

## EF3 | Radiometry and photometry



NIVEAU : BASIC

**Publics :** Engineers or technicians wishing to master radiophotometry for applications in metrology, materials, aeronautics, surveillance, defense, medical biology, transportation...

**Prérequis :**

**Responsable(s) pédagogique(s) :** Isabelle Ribet - Experte Onera, enseignante à l'Institut d'Optique

**Langue de la formation :** French

**Capacité maximum :** 12

**Prix :** 2150€ HT - **Durée :** 5 days - 35 h

### Objectifs

- ▶ Understand and deepen the basics of radiometry and photometry
- ▶ Know how to choose and to use commercial instruments (luxmeters, luminancemeters, spectroluminancemeters, colorimeters)
- ▶ Know how to develop dedicated test benches (characterisation of lighting sources or optical components, metrology, instruments calibration...)

### Thèmes abordés

Basics of radiometry and metrology

Spectrophotometry

Sources, surfaces/media, detectors

Colorimetry

Industrial and commercial applications



---

## EF3 | Radiometry and photometry

---

### Le programme

#### Radiometry

- ▶ Basics of radiometry: general laws, physical quantities, sets of units
- ▶ Metrology and main types of photometers
- ▶ Spectrophotometry
- ▶ Sources
- ▶ Surfaces and media
- ▶ Detectors: principles of operation and main characteristics
- ▶ Colorimetry
- ▶ Exercices
- ▶ Applications
- ▶ Détecteurs

#### Labwork

- ▶ Luminance and intensity measurements
- ▶ Lighting sources characterisation
- ▶ Photometric characterisation of two objectives

### Méthodologie et évaluation

Courses and exercices

Interactive demonstrations

Labwork