

UE Systems Reliability and Maintenance

ECTS 3 cred

ECTS 3 credits Component UFR PhITEM (physique, ingénierie, terre, environnement, mécanique) Semester Printemps

- > Teaching language(s): English
- > Open to exchange students: Yes
- > Code d'export Apogée: PAXXMIAC

Presentation

Description

The objective of this course is to provide a comprehensive foundation in system reliability theory and dependability analysis methods. The following topics are addressed.

- · Probabilistic failure models and lifetime modelling of engineering components
- Qualitative approaches to system reliability analysis (FMECA, ...)
- Reliability modelling and analysis of systems and networks of independent components (Fault Tree Analysis, Reliability Block Diagrams, Event Tree Analysis, Structure Function, Minimal Cutsets, Importance Measures)
- Markov processes for systems and networks reliability modelling (systems with dependent components, passive redundancies, tested components, ...)
- · Reliability of maintained systems and maintenance policies modelling

Course parts

CMTD

TΡ

Lectures (CM) & Teaching Unit (UE) 18h Practical work (TP) 6h





Useful info

Campus

> Grenoble - Scientific Polygon