Advanced Microelectronics (AM)

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Synthesis

Master program in English

Developed in collaboration and supported by Infineon Romania.

In activity each year for 15 years.

Balanced curricula combining:

- Analog
- Digital and
- Automotive Electronics with
- Integrated Circuits Design

3 Topics taught by world class specialists from Germany and Austria invited and sponsored by Infineon.

2 Topics taught by specialist from Infineon Romania.

2 Research contracts in cooperation with Infineon Romania.

The first chip designed by students via an inter-university cooperation between TU Cluj-Napoca, “Gh. Asachi” TU Iași and ETTI/UPB.

For whom is the master program intended?

Graduates from all electronics/computer science specialties and graduates from other license studies that have electronics background and want to get acquainted to the most advanced technologies in automotive and mixed-mode integrated circuits electronics.

Classes are taught based on a schedule convenient to attendants that may be employed by commercial companies.

Master program's objectives

- Provide specialists in integrated circuits design, validation and test for automotive, analog, digital and mixed-signals applications to research and development facilities in Romania and EU.
- Facilitate access of Romanian students to classes taught by western world class specialists. State of the art techniques are presented by people that implement them daily.

Specialized competencies offered to program's graduates

Competencies in:

- Analog electronics (6h course, 6h lab, 3h project)
- Digital Electronics (6h course, 3h lab, 3h project)
- Automotive Electronics (6h course, 1h lab)
- Integrated Circuits Design (4h course, 4h lab)

Graduates will be able to work at master degree level on all aspects of development of electronic components for automotive and all other kinds of applications.

Research directions examples

- Analog, digital and mixed mode IC designs.
- Integrated smart sensors.
- FPGA implementations.
- Embedded software.
- Technology demonstrators including sensors, actuators and mechanical blocks.
- Testing and statistical data analysis.