

# Petri network



## Component

École Nationale  
Supérieure  
d'Électrotechnique  
d'Électronique  
d'Informatique  
d'Hydraulique  
et des  
Télécommunications

## In brief

- > **Amety's Code:** N8EE16E
- > **Open to exchange students:** Yes

## Presentation

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### Objectives

- Understand the fundamental concepts and terminology of Petri nets.
  - Identify and model discrete event systems
  - Analyze the structural and behavioral properties of Petri nets.
  - Understand the limitations of the classical model and the principle of extensions.
  - Learn how to use graphical modeling, editing, and analysis software such as TINA with application to concurrent and distributed systems.
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### Description

This course studies Petri nets used to solve problems in concurrent and distributed systems, where several processes or events occur simultaneously and interact in complex ways. They can be used to model and analyze scenarios such as task synchronization, shared resource management, deadlock detection, and verification of safety and liveness properties in dynamic and unpredictable environments.

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### Pre-requisites

- Linear algebra
- Graphs