Master of Science and Engineering
Big Data
English taught program

Big Data describes collections of information so voluminous that traditional data-processing application software cannot manage their complexities. Storing, accessing, securing, processing, and analyzing Big Data present some of the greatest IT challenges of our era. The aim of JUNIA ISEN's Big Data Master program is **to train well-rounded experts in the latest advances in information management, analytics, machine intelligence, databases and cloud computing** to meet the needs of businesses in any industry that uses data technology.

active pedagogy

Our Big Data program is built on project-based learning, active teaching methods, and learning-by-doing. This hands-on approach gives students real world experience and, with our piecemeal curriculum, the power to decide how to build their own expertise.

projects

Semester-long team projects are an integral part of the curriculum. One day per week is dedicated to group projects in collaboration with a professional expert, partner company, or research institute and supervised by a JUNIA ISEN faculty member.

internships

Students spend 40% of the program immersed in real professional experience. These internships, carried out either in France or abroad, in a company or research center, expose students to the current reality of working and prepare them for entry into the global workforce.

LEARNING BY DOING

- Teaching and group projects supervised by professionals
- Hackathons and coding challenges
- Innovation learning centers and Fab Lab
- Flipped classrooms and serious games
- Co-design labs with partner schools

EXAMPLES OF PROJECTS

- Absolute cell quantification from phase-contrast microscopy images
- Statistical analyses and prediction methods using financial data to create a trading algorithm

EXAMPLES OF INTERNSHIPS

- Installation of a decision-making software
- Development of augmented reality system
- Big Data/AI solutions development
- Python development of a optimization tool

career prospects

As information becomes almost exclusively digitized, Big Data touches every aspect of society, economy, and industry. Over the past decade, technology leaders have made Big Data their R&D priority with increased investment of resources. This focus creates an opportunity for IT engineers across industries. Some career prospects in big data include chief data officer, business intelligence manager, data scientist, data analyst, data miner, master data manager, data protection officer, Artificial Intelligence Engineer and more.

In addition to exceptional technical knowledge and managerial skills, JUNIA ISEN graduates are prepared for the reality of the professional world even before they get their diploma, which is why **100% of JUNIA ISEN alumni are employed within 6 months of graduating**. JUNIA ISEN's more than 26,000 alumni around the world work for some of the biggest names in electronics and digital technology or join and create their own startups thanks to the entrepreneurial mindset cultivated at JUNIA.

Practical information

admission requirements

- Bachelor's degree in Engineering Sciences (Digital and Information Technology, IT Engineering or any related fields)
- English B2 level certified by an official test IELTS, TOEIC, TOEFL IBT or FIRST
- Knowledge of French language is recommended, but not required for admission

application procedure

- Complete your online application on admissions.junia.com
- Have an individual interview (online)
- Application deadline: **May 15th, 2024**

financial aspects

Fees and other expenses
- Tuition fees : 9,000€ / year (18,000€ for the 2-year program)
- Living expenses in France: approx. €850/month
- Miscellaneous fees (insurance, visa...): approx. €650/year

Scholarships and Financial Aid
- Scholarships: refer to your local French embassy or Campus France Office
- Paid internships if carried out in France: min. €555/month
- French government housing allowance: approx. 90€/month

MASTER 1		ECTS
Fall Semester	Data Report, Visualization	3
	Advanced Statistical Analysis	3
	Artificial Intelligence	3
	Operations Research	3
	Network and System base	3
	Technical Project	5
	Humanities and Management	3
	French as a Foreign Language	6
Spring Semester	Metaheuristics & Indexing	3
	Advanced Machine Learning	3
	Data Base	3
	Parallel and distributed programming	3
	Block Chain	3
	Technical Project	5
	Humanities and Management	3
	French as a Foreign Language	2
Summer Internship	Three-month Internship	10

MASTER 2		ECTS
Fall Semester	Cloud Computing & Architecture	3
	Hadoop & Spark Ecosystem	3
	IT Risk & Management	3
	Secured Network Architecture	3
	Urbanization of IT Services	3
	Humanities & Management	5
	Innovation Project	10
Spring Semester	Six-month Internship	30

*Course details are subject to change, please visit **junia.com** for the latest information*

international student services

Dedicated support just for you
- Reservation of accommodation in a student residence
- Administrative procedures (visa, resident permit, etc.)
- Integration into student life (associations, activities, etc.)
- Welcome Session: intensive French language course, intercultural communication, orientation week, social events, and more

JUNIA
Grande école d'ingénieurs
HEI·ISEN·ISA

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Commission des titres d'ingénieur