

# **MASTER** of Computer Engineering

Ш Σ

The aim of the Master of Computer Engineering program is to prepare students to become computer engineers who can easily find a professional position anywhere in the world. Whether they choose a career in France or abroad, digital engineers have a wide range of choices on the job market after graduating from our engineering school.

> + Balance between soft and technical skills

 Pedagogical approach focused on learning through projects, workshops and seminars

+ 9 specializations offered in English or French.

<sub>'ear</sub> 1		Year <b>2</b>	
larmonization	Specialization	Specialization	Internship
0 ECTS	30 ECTS	30 ECTS	30 ECTS
ep to Jan	Feb to Jul	Sep to Jan	Feb to Sep

### epita.fr/<mark>en</mark>

Phone: +33 (0)1 80 51 71 07 international-programs@epita.fr 14-16 rue Voltaire - 94270 Le Kremlin-Bicêtre FRANCE

## Learning Objectives

The heart of this program is to provide graduates with a multidisciplinary and innovative training program. It combines the passion and innovation expected by businesses. Students have the chance to choose from the specializations listed on the right.



Average salary: 45K€ gross annually

Internship salary: 1200-1500€ monthly

## Application

#### Requirements

- 4-year bachelor's degree or higher
- 2 years of professional experience

#### Fees

- ► Tuition fees: 11 000 €/per year
- ► Application fees: 60 €

#### Deadline

31<sup>st</sup> of July (September Intake)

#### Procedure

 $\sim$ 

 

 APPLY ONLINE
 www.epita.fr/en

 1
 Validation of the candidacy

 2
 Online interview

 3 Online scientific assessment (Math, Programming & Algorithms)
 4 Admission results

Status of an application is communicated by email during each phase of the procedure.

Checklist

- ► Resume
- Passport
- Official university transcripts
- Certified copy of the bachelor's
- degree certificate
   Certified copy of the High School certificate
- ► 2 letters of recommendation
- ► TOEFL 80, TOEIC 800, IELTS 6.0
- Motivation letter certified to be written only by the student

## Specializations

	Description	Skills Acquired	
Multimedia & Infor- mation Technology	Train "Digital Leaders", who can innovate, propose new content, new use cases, new services, either open source or those of the big software developers such as Microsoft, Adobe and Google.	<ul> <li>Mobile Technologies, Web, IoT, Cloud</li> <li>Interactions between humans and technologies</li> <li>3D technologies, video games</li> <li>Design Thinking</li> <li>Open Source, Open Data, Open Innovation</li> <li>Management</li> <li>Project management</li> </ul>	
Systems, Network & Security	Master cybersecurity issues to thwart cyber threats. This specialization combines learning systems (design through administration), networks (existing and new generation) and cybersecurity (organizational and technical).	<ul> <li>Audit missions, intrusion tests</li> <li>R&amp;D in a critical and sensitive environment</li> <li>Reverse engineering</li> <li>Virology</li> <li>Infrastructure Architecture/Critical Deployment</li> <li>Design and implementation of cybersecurity solutions</li> </ul>	
Enbedded & Realtime Systems	Deepen the knowledge systems to achieve excellence in controlling embedded environments and IoT, from both open source and proprietary software publishers. Robotics/automation and an introduction to electronics are included in this specialization.	<ul> <li>C / C ++ development, Python, Java, Go</li> <li>POSIX API</li> <li>Operating systems (Linux, Windows, Android)</li> <li>Development drivers</li> <li>Network and CAN data bus (Controller Area Network)</li> <li>Digital Electronics and FPGA (VHDL)</li> <li>Robotics/automatic</li> </ul>	
Telecommunica- tions & Networks	Train managers with strong technical skills for working in telecommunications, network security system architecture and infrastructure. Focus is on new use cases in mobility, collaboration, unified communication, telecommuting, Cloud applications, IoT and geolocalization.	<ul> <li>Technical: telecommunications technology and networks</li> <li>Business: development, curiosity, creativity, working as a team</li> <li>Communication: oral and written business communication, analyzing and synthesizing</li> </ul>	
Information System & Software Engineering	Train engineers in information systems and software engineering to be leaders in transforming companies deploying new scalable IT systems aligned with business needs. The curriculum is developed along 4 main axes: • Leadership and Management • Cloud and Architecture • Mobility and Application • Digitalization and Transformation	<ul> <li>Budget Process</li> <li>Project manager</li> <li>Cost reduction</li> <li>Business Case</li> <li>Master plan</li> <li>Governance</li> <li>ITIL</li> <li>Virtualization - Automation</li> <li>Private Cloud /</li> <li>Private Cloud /</li> <li>Private Cloud /</li> <li>Dopestack,</li> <li>Openstack,</li> <li>Openstack,</li> <li>Object and business</li> <li>programming,</li> <li>Iteration</li> <li>Objects, Green IT,</li> <li>Integration</li> </ul>	
Global IT Management	Preparation for business consulting and project management. Focus in on working in multicultural teams managing innovation, digital transformation, new economic models, disruptive technology in Big Data, Cloud Computing and Geomarketing.	<ul> <li>Digital transformation and new economical models</li> <li>Change management</li> <li>Technology Audit</li> <li>Innovation management</li> <li>Management of IT projects internationally</li> <li>Technological expertise: ERP, CRM, BPM, Mobility, Cloud Computing, Big Data, Geomarketing, etc.</li> </ul>	
Data Science & Artificial Intelligence	Industrialize recent Artificial Intelligence research results in Data Analysis applications including Big Data, Data Science, recommendation of systems, images/speech pattern recognition and machine learning.	<ul> <li>Understanding the issues, context and data types deployed in Big Data and Data Science.</li> <li>Propose and build solutions using machine learning and pattern recognition of company data</li> </ul>	
Image Processing	Train students to design and master new tools for the treatment and synthesis of image processing. Students will acquire a theoretical background useful in developing new practical algorithms. The program is structured around two main axes. The first is image processing for extracting the features of objects in images, the restoration and denoising of images. The second is image description and synthesis, allowing the creation or recreation of scenes in 2D and 3D, to create virtual and augmented reality.	<ul> <li>Acquire problem solving ability in imaging from prototyping through production.</li> <li>Be able to design adapted solutions to imaging problems using advanced knowledge of Python and C ++.</li> <li>Problem solving deploying innovative machine learning solutions.</li> </ul>	
Research	The double-competency academic research major provides students with immersion in one of the EPITA laboratories. Students work with professor-researchers in addition to their chosen major. Research themes include the treatment of images, automation modelling, virtual reality and cybersecurity.	<ul> <li>Academic research in computer science in the field of choice</li> <li>Preparing for a PhD or a Research Master</li> <li>Realization of state of the art</li> <li>Writing scientific articles and presentation of results</li> <li>Analytical and synthetical mind</li> <li>Scientific rigor</li> </ul>	