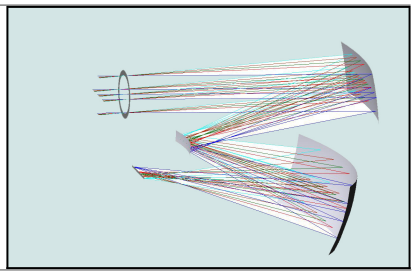
INSTITUT d'OPTIQUE GRADUATE SCHOOL | Continuing Education
Formation Continue

CO3 | Optical Design with CodeV®



NIVEAU : ADVANCED

Publics : Engineers who need to design imaging optical systems with the CodeV software

Prérequis : Basic knowledge in geometrical optics (centered systems in paraxial optics, notions of entrance and exit pupils...) and basic notions on the aberrations of real optical systems

Responsable(s) pédagogique(s) : Hervé Sauer - Enseignant-chercheur à l'Institut d'Optique

Langue de la formation : French

Capacité maximum : 10

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

Objectifs

- Be able to to use the practical bases of CodeV software
- Analyze optical systems performances
- Optimize optical system using basic methods
- Handle standard imaging optical systems

Thèmes abordés

Optical system analysis
Optimization of optical systems with simple or more complex constrains
Introduction to tolerancing
Rough set out of more advanced CodeV features

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Le programme

Basics and first steps

- Introductory lecture on object/image conjugation, entrance and exit pupils, aberrations, diffraction, ...
- CodeV hands-on workshop with a simple example (Cooke triplet)

Optical systems

- Study of aberrations and optical system quality criteria on different examples
- Setting of mirrors, aspheric surfaces, obscurations, tilts and decenters, multiconfigurations...

More advanced elements and training

- Optimization: basics, methods, and practical tutorial (example of eyepiece design with complex constrains)
- Training tutorial (on a catadioptric system)
- Introduction to tolerancing and some other advanced CodeV options
- Last tutorial subject at the trainee's choice

Méthodologie et évaluation

Mixed lectures and tutorials in a computer facility room
Example based teaching
Supervised software usage, largely guided at beginning, and more free later when user skills increase