ Visiting professors coming from the Industry
- ⊖ Consultancy projects and case studies. Dissemination of best practices in Industry.
- ⊖ **Research**
- ⊖ Cooperative Education / Apprenticeship

EPF Research aims to **protect resources in order to protect Life**

The cross-cutting theme of EPF Research covers **Sustainability of the systems for:**

- **Mechanics,**
- **Energy,**
- **Environment.**



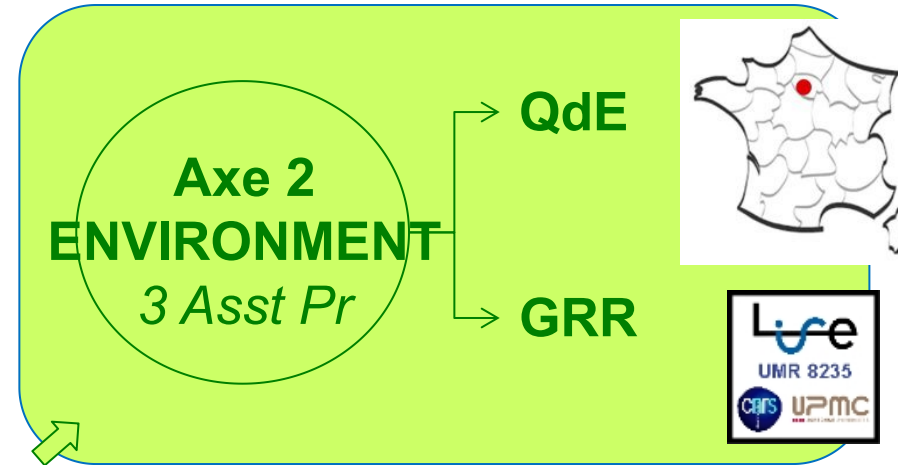
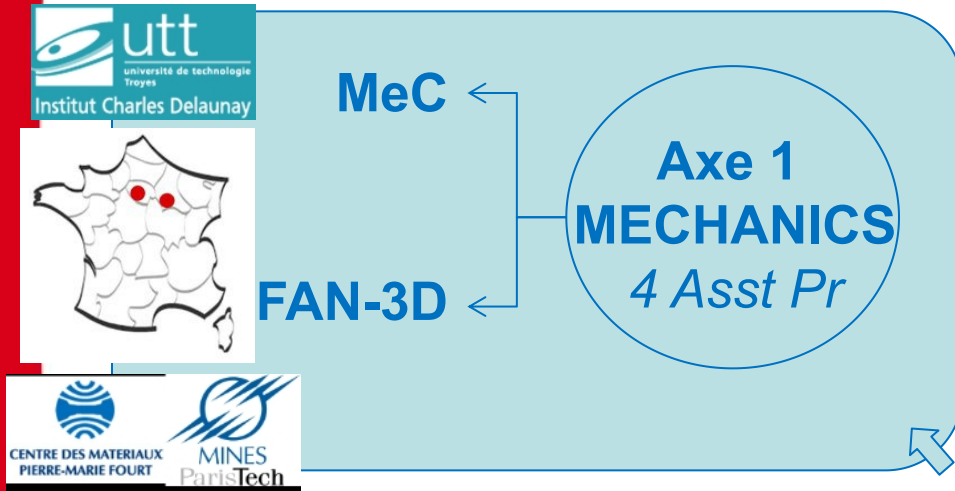
Three Research axes

MeC: Materials and Composites

FAN-3D: Additive Manufacturing and 3D Scanning

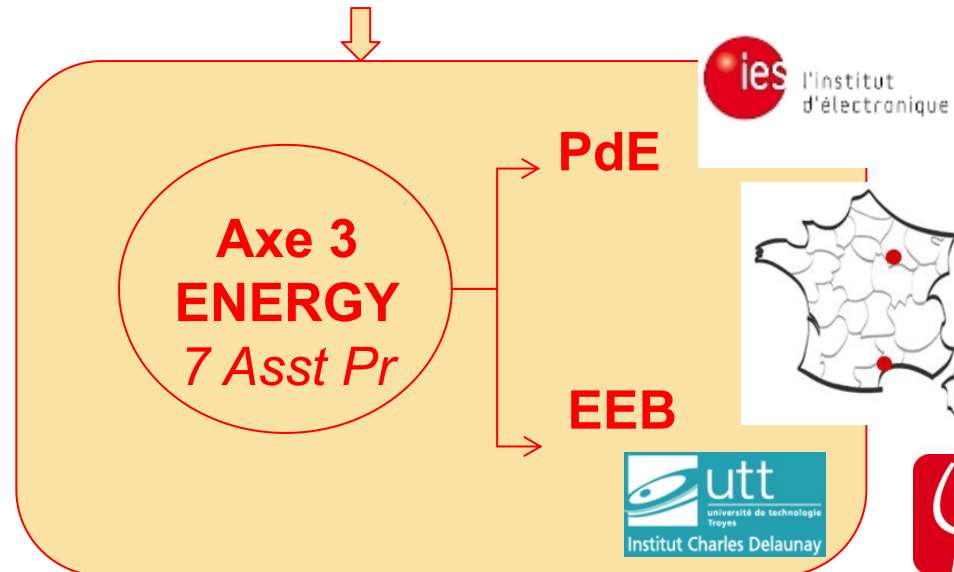
QdE: Water Quality

GRR: Resource Management and Recycling



EPF Research

PdE: Energy Production
EEB: Energetic Efficiency in Buildings



Introduction to EPF

MECHANICS



PhD & Master students trainees with industry and local authorities

ENVIRONMENT



PhD & Master students + service delivery with industry

Types of partnership

ENERGY



PhD & Master & Erasmus students + service delivery with industry

EPF Strategy

- EPF students involved in the industrial projects (trainees, Master trainees, PhD)
- Extensive use of the **French competitiveness clusters** to set up partnerships with industry

- ⊖ Participation to the Governance of the School
- ⊖ Internships
- ⊖ Project Based Learning
- ⊖ Visiting professors coming from the Industry
- ⊖ Consultancy projects and case studies. Dissemination of best practices in Industry.
- ⊖ Research
- ⊖ **Cooperative Education / Apprenticeship**

Engineering degree by Apprenticeship, Specialization: « Computing & Industrial Systems », in partnership with l'ITII Ile de France.




- φ Legal framework
 - 1 Apprenticeship contract
 - 1 Centre for Apprenticeship
 - Cooperative Education involving Company / EPF
- φ Joint tutorial of students, EPF & Company
 - School ; Academic mentor for each student
 - Company ; Professional mentor for each student
- φ Skills, Knowledge acquisition and assessment shared:
 - 50% at EPF
 - 50% in Company

- ⇒ 50 companies involved in the Apprenticeship programme each year
- ⇒ Average starting salary for graduates 2015 : 38 000 €
- ⇒ In position 3 months after graduating : 90% of the total number of apprentices (40% in the hosting company during the apprenticeship period)
- ⇒ Further studies at MSc level : 10 %

Some examples of hosting companies



A low-angle, perspective view of a suspension bridge deck extending from the foreground towards the horizon over a body of water. The sky is a mix of blue and orange, suggesting sunset or sunrise. The bridge's structure, including the deck and suspension cables, is prominent in the foreground.

Thank you for your
attention!