



IP PARIS



3TC36: Object-Oriented Programming in Java

Introduction and course organization

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Teaching team

- English course group:
 - Prof: Xhevahire Tërnavá
 - Assistant: Anish Bhohe
 - Students are expected to use their own laptops (there are no computers in the class rooms).
- Cours en français groupe F.B :
 - Prof : Sébastien Canard
 - Assistant : Nathan Papon
- Cours en français groupe F.A :
 - Prof : Dominique Blouin
 - Assistante : Yara Hallak



Learning objectives of the course

- Model real-world objects using Object-Oriented (OO) programming paradigm concepts such as `classes`, `objects`, `methods`, `inheritance`, `polymorphism`, etc.
- Learn to develop an OO software application and design its **architecture** using well-known design patterns like `Model-View-Controller (MVC)`
- Master software application **modularity** through the use of `interfaces` for integration with existing libraries or applications
- Use **good programming practices** to facilitate understanding and maintainability of the software application code

Course structure: Overview (1/2)

- The course alternates between Lectures (**CM**: Cours Magistraux) and Practical Sessions (**TP**: Travaux Pratiques)
 - 13 hours in total in class:
 - 7 hours of lectures (CM)
 - 1 hour of guided design exercises (TD)
 - 6 hours of accompanied practical work (TP)
 - 10 hours of **unsupervised personal work** (Personal TP)
- The course program and materials are available on

oojava.telecom-paris.fr

Course structure: Overview (2/2)

- The practical sessions (TPs) guide you in **building the final project**
 - They are conducted on a computer using the Eclipse development environment (recommended) or another IDE of your choice.
 - Ideally, you should **use your own computer**. Otherwise, computers in the TP rooms are available.
- Download Eclipse IDE for Java Developers:
 - <https://www.eclipse.org/downloads/packages/release/2025-12/r/eclipse-ide-java-developers>
 - Extract the archive and run the executable named `eclipse`.

The project

- Develop a **Robotic Production Factory Simulator**
 - Example: <https://www.hpi.uni-potsdam.de/giese/public/cpslab/>
- The project development will be guided by the TP sessions
 - The source code must be submitted by the project deadline
 - Make sure to **save your source code**
 - We will provide a Git repository for archiving it
 - During the TP1, you will learn how to create a Git project in order to archive it.
- The project can be done **alone** or in **pairs** (encouraged)
- Let us know your choice **before the first TP session**
 - Enter your names and teams in the following table:
<https://partage.imt.fr/index.php/s/jPnXKTRKZ5EP7Gk>

Project evaluation criteria

- Proper functioning of the implemented **Simulator** according to the provided specifications
 - Requirements will be provided during the TD session.
- Implementation of the concepts and best programming practices covered in the course

Course evaluation (out of 20 points)

- Knowledge check at the end of the course: **12 points**
 - Conceptual questions and simple modelling exercises
 - On paper, phones off
 - An A4 sheet of notes is allowed
 - Duration: one hour and a half
- Project : **8 points**