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## Dispositivi programmabili A

### Finalità

The course provides fundamentals of digital system computer-aided design and fast prototyping. It will include practical design experiences using suitable CAD tools.

### Programma

Architecture and design of a embedded digital system.  
A survey of the main devices used in the digital systems.  
Programmable logic FPGA: technology and features.  
The hardware description languages: the VHDL.  
The CAD design flow: synthesis and verification methodology.  
FPGA oriented methods of VHDL design.

### Attività d'esercitazione

The course will include CAD tools sessions and the implementation of a simple digital system design.

### Modalità d'esame

The examination is divided in an oral and a short written session.

### Testi consigliati

The VHDL Cookbook - on the "Download" section of the site: <http://ee.unipr.it/~gmatrell/mypage/>