

# HPC2025

## Evaluation #1 – Introductory lecture to GPU programming

The primary objective is to prepare a lecture that is easily accessible at any student level, avoiding overly technical or complex concepts, while simultaneously providing a sense of accomplishment by enabling the students to understand and execute CUDA code by the end of the lecture.

The lecture must be initially provided in written format (text or slides, PDF, MD format, other).

The CUDA code must be provided (one text file).

The work *must* be performed in groups of two.

Deadline for submission : November 28th, 2025.

Presentations on December 4th and 8th (~10 minutes per group).

Criteria for evaluation will include:

- respected deadlines
- originality (i.e., not copied from somewhere)
- uniqueness (i.e., anybody else's lecture will look similar)
- simplicity in understanding
- correctness of the code
- quality of the lecture (written part)
- cleanliness of both code and lecture
- clear explanation during the presentation
- balanced speaking time in the group
- capability to reply to questions
- respect of the allocated time slot
- early presentation bonus (only for good-looking submissions)

You can begin to form the groups right now. The next lab session will be devoted to the lectures! Don't hesitate to explore the material on the web, and to share your first ideas with your teacher!

## Evaluation #2 – Quiz

A Google form with some questions, mostly with multiple answers, but not only ;-)

It potentially covers the entire class content.

When? Lab sessions planned late November / early December.

### Evaluation #3 – Software project

Select one project among the following ones:

- “Shared memory”  
=> take the code of Lecture 4 and implement what is asked in the very last section!
- “Sierpinski with real images”  
=> take the code of Lecture 5 and make it work with real images!
- “The game of life”  
=> make the exercise in the repository by taking advantage of the shared memories!

What to submit? Only the CUDA code. However, consider commenting on your code, and to provide a little documentation (it can be in text format in the same file).

You can work alone on the project, or in “binome”, but your “binome” **must** be different from the one that you formed for Evaluation #1.

The last two 3-hour long lab sessions will be devoted to this project (a little part of the time will be devoted to the quiz).

Provisional deadline : December 19th, 2025.