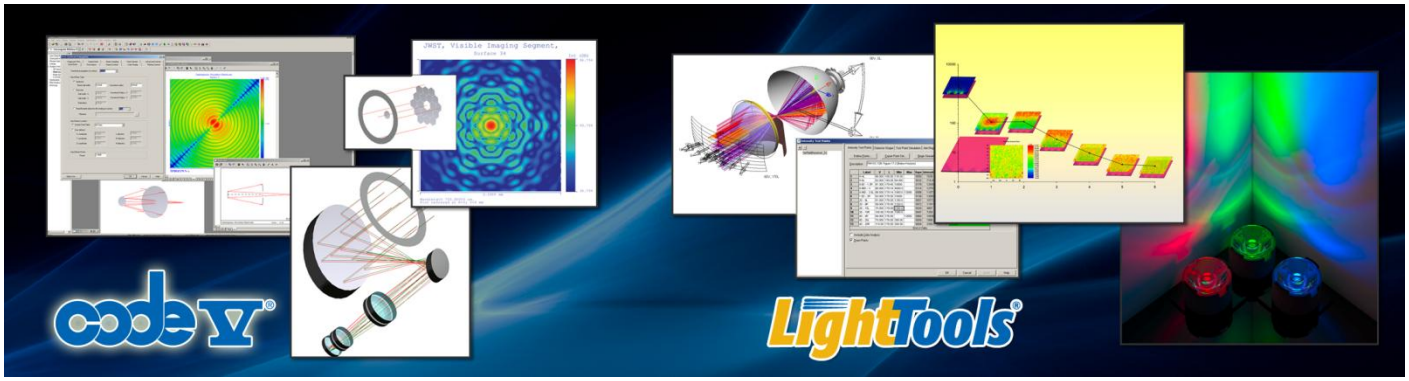
LightTools and CODE V Training

Brussels, Belgium | 2012 May 21-25



Register today for the upcoming CODE V® and LightTools® training in Brussels, Belguim. To register or for more information, contact us about these events.

LightTools Training

LightTools is a unique optical engineering and design software product that features virtual prototyping, simulation, optimization, and photorealistic renderings of precision illumination applications. The software has adapted solid modelling technology to accommodate the inherent accuracy required to simulate ray paths of light as they traverse through and within optical elements and mechanical structures. The software is straightforward to use, accurate, has the most advanced capabilities commercially available, and supports the tasks of design and engineering iterations in addition to analysis.

- **Introduction to Illumination Design Using LightTools**
  4 days, €1600
- **Advanced Topics in LightTools: COM Macro Programming**
  1 day, €400

CODE V Training

CODE V is a comprehensive program for optical design, analysis, and fabrication support. It is used by engineers around the world to design a wide range of optical systems for a variety of products, including photographic equipment, video cameras, medical instruments, aerospace systems, and much more. CODE V's advanced features are combined with outstanding flexibility, ease of use, and technical support to help make you more productive.

- **CODE V for Image Forming Systems**
  5 days, €2000

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Introduction to Illumination Design Using LightTools

COURSE OVERVIEW

This 4-day short course is a practical introduction to LightTools for engineers and scientists who wish to model and analyze the interaction of light with opto-mechanical systems. It assumes some familiarity with optical concepts and terminology. The course will be taught using LightTools 7.2. The course is based on interactive examples of various illumination systems rather than lectures. This hands-on approach maximizes time spent using LightTools while incorporating key illumination concepts in their practical context. Workshop problems provide opportunity for additional practice. The course will include how to:

- Create an opto-mechanical system model within LightTools, with native geometry or imported from a CAD program
- Use Surface Properties to define the interaction of light with specular, scattering, or absorbing surfaces
- Use Boolean operations to construct complex structures
- Set up an illumination system, including multiple sources and multiple receivers
- Understand, interpret, and manipulate the intensity and illuminance analyses
- Create photorealistic renderings of models to visualize the system performance
- Improve system performance by using LightTools optimization with its various merit functions

Advanced Topics in LightTools: COM Macro Programming

COURSE OVERVIEW

This one-day course provides a practical overview of LightTools COM Macro Programming. The course includes lectures, demonstrations, and hands-on computer workshop sessions. Familiarity with LightTools basic features is assumed.

The COM Macro Programming capability allows users to automate tasks within LightTools. The course will use Excel Visual Basic for Applications (VBA) to control LightTools. Basic programming experience is helpful, although proficiency in VBA is not necessary.

COURSE OUTLINE (FRIDAY)

Topics covered in the course will include:

COM Macro Programming

- Accessing LightTools via Excel's VBA COM interface
- LightTools JumpStart Macro Library
- Direct database access

CODE V for Image Forming Systems

Goals for this Course

This course for current CODE V users will give you a more detailed understanding of the usage and operation of the program's more familiar features, and exposure to some of more specialized features as well. You will learn how to address your design and analysis tasks more effectively and discover new applications for CODE V in your work.

Format for the Course

Seminar attendees will be CODE V users with varying interests and experience levels. Thus, a flexible, informal, and wide-ranging format will be used, which will include presentations on the selected topics, computer demonstrations, hands-on exercises, and informal discussions.

Course Outline

Topics will be selected from among the following list, with the intent being to tailor the course content to the needs of the attendees. Please let us know, preferably in advance, if you have a particularly strong interest in any of the listed topics.

- Background for running CODE V
- Performance evaluation
- Optimization of lens performance
- Reflective optical systems
- Non-spherical surfaces
- Afocal systems
- Zoom and multi-configuration systems
- Tolerancing an optical system
- Diffraction analysis (including Image Simulation)
- Environmental analysis of optical systems
- Diffractive and binary optics
- Interferograms and the Alignment option
- Non-sequential surfaces
- Macro-PLUS™ programming
- Beam Propagation

Who Should Attend?

Current users of CODE V or LightTools are invited to attend these training sessions. While there are no specific prerequisites, some familiarity with optical or illumination design concepts and with the software is helpful, particularly for the advanced sections.

Training sessions are subject to space limitations and topics are subject to change without prior notification.

Important:

- Attendees are responsible for their own arrangements for accommodation.
- Tuition includes all teaching materials.
- Tuition must be paid in full prior to attendance. Minimum enrollments apply.