# Laboratory of Electronics for Industrial Measurements: indications for the final report

This document is meant to provide a few indications for the final report for the Laboratory of the Course in Electronics for Industrial Measurements. In particular, the report will be concerned with the last lab experience, i.e., the implementation of **a system for acquiring the signal from a temperature sensor**.

The report is supposed to include an introductory section, with a general description of the acquisition system (PC + acquisition board + LabView programming environment + breadboard with the conditioning circuit). The report should also include:

1. a discussion of the main purposes of the lab experience;

2. a description of the circuit implemented on the breadboard and of the individual components used in the circuit, in particular the transducers and the integrated circuits, and the equation describing the behavior of the transducer;

3. a description of the acquisition program, i.e., of the virtual instrument:
   a. front panel and its parts;
   b. block diagram, with a description of the functions carried out by the different parts of the program;
   c. equations and mathematical and/or statistical functions appearing in the program;

4. a presentation of the collected data (in the form of plots and/or numerical tables);

5. a comparison, if possible, between the results obtained with the acquisition system and those obtained by means of the bench top instrumentation (oscilloscope);

6. a description of possible modifications (with respect to the solutions proposed when the lab experience was introduced) made to the acquisition program with the purpose of improving it or adding new useful functions.


The report is supposed to be a group report (a group being defined as a set of students working at the same bench). Based on the quality of the report, *x* points (with *x*≤2) will be assigned to each of the group members (**whose names should be listed on the cover of the document**), under the assumption that all the members in the group equally contributed to its compilation. The points will be added to the final exam score.
The report must be sent in pdf format to lodovico.ratti@unipv.it by January 17 2020.