Piston engines Project

Component
École Nationale Supérieure d'Électrotechnique d'Électronique

In brief

- **Code:** N9EM21B
- **Open to exchange students:** No

Presentation

Objectives

The aim of this BES is to enable students to tackle many of the multiple problems posed by piston engines and their design. In the course of this work, they will be required to work on the following disciplines: thermodynamics, thermics, fluid mechanics, acoustics, vibrations, combustion...

Description

The project is divided into two parts:

A/ Thermodynamic cycle and dimensioning of a piston engine. This part is common to all students.

B/ In-depth study of 1 or 2 of the following topics:

B1/ Direct fuel injection

B2/ Engine cooling

B3/ Valve sizing

B4/ Study of engine combustion

This second part is left up to the students, who must decide for themselves which study interests them most. Depending on how far they have progressed, teachers may decide to go further in just one of the B studies, or to carry out two B studies which in some cases complement each other.