

1st year

TU		CLASSES	ECTS
SEMESTER 1	SOFT SKILLS	French	7
		Communication	
		Sports	
		Conferences on aeronautics	
	MATHS	Maths Fourier Analysis	6
		Complex variables – Vector analysis	
		Probability - Statistics	
	PROGRAMMING	Basis of programming / Matlab	3
		C programming	
		Microprocessor	
INTRODUCTION TO LABORATORY EQUIPMENT	Introduction to electronic laboratory equipment	1	
	Introduction to RF laboratory equipment		
DIGITAL ELECTRONICS	VHDL digital design	5	
	Digital electronics project		
INTRODUCTION TO DIGITAL COMMUNICATIONS	Signal processing	8	
	Digital signal processing		
	Digital communication		
	Channel coding		
	Simulation of communication chain		
SEMESTER 2	SOFT SKILLS	French	5
		English	
		Sports	
		Conferences on aeronautics	
		Junior research project	
	DIGITAL ELECTRONICS	Digital electronics project	6
		Front end acquisition	
	OPTICS/TELECOM	Optoelectronics	4
		Laser and optical fiber sensing techniques	
		Practical Hyper/opto	
RF	Antennas	7	
	Passive RF		
	Active RF circuits		
	MEMS		
	Microwave system project		
ANALOG ELECTRONICS	Circuit 1	8	
	Circuit 2		
	Project Analog Electronics		
	Analog Electronics Practical		
	Semi conductor devices		
	Analog filter		
	Transmission lines		

2nd year

TU		CLASSES	ECTS
	SOFT SKILLS	French	3
		English	
		Professional communication	
	EMBEDDED SYSTEMS	System On Chip	9
		Architectures, interfacing and reliability ES	
		Mobile Autonomous platform	
		Synthesis Strategy	

SEMESTER 3	POWER MANAGEMENT	VHDL design	4
		Microprocessor power supply	
		Mosfet Driver Circuits	
		EMC for SMPS	
		EMC of integrated circuit	
	FEM modelling of integrated passive filters		
	RADAR & REMOTE	Remote sensing project	3
		Radar equipment	
	RF/OPTO	Photonics for HF	5
		Embedded optical systems	
		MMIC	
INTRODUCTION TO SCIENTIFIC RESEARCH	Internship presentation	6	
	Research project		
SEMESTER 4	INTERNSHIP	Six months internship in a company or a research lab. The internship will be concluded by an presentation in front of a jury composed by master ESECA and company tutors.	30