

Intégration et Applications



Component

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

In brief

> **Code:** N5EN02A

Presentation

Objectives

To give the mathematical basis essential to any engineer concerning the theory of measurement, integration and the Fourier transform. These basics will be useful in several courses such as signal processing, image processing, telecommunications, data analysis, partial differential equations,...

Description

- * Introduction to measure theory
- * Construction of the Lebesgue integral
- * Main integration theorems (dominated convergence, Fubini,...)
- * Fourier transform in L^1/L^2
- * Convolution, filtering
- * Distributions, Fourier transform of distributions.