# 1st year

| | Track | CLASSES | CREDITS |
|---|---|---|---|
| SEMESTER 1 | Soft and Human Skills | French | 4 |
| | | Conferences on aeronautics | 1 |
| | | Communication | 1 |
| | | Sport | 1 |
| | | | |
| | **Mathematics** | Math Fourier Analysis | 2 |
| | | Math-Complex variable- Vector analysis | 2 |
| | | Math probability/ Statistics | 2 |
| | | | |
| | Programming | Basis of programming/Matlab | 1 |
| | | C programming | 1 |
| | | Microprocessor | 2 |
| | | | |
| | **Digital electronics** | VHDL design | 3 |
| | | PBL : Digital electronics design | 2 |
| | | | |
| | Analog Electronics | Circuits | 2 |
| | | Project analog electronics | 2 |
| | | Analog practical | 1 |
| | | Semi-conductor devices | 1 |
| | | Filtering | 1 |
| | | Transmission lines | 1 |
| | | | |
| | Soft and Human Skills | French | 1 |
| | | Professional English | 1 |
| | | Sport | 1 |

| | Track | CLASSES | CREDITS |
|---|---|---|---|
| | | Conferences on aeronautics | 1 |
| | | Junior Research project | 2 |
| | | | |
| | **Digital electronics** | Digital electronics project | 3 |
| | | Front-end acquisition | 3 |
| | | | |
| | **Optics/telecom** | Optoelectronics | 2 |
| | | Laser and optical fiber sensing techniques | 1 |
| | | Practical Hyper / Opto | 1 |
| | | Telecoms | 2 |
| | | Signal for telecommunication | 1 |
| | | Space telecoms | 1 |
| | | | |
| | **RF** | Antennas | 1.5 |
| | | Passive RF | 1 |
| | | Active RF circuits | 1 |
| | | MEMS | 2 |
| | | Hyper project | 1.5 |
| | | | |
| | Signal & image | Signal processing | 1.5 |
| | | Digital signal processing | 1.5 |

(Note: the leftmost column contains the vertical text "SEMESTER 2")

## 2nd year

| | Track | CLASSES | CREDITS |
|---|---|---|---|
| | | French | 1 |
| | Soft and Human Skills | Conferences on aeronautics | 1 |

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|---|---|---|---|
| | Soft and Human Skills | Internship presentation | 2 |
| | | Professional English | 1 |
| | | Research project | 3 |
| | | | |
| | Embedded Systems | SOC | 2 |
| | | Project analog electronics | 2 |
| | | Architectures , interfacing and reliability of ES | 1 |
| | | Mobile autonomous platform project | 1 |
| | | Synthesis strategy | 1 |
| | | FPGA conception project for signal processing | 3 |
| | | VHDL design | 1 |
| | | | |
| SEMESTER 3 | Power management | Microprocessor power supply | 1 |
| | | MOSFET Driver Circuits | 1 |
| | | EMC for SMPS | 1 |
| | | EMC of integrated circuits | 1 |
| | | FEM modeling of integrate circuits | 1 |
| | | | |
| | Radar & remote | Remote sensing project | 2 |
| | | Radar equipment | 1 |
| | | | |
| | RF/opto | Photonics for HF | 2 |
| | | PBL embedded optical systems | 2 |
| | | MMIC | 1 |
| | | Payload architecture | 1 |
| | Track | CLASSES | |
| SEMESTER 2 | 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 |
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