

**INFOBITES**  
**1 TOPIC**  
**2 CREDITS**  
**18 HOURS**

**4**

## **Basic electronics and digital signal processing**

Start: 23 October 2017

9 Lectures + Final Test

Mondays and Tuesdays

Room E4.20, 4-6 p.m.

Max participants: 20

**Learn how a computer really “thinks”! This short course will introduce you to digital signal processing, from essential topics of analog signal conditioning to advanced field-programmable gate array programming.**

After attending this course participants will possess basic notions of:

- Analog signal processing (propagation, filtering, amplification, impedance matching)
- Analog-to-digital and digital-to-analog conversion
- Combinatorial and sequential devices
- Digital signal processing (DSP)
- DSP via programmable logic devices (FPGA)

### **Prerequisites:**

Basic knowledge of C/C++ languages. Basic knowledge of passive electronics (resistances, capacitors, Ohm's law, etc.).

### **Registration:**

Limited places (20) – register as soon as possible!

By March 27 2017, send an e-mail to

**computer.science@unibz.it** including:

- (1) a presentation of yourself
- (2) the detail of your skills in computer science
- (3) your motivation for attending the course