

[Login](#)**Politecnico di Torino**

Academic Year 2008/09 (first time established in A.Y.2007/08)

01LTBJA

Automatic Measurement Systems

1st degree and Bachelor-level of the Bologna process in Electronic And Computer Engineering - Vercelli (II FACOLTA' DI INGEGNERIA)

Teacher	Status	SSD	Les	Ex	Lab	Years Stability
SSD	CFU	Activities				Area context
ING-INF/07	5	D - A scelta dello studente				A scelta dello studente

Objectives of the course

The course is designed to give students the capability of designing and working on automatic systems in the industrial filed. The course is mostly based on practical activities in the laboratory with 20 hours of lessons and about 40 hours in the laboratory.

Expected skills

Capability to choose the correct architecture and interface for automatic measurement systems in the industrial field.

Prerequisites

Basic maths, physics, electrical and electronic and measurement knowledge obtained by previous courses.

Syllabus

Data acquisition: choose of resolution and sampling frequency

Acquisition system architectures

IBus and interfaces: Serial (RS232, 422, 495), IEEE488, VME/VXI, PXI and networked systems

Programs system management: direct programming, LABVIEW, VEE'.

Data processing techniques (filtering, deconvolution of measurement data,').

Laboratories and/or exercises

Design of a measurement system based on serial connection

Design of a measurement system based on IEEE488 connection

Use of digital acquisition boards

Design of a complex system

Bibliography

Material prepared by the teacher on the different topics.

Revisions / Exam

Written and oral examination.

Programma definitivo per l'A.A.2008/09

