

Applied Electronics

1. Admission Requirements:

• Prerequisites:

- Successful completion of high school studies and obtaining a baccalaureate degree or equivalent.
- Non-EU Citizens - Contingent upon the presentation of the Graduation Certificate from the preparatory year (excluding those who have completed their previous studies in the Romanian language) and obtaining the Letter of Acceptance issued by the Ministry of Education.
- EU Citizens + Swiss Confederation - Contingent upon the presentation of the Graduation Certificate from the preparatory year (excluding those who have completed their previous studies in the Romanian language) and the recognition of their studies by the National Centre for Recognition and Equivalence of Diplomas (CNRED).

• Entrance Exams:

The admission average of registered candidates is made up of:

- Average of the baccalaureate exam - weight 100%.

2. Degree Levels:

• Undergraduate Level: Applied Electronics

- Bachelor's Degree: 4-year program.

3. Curriculum:

• Core Courses:

- Linear Algebra and Analytic and Differential Geometry
- Mathematical Analysis
- Chemistry
- Computer-Aided Graphics
- Computer Programming and Programming Languages
- Applied Informatics
- Probability Theory and Mathematical Statistics
- Physics
- Special Mathematics
- Passive Components and Circuits
- Electrotechnical Materials
- Numerical Methods
- Electronics
- Data Structures and Algorithms

- Basics of Electrotechnics
- Digital Integrated Circuits
- Electrical Measurements
- Electronic Devices
- Management and Marketing

- **Electives:**

- Fore Foreign Language / Mathematics Complements
- Use of Computers / Complements of Physics
- Spice Models / Internet Programming Technologies
- Integrated Structures for Specific Applications / Sensors and Transducers / Automatic Tuning Engineering
- Spice Models 2 / CAD Techniques in Making Electronic Modules
- Power Electronics / Communication Systems
- Decision and Estimation in Information Processing / Optoelectronics
- Distributed Control Systems / Mobile Robots
- Medical Electronics / Reliability of Electronic Systems
- Electronic Measurement Instrumentation / Electromagnetic Compatibility
- Digital Audio-Video Systems / Programming in Matlab
- Automotive Electronics / Electronic Systems Technology

- **Major/Concentration:**

- Object-Oriented Programming
- Architecture of Microprocessors
- Fundamental Electronic Circuits
- Signals and Systems
- Digitization and Data Analysis
- Analysis and Synthesis of Circuits
- Analog Integrated Circuits
- Theory of Information Transmission
- Digital Signal Processing
- The Bases of Data Acquisition Systems
- Specialized Practice
- Microcontrollers
- Computer Networks
- Image Processing and Analysis
- Television
- Power Sources
- Systems with FPGA
- Embedded Electronic Systems
- Software for Applied Electronics

- **General Education Requirements:**

- Successfully fulfilling mandatory and optional courses and seminars, actively participating in research within student circles, and contributing to scientific conferences.

4. **Credits:**

- Each semester carries a weight of 30 ECTS, with a total of 240 ECTS required for graduation.

5. **Internships and Practical Experience:**

- Applied Electronics students can do internships at companies such as: SC ARCTIC SA, SC AUTOMOBILE DACIA SA, SPEEH HIDROELECTRICA SA, SC INFOBIT CONSULT SRL, SC LIN IMPEX SRL, SDEE.

6. **Research Requirements:**

- Each bachelor thesis will contain a theoretical part and a case study (theoretical or practical) in the field of specialization, under the guidance of a teaching staff.

7. **Academic Advising:**

- Throughout each academic year, a dedicated tutor is assigned to assist every student in course selection, academic planning, and addressing any concerns that may arise.

8. **Extracurricular Activities:**

- Students may have the option to participate in clubs, organizations, or extracurricular activities related to their field of study or personal interests.

9. **Examinations:**

- The courses will span 14 weeks during each semester. Successful completion of these exams is mandatory to earn study credits.
- For each discipline, examinations may take the form of written, oral, or practical exams, as outlined in the discipline sheet at the start of each academic year.
- Examinations are conducted during the scheduled exam sessions announced at the commencement of each academic year.

10. **Thesis/Dissertation Defense:**

- The preparation of the Bachelor's Thesis is conducted under the guidance of a scientific coordinator.
- The committee responsible for assessing the dissertation thesis is appointed by the decision of the rector and includes a president, three members, and a secretary, all of whom are specialized teaching staff.
- In order to submit the thesis, each student must have accrued 240 ECTS from the mandatory and elected subjects.
- The bachelor thesis topic must pertain to the field of Energy Engineering.

11. Graduation Requirements:

- Graduation requires students to fulfill all program requirements, including achieving the prescribed number of ECTS credits and successfully completing a final examination.

12. Degree Awarding:

- Bachelor's Degree in Applied Electronics.