

# IT operational security



**Component**  
École Nationale  
Supérieure  
d'Électrotechnique  
d'Électronique

## In brief

- > **Amety's Code:** N9EE20B
- > **Open to exchange students:** Yes

## Presentation

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### Description

General information, definitions, and basic concepts (attributes, constraints), means of operational safety (prevention, tolerance, elimination, prediction), and measures

Fault tolerance techniques (fault assumptions, basic techniques, replication strategies) and architectural solutions

Validation techniques, in particular through fault injection (principles, robustness analysis, examples of tools and experimental results)

Examples of industrial systems (e.g. Airbus A320, Boeing B777), summary and conclusion

TER "Critical System" associated with this course

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### Pre-requisites

Basic knowledge of computer science (hardware, operating system, language)

Concept of behavioral modeling of computer systems