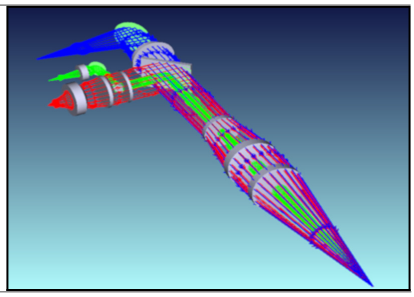
INSTITUT d'OPTIQUE GRADUATE SCHOOL | Continuing Education
Formation Continue

CO6 | Design of optical systems based on off-the-shelf components with Zemax®



New training

LEVEL: BASIC

Audience: Technicians, engineers, PhDs, postdocs

Prerequisites: General optics knowledge (geometrical optics, optical aberrations, wavefront). General knowledge of the different types of off-the-shelf components (simple spherical lenses, aspheric lenses, doublets, mirrors, beamsplitters...)

Pedagogical manager(s): Nicolas Lefaudeux - Expert Imagine Eyes

Language of the training: French

Maximum capacity:

Price: 1820€ HT - **Duration:** 4 days - 28 h

Objectives

- Be able to design an optical system using off-the-shelf lenses (e.g. collimation system, focalization system, projection system)
- Be able to design an optical system using mirrors (e.g. laser beam expanders, simple telescopes)
- Be able to design an optical system with multiple beams using beamsplitters (e.g. multi beam systems, emission/reception systems)
- Be able to design an illumination system (e.g. systems with diffusers, condensers)

Next sessions

- 30 march 2022 au 31 march 2022 et 11 april 2022 au 12 april 2022 - Palaiseau

Addressed topics

Optics
- Optical aberrations, optical aberrations associated with off-the-shelf components, design levers available on off-the-shelf components.

Optical design with Zemax OpticStudio®
- Sequential mode, merit function, optimization, fitting with off-the-shelf components. 3D and multiconfiguration with Zemax. Non-sequential mode with Zemax.

Off-the-shelf components
- Types, availability, specifications, main suppliers

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The program

Optical design of rotationally symmetric systems
- Types of systems and application, associated off-the-shelf components
- Zemax sequential, merit function, optimization, fitting with off-the-shelf components

Optical design of mirror systems
- Types of systems and application, associated off-the-shelf components
- Zemax 3D

Optical design of multibeam systems
- Types of systems and application, associated off-the-shelf components
- Zemax multiconfiguration

Optical design of illumination systems
- Types of systems and application, associated off-the-shelf components
- Zemax non-sequential mode

Methodology and assessment

Seminars (30%) and exercises with Zemax/OpticStudio
Interactive experimental demonstrations
Practical hands-on on instruments

Formation Continue de l'Institut d'Optique - 2 av. Augustin Fresnel, 91127 Palaiseau. Tél . : +33 1 6453 3236 - fc.institutoptique.fr
PARIS-SACLAY - SAINT-ETIENNE - BORDEAUX