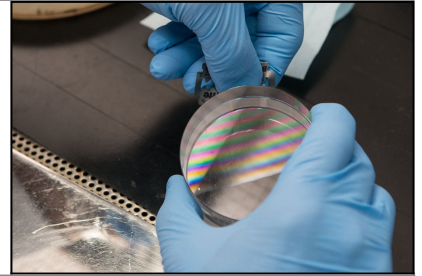


SC2 | Optical manufacturing and optical metrology



Nouveau Programme

NIVEAU : SPECIALIZED

Publics : Engineer or advanced technician willing to work with opticians in the field of optical manufacturing

Prérequis : Basic knowledge in optics

Responsable(s) pédagogique(s) : Sébastien De Rossi - Enseignant-chercheur à l'Institut d'Optique

Langue de la formation : French

Capacité maximum : 12

Prix : 1380€ HT - **Durée :** 3 days - 21 h

Objectifs

- ▶ Discover the steps of optical components manufacturing
- ▶ Learn the control techniques of optical components
- ▶ Integrate notions of quality monitoring

Thèmes abordés

Optical component manufacturing processes

Metrology of optical components



SC2 | Optical manufacturing and optical metrology

Le programme

Manufacturing methods

- ▶ Machining, mechanisms lapping and polishing.
- ▶ Standard processes for spheres and planes. Industrial production equipment.
- ▶ Principles and implementation of computer assisted polishing.
- ▶ Special processes and ion milling.
- ▶ Means of manufacture inspired by mechanics: machining diamond tool
- ▶ Micro-grinding - Examples of applications
- ▶ CN Manufacturing equipment: Roughing - Fining - Polishing - Edging
- ▶ Polishing by magneto-rheological and application to the manufacture of aspherical surfaces

Optical Control

- ▶ Controls with caliber and interferometer, dimensional metrology
- ▶ Wavefronts analyser: Hartmann, Hartmann-Shack, Hartmann modified lateral shift interferometry
- ▶ Interferometric measurements (Zygo)

Awareness of quality procedures and standards

- ▶ Quality concept and approach: quality objectives and indicators
- ▶ Risk management, problem solving method, role of quality documentation.
- ▶ Introduction to quality standards and certification procedures.

Méthodologie et évaluation

General lectures

Tutorials

Optical workshop visit