

Module IE.3511

# Safety and reliability

**Person in charge:** Frederic AMIEL

**Prerequisite:**

**Organization:** 14 x 3h Lectures/Tutorials

**Evaluation:** Exam

**ECTS:** 5 credits

## Context

Embedded systems as aircrafts, cars, trains... uses different techniques of various fields (mechanical, chemical, physics, electronics ...). In many cases, the failure of an element causes considerable damage or even involves the life of human beings. This module describes causes of failure, and methods to handles it.

## Objectives

### *Skills*

In terms of skills, this module enables students consider the overall scheme of the embedded system and to formalize failures and its effects.

### *Knowledge*

- Reliability from component to system
- Safety, AMDEC graphs
- Risk analysis

Various approaches with Lectures and labs will be used to teach the subject.

## References

Handout