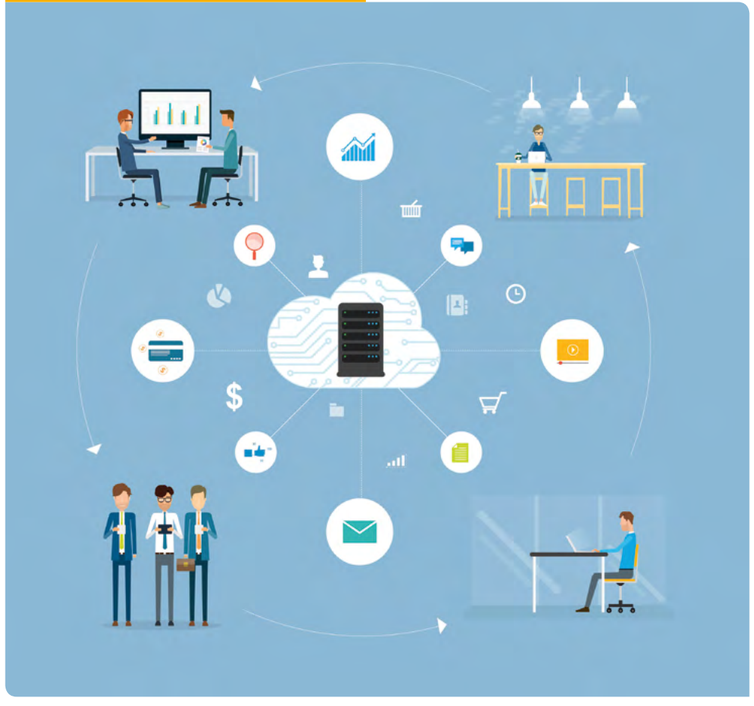
CAREER PROSPECTS

This transversal major provides training for a range of corporate support functions. Program graduates will be able to work in the industry of their choice.

POSITIONS TARGETED

- Development
- Contracting
- Consultancy
- Project management
- Data science
- Security
- Technology



PROJECTS

In Year 4, engineering students get familiar with Agile methods through a project carried out within the school.

In Year 5, students integrate a project team to take part in innovation in a partner company.

ANY **QUESTIONS**?

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For further information please check the "Application process for international students" section on our website www.epf.fr/en

Cécile DREYFUS
Consultant - ATOS
(Class of 2014)

When I arrived at EPF, I hadn't decided which major to go for, even though I had a slight preference for aeronautics. Thanks to Year 3 project (building a website), I found myself developing a passion for coding and the Engineering and Digital Technologies major became an obvious choice! In Year 5, I particularly enjoyed ***the semester project at the French Interior Ministry****, where I was project manager on one of the topics offered.*

I carried out my Year 5 internship in the Open Source department at ATOS. As I wanted to work in the field of mobility, I was assigned to a POC (Proof of Concept-Demonstration of Feasibility) of ***augmented reality on tablets for the Bolloré group****. They wanted to use an innovative marketing tool to sell their products, in this case Autolib. I knew nothing about this technology,* ***yet this was a successful project, both on a personal and a professional level****, which made me realize that the teaching provided at EPF was not necessarily about making us learn the theory by heart but rather* ***making us learn how to learn****. After my final year project,* ***I was hired by Atos in the Open Source Center*** *to work in the field of mobility. EPF taught me how to adapt to an environment and to technologies in which we are not very proficient or not proficient at all. Thanks to all the projects, especially from Year 3 onwards, I also learnt how to work in a group and gain more confidence.* ***EPF aims to prepare us to be adaptable and sociable in working life****. Even the geeks!*

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Officially recognized foundation - Graduate school of engineering since 1925 - Accredited by the French accreditation board, CTI

SCEAUX | TROYES | MONTPELLIER

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CLOUD COMPUTING
ENTERPRISE ARCHITECTURE
BLOCKCHAIN

MOBILITY
DATA SCIENCES
BIG DATA
IoT INTELLIGENCE ARTIFICIELLE
SOFTWARE ENGINEERING

ENGINEERING & DIGITAL TECHNOLOGIES MAJOR

CYBERSECURITY
INFORMATION SYSTEMS
SMART SYSTEMS
IS MANAGEMENT
VIRTUAL REALITY
AUGMENTED REALITY

PROGRAM **AIMS**

The engineering & Digital Technologies major helps engineering students understand how Information and Communications Technologies (ICT) are incorporated into the workings of society and how they transform processes. Students' training focuses on four main areas: software development, data analysis and processing, information systems management and cybersecurity.

The aim of this major is **to train general engineers who are capable of executing complex and transversal projects involving ICTs**. Engineers who have followed this major are high caliber computer scientists, who are perfectly in tune with societal expectations. They are able to propose and execute digital transformation projects. In addition to marked versatility and flexibility, this major will provide them with the technical elements, as well as the critical thinking and intellectual maturity required to make them true specialists in the IT field.

PROGRAM **STRUCTURE**

The engineering & Digital Technologies major extends over two academic years and is organized around two in-class-based semesters, alternating with two internship semesters: a student engineer internship in Year 4 and a "final year project" internship in Year 5.

In Year 4, the program provides students with a strong grounding in the fundamental fields of digital engineering.

In Year 5, students choose several elective CUs that correspond to the career plan they have chosen.

COMPULSORY CUs – **YEAR 4**

COURSE UNIT	
Tools of the trade I 64 h I 5 ECTS	
Labour law Introduction to economics Business game English language	Understand the working world and learn the skills to survive in it.
Software Engineering I I 80 h I 5 ECTS	
Java programming Mobile app development Web design Software craftsmanship Modern web development	Acquire the skills of a software engineer.
Information technologies I 64 h I 5 ECTS	
Unix / Linux Git for version control Network infrastructure Information systems	Understand infrastructure and workflows of the digital world.
Cybersecurity I 64 h I 5 ECTS	
Information security Network security Cryptography	Integrate cybersecurity into software development and project management.
Tech Trends I 48 h I 5 ECTS	
Blockchain Artificial intelligence API design Virtualization	Discover the key technologies supporting digital transformation.
Project I 150 h I 5 ECTS	

COMPULSORY CUs – **YEAR 5**

COURSE UNIT	
Networking and business relations I 50 h I 3 ECTS	
Visits & conferences Communication Intellectual property law Resume & cover letter workshops	Meet professionals from the digital industry and learn the tools to get a job.
Software Engineering II I 80 h I 5 ECTS	
Java & DevOps Agile project management Scaled Agile Framework (SAFe) Design thinking Architecture design Software testing	Understand advanced methods for conception and validation of information systems and computer programs.
Data science & big data I 50 h I 5 ECTS	
Statistics Big data Database management systems ERP & SAP	Acquire the basic skills of a data engineer.
Project I 150 h I 5 ECTS	

ELECTIVE CUs – **YEAR 5** – 1 to be chosen

1 CU TO BE CHOSEN	
Virtual and augmented realities I 50 h I 4 ECTS	
Virtual reality Augmented reality	Understand concepts and methods regarding the development of interactive 3D environments.
Artificial intelligence I 50 h I 4 ECTS	
AI, logic and probabilities Machine learning & deep learning Ethical dilemmas of AI	Discover the main artificial intelligence algorithms. Understand the associated issues, challenges and ethical questions.

1 CU TO BE CHOSEN	
Internet of things I 50 h I 4 ECTS	
Internet of things Embedded systems in healthcare	Understand and design networks of connected sensors and actuators.
Cloud Computing I 50 h I 4 ECTS	
Cloud computing Open source softwares	Design and deploy cloud-based solutions.

1 CU TO BE CHOSEN	
Consulting & audit I 60 h I 5 ECTS	
Industry 4.0 Offshoring and outsourcing Enterprise softwares Cloud & consulting Innovation management Startup studio Security audit	Understand methods and issues related to consulting and audit in the IT field.
Digital transformation I 60 h I 5 ECTS	
Digital transformation Digital innovation Chatbots & e-marketing Blockchain	Study how connections between people, processes, databases and objects transform all sectors of the economy.