Politecnico di Milano

Data Acquisition Systems

prof. Alessandro Pesatori

Professor and office hours

- Professor: Alessandro PESATORI email: alessandro.pesatori@polimi.it
- office number: 02 / 2399 3609
  - cell. (emergency) 392 / 1791170
  - https://pesatori.faculty.polimi.it/Pesatori/
- Office hours
  - Tuesday h 16-18 (on appointment by mail)
  - 2° floor DEIB room 331

Teaching Materials

Handouts and transparencies (A. Pesatori)

https://svelto.faculty.polimi.it/didattica/materiale_didattico/materiale_didattico_LA/materiale_didattico_SAD.html

LabVIEW Student Edition downloadable on web:

https://lumen.ni.com/nicif/us/acadevallvdl/content.xhtml

PWD registering at:

https://lumen.ni.com/nicif/i/contactmeacademic/content.xhtml

Other teaching materials:
on professor's web page (slides, handouts, discussions, exercises)

Program Of The Course (1/2)

1ª Part (LES and EXE on Data Acq.):

- D/A e A/D Converter for Data Acquisition
  Exercises
- Sampled Signals (references)
  e quantization
- Data Acquisition Board(DAQ)
  Exercises
- Communication interfaces (GPIB/RS-232/USB)
- Data representation
- *Exercises*

Program Of The Course (2/2)

2ª Part (EXE e LAB on DAQ and LabVIEW):

- LabVIEW SW introduction
- Configuration and use of the DAQ board
- Data Acquisition with LabVIEW and DAQ
- LabVIEW Data Elaboration
- Autonomous Programming with LabVIEW

Logistics Of The Course And Exam Modality

Teaching mix (hours):

4 LES of theory

8 LES of software programming

+ (optional) project with LabVIEW and microcontrollers

Exam:

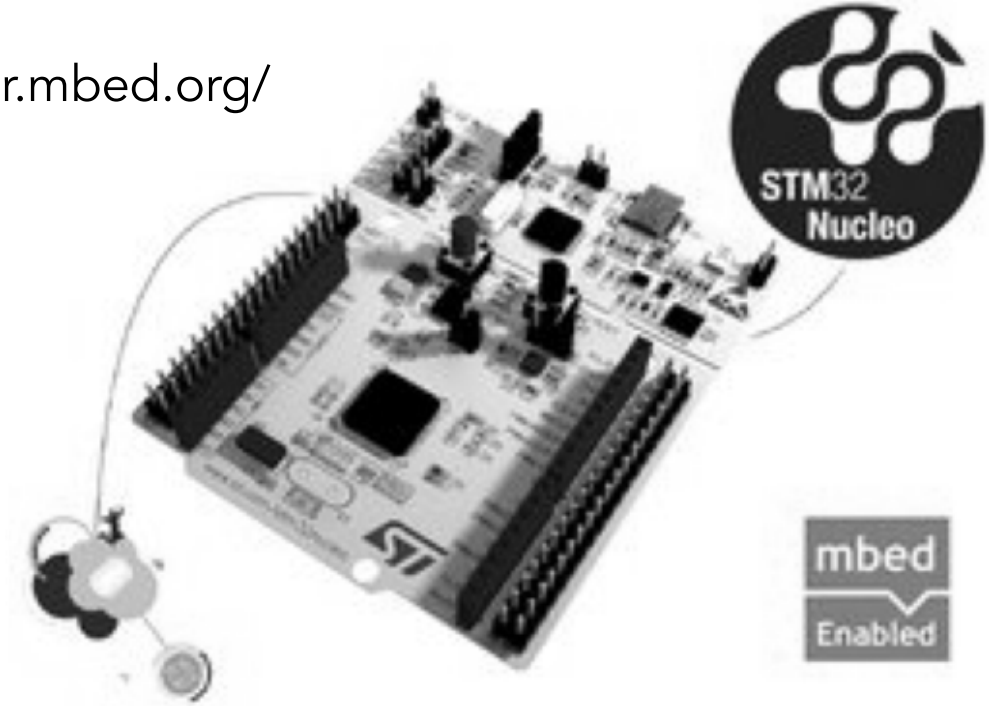
Written test (25%) +

LabVIEW program SW (75%) +

(10%) project (optional)

Project with MICROcontroller

https://developer.mbed.org/



Development of a program on a microcontroller interfaced through LabVIEW

Timetable of the course

Data Acquisition Systems

Timetables of 2020/21 course

Theory exam on November xxth in xxx classroom from xx:xx

CLASSROOM virtualroom for Lessons and Practices

CLASSROOM virtualroom for Laboratories

Tuesday (optional) 25.1.4 (EX D.2.4)	15.30-16.15	LES/PRA
Thursday (optional) 25.1.4 (EX D.2.4)	15.30-16.15	LES/PRA
Friday Virtual Room	10.15-13.15	LES/PRA/LAB

Expected lessons

Month	Date	Les/Ese/Lab
September	18-25	Les/Pra
October	2-9-	Les/Pra
October	16-23-30	Lab
November	6-13-20-27	Lab
December	4-11	Lab

FINAL EXAM (LabVIEW)
to be discussed in classroom:
December xx xx.15-xx.15 in virtual room
December xx xx.15-xx.15 in virtual room

The theory of the course will be performed during the tests of January xx and February xx. The part of LabVIEW once supported will be held valid for all test of theory.

Please note that dates and times are "planned" and may change until the beginning of the semester.

N.B.: The educational activities planned will be carried out entirely (including exam at the end of the course) during the hours of laboratory that, if exploited profitably, will enable students to have a reduced commitment to study at home.