

System Monitoring and Diagnostics



Component
École Nationale
Supérieure
d'Électrotechnique
d'Électronique

In brief

- > **Amety's Code:** N9EE16B
- > **Open to exchange students:** Yes

Presentation

Objectives

Understand the overall situation in the field of electromechanical system diagnostics.

Identify the different functions involved in a diagnostic system.

Perform FFT analyses on real signals to create fault indicators.

Use the design of experiments method for lifetime modeling.

Description

Monitoring and fault diagnosis of electromechanical systems

1. The growing role of monitoring and fault diagnosis
2. Failures in electromechanical systems
3. Existing solutions for monitoring and fault diagnosis
4. Introduction to reliability
5. Diagnostic methods: classification and examples (BE)

6. Designing experiments for a reliability study (BE)

Lectures and computer-based assignments, based on problem-based learning

Pre-requisites

Basic mathematical functions

Basic electronic functions