**Integrated Systems Architectures**

# Lab Guidelines

The following guidelines have to be intended as a workflow to stick to whenever a group has some difficulties in pursuing the lab requirements. The process doesn't want to make students' lives more complicated, but rather promote self-learning in all its forms by having access to countless open source websites and books. Moreover, the student must consider the large number of his colleagues, in sharp contrast to the number of teachers, which is why it is not possible to provide advice to all groups on a continuous and exhaustive basis.

**Please stick to the following points without exception and with the utmost commitment, as teachers will undertake to provide support whenever the practice is followed correctly.**

## TO DO LIST

1. **Use your brain**: before you open your laptop make sure that the whole project is clear in your mind and in your groups. Designing means exploring the space of the solutions to find the one that best suits your target;
2. **Read carefully the lab requirements**: If you dont understand some of them, read on, the answer is probably later. it is the teachers duty to provide details of laboratory experience;
3. **Exploit manuals and books**: you will find yourself using complex commercial tools widely used in companies around the world. These tools are accompanied by manuals easily found online along with countless forums. If you want to deepen your knowledge or solve some problem this is a good starting point;
4. **Google your errors and doubts**: refer to the previous point;
5. **Confront with your peers**: Sometimes when you have a problem the best solution is to talk to your colleagues. Reasoning together can help you find alternative solutions;
6. **Mail**: If all previous points fail to help you find a solution to your problem, you can write an email to the reference at the end of the document. Be as clear as possible in exposing the problem. You will receive an answer within 48h. If this does not happen you are invited to re-send the mail;
7. **Lab Counseling**: If it is not possible to solve the problem by email, counseling may be sought to discuss it in person. Time slot and place is given at the end of the document.

The above list has to be followed in order.

## TO BE AVOIDED

- Ask questions about information clearly present in the lab requirement text;
- Report with a non-working testbench without knowing where the problem is and ask for debugging help. Laziness is not tolerated, if the architecture does not work it is up to you to find the problem, or at least identify which component is responsible before asking for help;
- Asking for counseling skipping the previous points.

**N.B.** All lab experiences are **NOT** mandatory, it is up to the group to decide how many of them to carry out according to the rules provided at the bottom of this document.

**References**:
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**Lab counseling time slot**:
*Thursday from 11.30 to 13.00*

## RULES and DEADLINES

**Lab activities**:

1. First lab, filter architecture and implementation.
2. Second lab, digital arithmetic.
3. Third lab, RISC-V.
4. Fourth lab, verification.

Labs activities are OPTIONAL and can be accomplished in **three modes**:

1. Standard:
   (a) 3 labs;
   (b) up to 3 points each respecting deadlines. Up to 1.5 points each after deadlines.
2. extended:
   (a) 4 labs;
   (b) up to 3 points each respecting deadlines. Up to 1.5 points each after deadlines.
3. Special project:
   (a) 2 labs (first and second);
   (b) up to 3 points each respecting deadlines. Up to 1.5 points each after deadlines;
   (c) Complex project substituting the third lab (up to 6 points, mandatory deadline)

**Deadlines**:

1. First lab delivery deadline: Nov. 19;
2. Second lab delivery deadline: Dec. 17;
3. Third lab delivery deadline: approximately the last written exam in the winter session;
4. Fourth lab delivery deadline: Apr. 15;
5. Complex project deadline: Jun. 30.

**NOTE**:the complex project might be a starting point to start getting some background for the thesis work.