40 years of expertise in laser safety and laser technologies, serving your most critical challenges.

Laser Engraving and Laser Machining

Ref: AL.4-1

The fineness and precision of the laser beam make it a tool in its own right, capable of machining the most difficult materials. The new generation of pulsed lasers delivers performance that places laser engraving in a strong position compared with traditional tools. Many applications are already operational in industry, notably in watchmaking and even in the manufacture of injection moulds and dies. Our training course aims to give you the skills to set up and optimise your engraving and micro-machining processes.

Practical information

DATES (INTER-COMPANY / IN-HOUSE)
• 18–20 November 2026

ORGANISATION
IREPA LASER - Strasbourg / Illkirch

DURATION
2.5 days (17.5 hours)

PRICES
2090€ excl. VAT

TECHNICAL/TEACHING LEAD:
Teaching: Franck RIGOLET | Technical: Frédéric MERMET

DO YOU HAVE A DISABILITY?
Contact our disability officer at referent.handicap@irepa-laser.com

Key information

PREREQUISITES
General technical knowledge

ACCESSIBLE LASER CLASSES
/

CERTIFICATION
Teaching equipment:
• Fibre laser and pulsed Nd:YAG laser machine.
• High-precision machine equipped with a nanosecond laser + femtosecond laser.
• High-power nanosecond laser (exclusive)
• Pulsed laser 532nm (green)
Validation:
• Training certificate issued

TECHNICAL/TEACHING LEAD:
Teaching: Franck RIGOLET | Technical: Frédéric MERMET

Training objectives

- Be able to adapt settings according to the laser technology.
- Apply the basic principles of laser engraving and micro-machining.
- Master the influence of operating parameters.
- Acquire a process optimisation methodology.

Target audience

Micro-machining installation managers, process technicians, setters and operators.

Programme

Over 2.5 days

Lasers and Technology
• Light and lasers
• Lasers used in engraving and machining

Principles, phenomena
• Laser/material interaction
• Influence of the type of material

Engraving and micro-machining on machines
• Visualising the influence of parameters
• Setting principles
• Qualifying a procedure
• Tests on various materials

Optical principles
• Beam shaping
• Beam delivery

Quality control
• Observation and analysis of machined surfaces

Safety awareness
• Exposure risks
• Protection and prevention