Microelectronics and Telecommunications
Master's Degree 1st Year - 1st Semester (S5)

Course	ECTS	Language
Physics and Electronics 1	**13**	
Electronics laboratory introduction		🇫🇷
Physics of semiconductors		🇫🇷
Electronics 1		🇫🇷
Physics of semiconductor devices		🇫🇷
Electromagnetic waves 1		🇫🇷
Mathematics, signals and IT 1	**12**	
Programming laboratory introduction		🇫🇷
Stability of linear systems		🇫🇷
Engineering calculus		🇫🇷
Numerical analysis		🇫🇷
C language		🇫🇷
Continuous and discrete signals and systems		🇫🇷
LANGUAGES AND SOCIAL SCIENCE, HUMANITIES, ECONOMICS, LAW	**5**	
English		🇬🇧
TOEIC		🇬🇧
Organization and Functioning of Companies		🇫🇷
Intercultural management		🇫🇷
Digital responsibility		🇫🇷

Microelectronics and Telecommunications
Master's Degree 1st Year – 2nd Semester (S6)

Course	ECTS	Language
Physics and Electronics 2	**8**	
Electronics 2		🇫🇷
Laboratory of semiconductor devices		🇫🇷
Optics and Photonics		🇫🇷
Electromagnetic waves 2		🇫🇷
Mathematics, signals and IT 2	**5**	
Probabilities and Statistics		🇫🇷
Random signals		🇫🇷
Object-oriented programming		🇫🇷
Microelectronics and telecommunications	**10**	
Analog Filter Synthesis		🇫🇷
Signal transmission		🇫🇷
Synthesis of Analog Amplifiers		🇫🇷
Digital Circuits		🇫🇷
Data coding and Digital Modulation		🇫🇷
Complex digital systems - VHDL		🇫🇷
LANGUAGES AND SOCIAL SCIENCE, HUMANITIES, ECONOMICS, LAW	**4**	
English		🇬🇧
TOEIC		🇬🇧
Business financial management		🇫🇷
Professional project 1		🇫🇷
Sustainable development		
Internship research preparation		
Opening module		🇫🇷
WORK PLACEMENT I (Internship)	**3**	🇫🇷/🇬🇧

Microelectronics and Telecommunications
Master's Degree 2nd Year - 1st Semester (S7)

Course	ECTS	Language
Microelectronics 1	**14**	
Arithmetic operators		🇫🇷
Design of Digital Integrated Circuits		🇫🇷
Processor Architecture: Hardware		🇫🇷
Manufacturing of semiconductor devices		🇫🇷
Design of Analog Integrated Circuits		🇫🇷
Analog to Digital & Digital to Analog Converters		🇫🇷
Telecommunications 1	**10**	
Digital Signal Processing		🇫🇷
Electromagnetic waves III		🇫🇷
Antennas		🇫🇷
Transmission and Analog Systems		🇫🇷
Digital transmissions and systems		🇫🇷
LANGUAGES AND SOCIAL SCIENCE, HUMANITIES, ECONOMICS, LAW	**6**	
English		🇬🇧
TOEIC		🇬🇧
Quality management		🇫🇷
Sales and Marketing Management		🇫🇷
Internship research preparation		🇫🇷
Project management		🇫🇷

Microelectronics and Telecommunications
Master's Degree 2nd Year – 2nd Semester (S8)

Course	ECTS	Language
Microelectronics 2	**10**	
Technological Training in a clean room (AIME)		🇫🇷
Modeling of radio and microwave devices		🇫🇷
Digital IC Test		🇫🇷
Processor Architecture : Application (MCU)		🇫🇷
CAD Flow for VLSI digital circuits		🇫🇷
Analog IC design flow		🇫🇷
Microelectronics Supervised Work		🇫🇷
Telecommunications 2	**10**	
Numerical method in electromagnetism		🇫🇷
Propagation in free space		
Measurements for telecommunications		
Physics and Photonic		
Hyperfrequency		
2G, 3G, 4G communication		🇫🇷
Telecommunications Supervised Work		🇫🇷
LANGUAGES AND SOCIAL SCIENCE, HUMANITIES, ECONOMICS, LAW	**4**	
English		🇬🇧
TOEIC		🇬🇧
Professional project 2		🇫🇷
Responsible management		🇫🇷
Innovation and Entrepreneurship		🇫🇷
WORK PLACEMENT II (Internship)	**6**	🇫🇷/🇬🇧

Microelectronics and Telecommunications
Master's Degree 3rd Year - 1st Semester (S9)

Course	ECTS	Language
OPTION/TRACK 1: High performance Mobile electronic systems	**10**	
5G		🇫🇷
Design of microwaves and RF circuits		🇫🇷
Integration of IP blocks		🇫🇷
Design of logic audio filters		🇫🇷
Android programming		🇫🇷
OPTION/TRACK 2: Autonomous embedded electronic systems	**10**	
Sensors and electronic processing		🇫🇷
Embedded Java systems		🇫🇷
ID systems and NFC/Cards		🇫🇷
Low power electronics		🇫🇷
Indoor transmissions		🇫🇷
Electronic systems	**10**	
Real time information processing		🇫🇷/🇬🇧
Memories		🇫🇷/🇬🇧
Cryptosecurity		🇫🇷/🇬🇧
Electromagnetic compatibility		🇫🇷/🇬🇧
RF architectures		🇫🇷/🇬🇧
AI material implementation		🇫🇷/🇬🇧
Industrial realization project – TAI	**6**	
Laboratory project of industrial realization		🇫🇷/🇬🇧
LANGUAGES AND SOCIAL SCIENCE, HUMANITIES, ECONOMICS, LAW	**4**	
English		🇬🇧
TOEIC		🇬🇧

Microelectronics and Telecommunications
Master's Degree 3rd Year - 2nd Semester (S10)

Main course	ECTS	Language
WORK PLACEMENT III (Internship)	30	🇫🇷/🇬🇧