**Diploma Supplement for the Electrical Engineering and Electronics Department**

Graduates of the Electrical Engineering and Electronics Department received training that provides them with opportunities for productive and long-term integration (over the course of decades) into the knowledge-rich industrial market. The curriculum is continuously adapted to trends and developments that are expected to occur in this industry through the mid-21st century.

The first tier of the graduate program equips students with the classic tools of electrical engineering based on three science fields: physical, computer, and mathematical. These enable students to use scientific and engineering principles as a basis for ongoing professional development during their futures as practicing engineers.

A second tier of training places emphasis on core professional engineering subjects such as: signal theory and communications; programming; digital signal processing, mixed signal, and radio-frequency signal distributed electronics systems.

In the third tier, students choose to complete two among three possible specializations:

**Signal and Image Processing**

Graduates of this specialization will have knowledge of digital signal processing, including: speech, audio, images, radio, acoustics, or any other communication signals that come from sensors or other reception systems and are translated into the electronic medium. Students learn how to use mathematical methods to decipher, analyze, improve, encode, present and transmit this information. In addition to digital processing methods, students learn artificial intelligence-based applications used in signal and image processing.

**Communications**

The graduates of this specialization will have a broad knowledge base and experience in the field of data and information transfer through multiple media types (wired, radio, Wi-Fi, fiber optics, etc.) and using various modulation and coding methods. Students focus on advanced technologies in digital and wireless communications, and the latest coding and decoding technologies.

**Computers**

Students in this specialization receive a set of knowledge and experience in the field of computer software and hardware. Students acquire knowledge in the field of computer embedded systems and real-time embedded systems, digital design using hardware description languages (VHDL), chip development and VLSI, and advanced computer architectures.

Students in this department undergo four years of challenging and diverse engineering design courses, which combine essential skills that strengthen capabilities for both teamwork and independent learning. They solve engineering design problems that combine various areas in this field, develop the ability to deal with difficulties and conditions of uncertainty, demonstrate a high level of written and oral communication skills, and internalize a commitment to life-long self-improvement and advancement.