

	MINISTERUL EDUCAȚIEI, CERCETĂRII ȘI TINERETULUI Universitatea POLITEHNICA din București
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**Department of Electronics, Telecommunication and
Information Technology**

Advanced Microelectronics Master Program Starting Academic Year 2009-2010

1. Master Program name: Advanced Microelectronics (AM)

2. Master Program type and time period: “Aprofundare”, 3 semesters (1½ Academic year), starting at the beginning of each Academic Year.

3. Master Program goals: The AM program offers a systematic and coherent frame for Mixed Signal Circuits Design and Application studies.

4. General and specific abilities provided by Master Program.

The AM graduate will be able to work independently or guided by the project leader in the Microsystems Design and Application.

The AM program provides the knowledge for Analog and Mixed Signal Circuits and Microsystems analysis, design and evaluation for both

- (1) Silicon implementations up to System on Chip level and
- (2) Specific application development from prototype level up to finite product.

The AM master program responds to the Romanian and international labor market strong demand for analog and mixed signal circuits and systems designers.

5. Target groups

Advanced Microelectronics Master program address graduated students in the Engineering Sciences Fundamental Domain (Domeniul fundamental de știință artă și cultură Științe inginerești) having a BS in the following areas (Domeniile de studii universitare de licență):

- Computers and Information Technology (Calculatoare și tehnologia informației),
- Electronic and Telecommunication Engineering (Inginerie electronică și telecomunicații),
- Electrical Engineering (Inginerie electrică),
- Power Engineering (Inginerie energetică),
- Mechatronics and Robotics (Mecatronică și robotică),
- Industrial Engineering (Inginerie industrială) – Nanotechnology and Nonconventional Processes Specialization (Specializarea Nanotehnologii și procese neconvenționale),
- Engineering and Management (Inginerie și management) – Economics Engineering in Electrical, Electronic and Power Domains Specialization (Specializarea Ingineria economică în domeniul electric, electronic și energetic),
- Automotive Engineering (Ingineria autovehiculelor) – Automotive Equipments and Control Systems Specialization (Specializarea Echipamente și sisteme de comandă și control pentru autovehicule)

6. Department/University Teaching Staff Master Program.

Professors: Mircea BODEA, Corneliu BURILEANU, Claudius DAN, Marcel PROFIRESCU, Gheorghe ȘTEFAN;

Associated Professors: Zoltan HASCSI, Alexandru VASILE;

Teaching Assistants: Claudiu PĂTRU, Vladimir POPESCU, Ph.D., Ovidiu PROFIRESCU, Marius STOIAN, Ph.D.;

Invited lecturers. Each semester include an Invited course on topics related to Advanced Microelectronics Master Program Goals. The courses will be delivered by Invited Lecturers belonging to national and international Industrial and Research Environment and Universities.

7. Master program HW and SW resources

Atmel-CADENCE Laboratory

- Room: B116
- Person in charge: Prof. dr. ing. Claudius DAN
- Maximum number of students working simultaneously: 10
- Main HW and SW dedicated resources:
 - 10 Work Places, Linux Operating System, CADENCE Design Environment
 - The Atmel-CADENCE Laboratory is affiliated to “CADENCE Academic Network” (person in charge with “CADENCE Academic Network” relationship: Prof. Claudius DAN)

Infineon Laboratory

- Room: B047
- Person in charge: Teaching Assistant Alina BULEANDRĂ
- Maximum number of students working simultaneously: 10
- Main HW and SW dedicated resources:
 - 10 Work Places, Mentor Graphics Design Environment
 - Wafer Level Qualification Stand including microscope and micromanipulators
 - Standard Electronic Instrumentation (power supply, oscilloscopes, signal generators, multimeters, pulse generators, microcontroller boards)

8. Research grants to support the Master program

Cooperation agreement between **Electronics, Telecommunication and Information Technology Department, POLITEHNICA University of Bucharest** and **Infineon Semiconductor Romania** regarding Infineon Laboratory full HW and SW support, Master and Ph.D. students scholarship and Joint Research Projects.

9. Study Plan (Curriculum), see Appendix 1 (3 Semesters Master Program)

10. Teaching activities (lectures, lab, and project) syllabus sees Appendix 3.

Dean,

Teodor PETRESCU

Professor, Ph.D

Person in charge with Master Program

Mircea BODEA

Professor, Ph.D.

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