

### **Master's degree year 1 - semester 1**

Information theory (3 ECTS)  
Programmable digital systems (3 ECTS)  
Signal and image processing 1 (6 ECTS)  
Object-oriented programming (3 ECTS)  
Algorithm design and analysis (3 ECTS)  
Programming and digital problem solving (3 ECTS)  
Digital system control (3 ECTS)  
Language techniques (3 ECTS)  
English 1 (3 ECTS)

### **Master's degree year 1 - semester 2**

Instrumentation (6 ECTS) including:  
\*\* Electronics and sensor for instrumentation (4 ECTS)  
\*\* Image system: physical principles and implementation (2 ECTS)  
Signal and image processing 2 (6 ECTS)  
Metrology and measurement (3 ECTS)  
Programming and digital problem solving 2 (3 ECTS)  
Physiology, systems of functional exploration and medical imaging (3 ECTS)  
Instrumentation and production, signal and image (3 ECTS)  
Project management (3 ECTS)  
English (3 ECTS)

### **Master's degree year 2 - semester 1**

Physicochemical principles (5 ECTS)  
Instrumentation (5 ECTS) including:  
\*\* Instrumentation for atmospheric pollution (3 ECTS)  
\*\* Embedded instrumentation (2 ECTS)  
Atmospheric particulate pollutants measurement (5 ECTS)  
Signal processing (4 ECTS) including:  
\*\* Data analysis and processing (2 ECTS)  
\*\* Non-stationary signals processing (2 ECTS)  
Processing and inversion (3 ECTS)  
English (3 ECTS)  
Projects, seminars, and research (3 ECTS)  
\*\* Projects (2 ECTS)  
\*\* Seminars and research (1 ECTS)  
Graphs theory and algorithms 2 (2 ECTS)

### **Master's degree year 2 - semester 2**

Internship (30 ECTS)