



# Faculté des sciences appliquées

**FSA****MECA2646** Fiabilité et analyse probabiliste du risque

[30h] 3 credits

This course is taught in the 1st semester

**Teacher(s):** Ernest Mund, Yves Smeers  
**Language:** french  
**Level:** 2nd cycle course

**Content and teaching methods**

Reliability is a study case of probabilities, which allows one to assess availability (or not) of a set-up which could be plagued by random failures.

This course provides an introduction to this discipline whose industrial impact is ever increasing, in the nuclear, aeronautical, computer science, chemical# fields. The aim of this course is to allow students to master the basics and be able to apply methodologies (at an elementary level) pertaining to probabilistic risk analysis.

The main topics are:

- Probability concepts for failures
- Failure data processing
- Reliability of simple systems, with repairs
- Event and failure trees
- Methodology of probabilistic risk analysis

**Other credits in programs**

**MECA23** Troisième année du programme conduisant au grade (3 credits)  
d'ingénieur civil mécanicien

**STAT2MS** Master en statistique, orientation générale, à finalité spécialisée (5 credits)