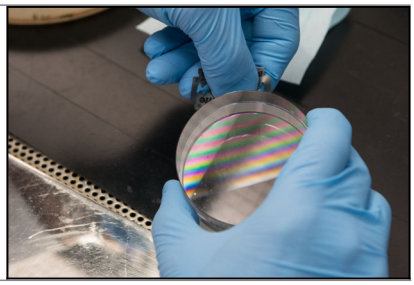
INSTITUT d'OPTIQUE GRADUATE SCHOOL | Continuing Education
Formation Continue

SC2 | Optical manufacturing and optical metrology



NIVEAU : AVANCÉ

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 : Français

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

Prochaines sessions

- 26 novembre 2018 au 28 novembre 2018 - Palaiseau

Thèmes abordés

Optical component manufacturing processes
Metrology of optical components

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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