

## GROUP PRESENTATION

December 18, 09:00 – 14:00.

Each group presentation will last 10 minutes. At the end of the presentation, there will be about 2 minutes for questions. Each student should present a part of the project. It is important to keep your presentation to 10 minutes to avoid delays.

The order of the presentation is the following:

<b>Group</b>	<b>Schedule</b>
Group 01	9:15 – 9:30
Group 02	9:30 – 9:45
Group 03	9:45 – 10:00
Group 04	10:00 – 10:15
<i>Break</i>	<i>10:15 – 10:30</i>
Group 05	10:30 – 10:45
Group 06	10:45 – 11:00
Group 07	11:00 – 11:15
Group 08	11:15 – 11:30
Group 09	11:30 – 11:45
<i>Lunch</i>	<i>11:45 – 12:30</i>
Group 10	12:30 – 12:45
Group 11	12:45 – 13:00
Group 12	13:00 – 13:15
Group 13	13:15 – 13:30
Group 14	13:30 – 13:45

The group shall prepare a presentation (PowerPoint format), describe the implementation in OpenStudio (i.e., input data and model definition), and summarise the main outcomes. Specifically, the group shall:

1. Briefly describe the initial model for the entire 4-unit apartment building, mentioning the (previous) solution adopted and any unresolved issues (e.g., thermal comfort requirement was not met). If present, mistakes (e.g., wrong orientation, etc.) must be addressed. This model will be the initial model. Specifically report:
  - Location, orientation and thermal zoning
  - Ventilation and internal gains
  - Annual energy need for space heating (kWh/(m<sup>2</sup> y))
  - Annual energy need for space cooling (kWh/(m<sup>2</sup> y))
  - Peak power for space heating (kW)
  - Peak power for space cooling (kW)
  - Appropriate comfort metrics (e.g., PMV, CO<sub>2</sub> concentration)
2. Improve the building envelope and describe the changes implemented. Compare this new model with the initial model (the model in point 1). The comparison should be made concerning energy efficiency (e.g., annual energy needs for heating and cooling) and indoor environmental quality (e.g., indoor air quality and thermal comfort).
3. Substitute the ideal heating (and cooling) system with a real one and add the DHW. Describe the changes implemented.
4. Propose and describe at least one change in the design of the building to improve its performance. This change must be additional to the improved building envelope and the implementation of a real heating (and cooling) system. However, the building should still have the following characteristics:

- The number of apartments should be the same.
  - The floor area of each apartment should remain roughly the same.
5. Compare and discuss the performance of the model in point 3 (i.e., old design + improved building envelope + real heating (and cooling) system) and updated design in point 4 (i.e., new design + improved building envelope + real heating (and cooling) system), with respect to energy efficiency (e.g., annual energy needs for heating and cooling) and indoor environmental quality (e.g., indoor air quality and thermal comfort).

Choose appropriate tools (e.g., tables, visuals) to communicate and describe the results.

**Grading rubric:**

<b>Criteria</b>	<b>Score</b>
<b>Introduction to the project context and initial model</b> What is the project goal?	3
<b>Building envelope improvements and comparisons</b>	3
<b>Heating system implementation</b>	3
<b>Design changes</b> What changes did you implement and why?	4
<b>Discussion of results found from design changes</b> What do the findings suggest?	4
<b>Presentation clarity and organization</b>	3

**Here are a few tips for your course project presentations:**

- Plan your story. You want to hold the audience’s hand and guide them through your work.
- Be passionate about the issue you are speaking about and your findings.
- Be professional. Avoid “silly” images on slides, etc.
- Avoid excessive amounts of words on slides. A rough rule is 26 words maximum for a slide (we violate this heavily in our teaching). You do not have to make complete sentences to get points across. Put the main point in words and fill in the rest. For example, instead of “Buildings are responsible for consuming 40% of all energy used in Switzerland”, you could write “Buildings = 40% of energy use”.
- Avoid wrapping around text lines.
- Font size should be 24 to 28 for primary lines and 20 to 24 for secondary lines (!!!)
- Make sure that your slides are “neat” and consistent. This is particularly important when you have multiple presenters. Use the same template, etc.
- You will likely turn to your slide during your presentation to point out important findings. Do not point at the computer monitor at the podium. The audience cannot see the monitor. Whenever you turn to look at the screen, remember to raise your voice so that the audience can hear you.
- Number your slides; it helps to navigate the discussion afterwards
- Do not mumble under your breath. If you screw something up, do not worry about it ... correct what you said and move on.
- Do your best to maintain eye contact with your audience.
- Keep your hands out of your pockets!
- Be calm. You are speaking to your classmates, and your professors and course project instructors are pretty nice people - they want this to be a good (and fun) experience for everyone.
- Practice to make sure that you finish within the time limit. You will be cut off during the time limit, and you do not want to rush 5 minutes of material into the last 30 seconds.