

Finite elements for electromagnetism



Component

École Nationale
Supérieure
d'Électrotechnique
d'Électronique
d'Informatique
d'Hydraulique
et des
Télécommunications

In brief

- > **Amety's Code:** N8EE22A
- > **Open to exchange students:** Yes

Presentation

Objectives

Approximate solution of partial differential equations using the finite element method, applied to physical problems frequently encountered by electronic engineers.

Description

Finite element principles

Variational formulation

Basis functions and discretization

1D and 2D meshes

Solution.

Practical application using the Matlab PDE toolbox

electronics-related issues (semiconductor physics, waveguides).

Continued implementation through the programming course.

Pre-requisites

EDP course on finite differences, 1st year EEEA.