

## OPSCITECH Optics in Science and Technology

**Duration:** 2 years

**Course description:**

Optics is crucial to science and industry; it plays a major role in the biosciences, medical technology, quantum physics, telecommunications, optical systems, mechatronics and image analysis. This Master's programme offers comprehensive coverage of the field of optics, from upstream scientific aspects to engineering and applications in major economic sectors.

Students in the two-year programme study for one year at two institutions in two countries. The objective is to train highly-skilled and qualified graduates for technical or scientific positions in industries specializing in optics or using optics. Many of the successful graduates follow on with a PhD within the consortium, in their home country or in a different country. The language of instruction is English, though courses may be taken in the local language if the student's language skills allow it. Examinations are in English at all the sites. Additionally, local language courses are available at all the institutions. Between 25 and 30 students from all over the world take up offers to study on the course each year.

The course is made up of study-tracks jointly designed by the partner institutions of Institut d'Optique *Graduate School* and Université Paris-Sud 11 (France), Friedrich-Schiller-Universität Jena (Germany), Technische Universiteit Delft (Netherlands) Politechnika Warszawska (Poland) and Imperial College London (United Kingdom). Core courses in fundamentals of optical sciences are provided on all sites as well as laboratory work and development of transferable skills. Advanced courses vary depending on the specific areas of excellence of each institution. Project and Master's thesis work are carried out in leading academic or industrial research environments.

At the end of each academic year all students attend a one-week summer workshop at one of the partner institutions. The activities include seminars and tutorials given by visiting scholars, academic staff and professionals from the optics and related industries. Master's thesis dissertations are presented by the graduating students and opportunities at partner institutions are presented. Each successful graduate is awarded the Master's degrees of the two institutions where he or she has studied.

Applicants should possess a good Bachelor of Science or Bachelor of Engineering degree that includes significant exposure to physics and notions of optics. Selection criteria include student motivation, academic record to date, academic references and involvement in relevant projects. A high standard of English is also required.

**Website:** [www.master-optics.eu](http://www.master-optics.eu)

**Partners:**

INSTITUTE OF OPTICS GRADUATE SCHOOL, France (Co-ordinating institution)  
FRIEDRICH-SCHILLER-UNIVERSITY, Jena, Germany  
UNIVERSITY OF PARIS 11, France  
DELFT UNIVERSITY OF TECHNOLOGY, Netherlands  
WARSAW UNIVERSITY OF TECHNOLOGY, Poland  
IMPERIAL COLLEGE LONDON, United Kingdom

**Contact:**

Alan Swan  
Institut d'Optique *Graduate School*  
Campus Polytechnique  
RD 128  
91127 PALAISEAU Cedex - France  
alan.swan@institutoptique.fr

**Grant:**

1 020 000 € (15 000 € consortium + 1 005 000 € scholarships), 2007  
907 000 € (15 000 € consortium + 892 000 € scholarships), 2008  
797 000 € (15 000 € consortium + 782 000 € scholarships), 2009

721 200 € (30 000 € consortium + 691 200 € scholarships), 2010