Program Name: applied physics

Program Description:

The massive use of electronic components and functions in a very large number of industrial, military, medical or consumer equipment and systems has led to the increasingly frequent occurrence of harmful electromagnetic interference phenomena. to their proper functioning. EMC therefore becomes a discipline in its own right which has the particularity of being in constant evolution. Its mastery requires the understanding of all the physical phenomena of interaction in order to develop optimal solutions for the protection of complex electronic systems. This development is an important challenge for the research and engineering sector in the industrial field in Algeria. In this spirit, at the end of this master's degree, students will have acquired additional knowledge in the field of the design of electrical systems taking into account electromagnetic compatibility.

Semester 1	
Teaching unit	
fundamental teaching units	MICROWAVES HYPER-FREQUENCY
	SIGNAL PROCESSING
	PHYSICS OF SEMICONDUCTOR DEVICES
Methodology TU	Numerical Modeling 1
	Matlab programming 1
transverse TU	ENGLISH FOR RESEARCH
Discovery TU	Insulating materials and high voltage
Semester 2 Teaching unit	
fundamental teaching units	ELECTROMAGNETISM, LINES
	ANALOG ELECTRONIC
	DIGITAL ELECTRONICS AND ACQUISITION
Methodology TU	MICROELECTRONICS TECHNOLOGY
	Numerical Modeling 2
transverse TU	ENGLISH FOR INDUSTRY
Discovery TU	Methodology - Methods measurements and tests

Semester 3 Teaching unit	
	Physics of Components and Nanostructures
fundamental teaching units	HETEROJUNCTIONS AND DIELECTRICS
	Analog Circuit Design
	Advanced MOS Devices
Methodology TU	Photovoltaic Conversion
	Photonic Materials and Components
transverse TU	Bibliographic search
Discovery TU	Telecommunications systems, RF and microwave devices
Semester 4 Teaching unit	Internship in a company sanctioned by a master dissertation