

UNIVERSITY DEGREE IN AUTOMOTIVE LIGHTING ENGINEERING

Continuous Education

Department of “Formation Tout au Long de la Vie et du Développement des Ressources Propres”

OBJECTIVES

This training is the result a partnership between the University of Toulon (www.univ-tln.fr) and OPTIS, Inc. (<https://www.optis-world.com/>).

OPTIS is a world-leading company providing scientifically proven, physics-based software for simulating the behavior of light, simulating human vision, and finally visualizing a product in its final context. The company offers its know-how to over 2400 customers, and many of the 500 largest companies in the world use software developed by OPTIS. In the field of automotive lighting, SPEOS (<https://www.optis-world.com/product-offering-light-simulation-virtual-reality-software/SPEOS>) has been frequently used by numerous automotive original equipment manufacturers and suppliers.

The aim of this training is to support professionals or students in acquiring the necessary qualifications and methods, as well as using the appropriate light simulation tools in the field of automotive lighting.

This 3-unit course will teach you how to model, simulate, and analyze the photometric efficiency of lighting systems with SPEOS software and how to dynamically experience and test lighting systems embedded in a future vehicle under real conditions with the VRX Driver simulator (<https://www.optis-world.com/product-offering-light-simulation-virtual-reality-software/vrx-dynamic-driving-software>). This training will also enable you to render photo-realistic aspects of products using High Resolution and High Dynamics Rendering thanks to a unique physics based approach to light and an understanding of the dynamics of human vision.

In partnership with:



REGISTRATION

Inquiries: Department of “Formation Tout au Long de la Vie et du Développement des Ressources Propres”, Campus de Toulon.
Phone: 04 94 16 22 50
Email: ftlv@univ-tln.fr

ADDITIONAL INFORMATION

- **Duration of the Training:** 2 weeks
- **Location:** University of Toulon, Campus de La Garde and OPTIS SAS, La Farlède - France.

PREREQUISITES

Applicants must have earned one of the following degrees.

- An Engineering Degree recognized by the Commission des Titres d’Ingénieurs (Commission for Engineering Degrees),
- A Master’s Degree or equivalent, (preferably in relevant scientific fields)
- A foreign degree equivalent to one of the above.

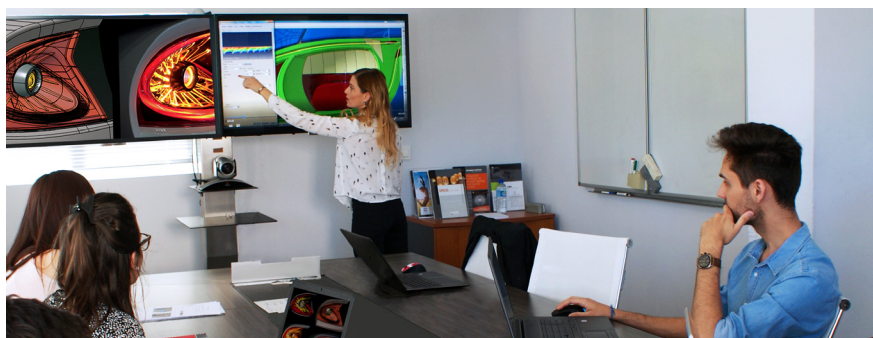
All courses will be taught in full-English.

Applicants should be proficient in English: B2 level (575 points on the paper-based TOEFL or 785 points on the TOEIC).

Enrollment is limited to 10 students.

PROGRAM DIRECTOR

- **Alexandre Merlen**
Maître de Conférences
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CONTENT

► UE 1 (40H) : PHOTOMETRY AND DESIGN FOR AUTOMOTIVE LIGHTING

- › Beam Propagation (Photometry and Colorimetry)
- › Light Expert Analysis
- › Optical Shape Design
- › Practices

Acquired Skills:

- › Creating optical shape designs for the automotive industry
- › Generate ray tracings
- › Simulate and analyze the photometric efficiency of lighting systems

► UE 2 (16H) : DYNAMICALLY EXPERIENCE HEADLAMP

- › Headlamp Simulator

Acquired Skills:

- › Prepare data for simulation
- › Manage environmental elements and car geometry

- › Adjust the lighting system to pass regulations
- › Use tools to measure physical quantities
- › Drive a car in real conditions
- › Configure a system to deploy the simulation

► UE 3 (24H) : VISUAL ERGONOMICS AND EXPERIENCE OF AUTOMOTIVE LIGHTING

- › From Visual Ergonomics to Virtual Reality

Acquired Skills:

- › Simulate lit or unlit appearances
- › Create multi-lighting configurations
- › Review design results and dynamically change the point of view
- › Explore the interior and exterior of a product to assess its ergonomics, perfecting the design

Total: 80 hours of training

FURTHER INFORMATION

► ORGANIZATION

- **Duration of the training:** 2 weeks
- **Beginning:** Monday 25th June 2018
- **End:** Friday 6th July 2018
- **Periodicity:** 10 weekdays over a 2-week period
- **Location:** University of Toulon, Campus de La Garde, France and OPTIS SAS La Farlède, France.

► FEES

- › 4,500 euros
- › University fees in excess of the educational costs: €189.10*

* Fees for the 2017-2018 academic year, subject to modification

► FACULTY

- › Specific to every diploma.
- › The training institution reserves the right to cancel or to postpone a training if the minimal number of participants is not reached.

► ADMISSION

The diploma is awarded when candidate fulfills the following requirements:

- › The student's average grade is above 10 (/20).
- › Each teaching unit average grade is above 10(/20).

CONTACT

► **UNIVERSITY OF TOULON** - «Formation Tout au Long de la Vie»
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Phone: 04 94 14 22 50 - Email: ftlv@univ-tln.fr

► **OPTIS** - ZE La Farlède - CS 40275 - 83078 Toulon cedex 9
Phone: +33 494 086 690 - Fax: +33 494 086 694
Email: training@optis-world.com

► ATTENDANCE

Participation is mandatory for all courses. Students will have to sign an attendance form each day during the training period. Any and all absences must be justified.

Any absence for a test will be sanctioned by a grade of 0 (/20) for the corresponding teaching unit.

For any other details, the examination policy of the Université de Toulon applies.

► EVALUATION METHODS

Examination

Each teaching unit is validated by a test organized by the professor in charge of the course in accordance with the Program Director. The test is scheduled at the end of each teaching unit.

Conduct of the tests.

- › To prevent fraud, the use of cell phones is forbidden during tests. Any irregularities which take place during a test will be subject to sanctions as stipulated in the examination policy of the University of Toulon.
- › Authorized Documents: no documents are allowed during tests unless otherwise authorized by the teacher in charge of a specific teaching unit.

Examination sessions

The D.U. Automotive Lighting Engineering consists of only one session of examinations.

► EVALUATION OF THE TRAINING

At the end of the training courses, students will be asked to evaluate the D.U Automotive Lighting Engineering.

► VALIDATION OF PERSONAL OR PROFESSIONAL EXPERIENCE

Applicants with professional or personal experience in the field of the D.U. Automotive Lighting Engineering can apply to validate their skills via a VAE or VES process with respect to French law (Decree n° 2002-529 dated 16/04/2002 relative to la Validation des Etudes Supérieures and Decree n° 85-906 dated 23/08/1985 relative to la Validation des Acquis Professionnels).



Visit our website at:
<http://www.univ-tln.fr>
Or scan this QR code.

University in the social media



*Subject to the authorization of the University's governing board CFVU meeting on April 12th, 2018.