

PROGRES

Programming and Networks

Sébastien Tixeuil
sebastien.tixeuil@lip6.fr

Fabien Mathieu
fabien.mathieu@lip6.fr

Goals

- Know how to write simple programs related to computer networks
- Execute or Automate network-related tasks in a professional environment
- Understand underlying mechanisms, use high-level libraries

Topics

- **Three modules**
 - **Low level network programming (2 weeks)**
 - **LLM Usage for programming (2 weeks)**
 - **High level network programming (2 weeks)**
- *Languages* : **Python** (JavaScript, Java)

Outline

- 3 modules of 2 weeks, followed by 3 weeks of personal work for mini-projects
 - *Week 1*
 - Main Lecture (2h) + TME (2h) Group 1 (A-F + international students)
 - *Week 2*
 - Main Lecture (2h) + TME (2h) Group 2 (H-Z)

Classes

- 19 and 26 September 2025: Module 1
- 17 and 24 October 2025: Module 2
- 28 November and 5 December 2025: Module 3
- The other days (03 Oct, 10 Oct, 7 Nov, 14 Nov, 12 Dec, 19 Dec) are free for personal work (TME, Mini-projects)

Evaluation

• 3 TMEs

- TME 1 due 3 Oct 2025 at 11:59 pm, TME 2 due 7 Nov at 11:59 pm, TME 3 due 12 Dec 2025 at 11:59 pm
- Individual or in pair (change pairs for each TME)

• 2 Mini-projects

- Mini-project 1 due 17 Oct 2025 at 1:00 pm, Mini-project 2 due 26 Dec 2025 at 1:00 pm
- In pairs, change pairs for each mini-project

Evaluation

- 10% TME 1, 10% TME 2, 10% TME 3
 - **TME** = **.zip** file with **source code** archive of what was done (+ explanations in Markdown and executed code in case of .ipynb file)
- 30% Mini-project 1, 40% Mini-project 2
 - **Mini-project** = **.zip** file with **source code** archive of what was done (+ explanations in Markdown and executed code in case of .ipynb file)

LLM Policy (Module 1)

• *Opt-In*

- Three cases:
 - No LLM usage (default)
 - LLM usage declared (provide model name and version with ALL prompts)
 - LLM usage not declared: considered plagiarism

LLM Policy (Modules 2&3)

- ***Opt-Out***

- Three cases:
 - LLM usage (default) (provide model name and version with ALL prompts)
 - No LLM usage must be made explicit
 - No LLM declaration despite LLM usage: considered plagiarism

Web Site

<http://www-npa.lip6.fr/~tixeuil/m2r/pmwiki.php?n=Main.PROGRES>

- Main Lecture PROGRES slides
- TME/Mini-projects
- Useful links (submission site, forum, virtual machine)