

EUROPHOTONICS

Master in Photonics Engineering, Nanophotonics and Biophotonics

Duration: 2 years

Course description:

The Master for Photonics Engineering, Nanophotonics and Biophotonics covers one of the most expanding field in physics and material sciences, dealing with the control, manipulation and monitoring of light and its interaction with matter.

This master program aims at giving an extensive two-year teaching program from fundamentals to advanced research topics in Photonics and its interdisciplinary applications. Master students benefiting from this program will be able to work on today's new challenges in their academic or applied research carriers : understanding and control matter and optical phenomena at the ultimate nanometric scale, providing new imaging tools for the most complex biological processes from cells and tissues to clinical applications, bringing original tools in line with future optical devices.

This two years master program is organized by three groups of institutions : Paul Cézanne Aix Marseille III University (France), Universität Karlsruhe (TH) / Karlsruhe School of Optics & Photonics (Germany), Universitat Politècnica de Catalunya/Universitat Autònoma de Barcelona/ University of Barcelona/ICFO (Institut de Ciències Fotòniques) (Spain). These institutions are recognized for their high quality training and research centers in the field of Optics and Photonics and their applications, with the unique opportunity to benefit from the presence of excellence and interdisciplinary research institutes, high level advice by professors and administrative staff, as well as local companies and international cooperation networking.

Students selected on the basis of their scientific and English-language levels will follow a first semester of fundamental lectures in optics and its applications in Marseille. The second semester on core subjects will be spent in Karlsruhe. The third specialization semester is proposed as a choice between the three institutions: Marseille (imaging: biophotonics/biomedical optics/astronomy), Karlsruhe (photonic materials and devices/nanobiology/optical engineering), and Barcelona (quantum optics/nanophotonics/optical engineering). The last semester is dedicated to the master thesis and summer school.

This program is dedicated to students with background in Physics or Engineering, who will receive a multiple master diploma awarded from the universities where they spent their semesters. The teaching language is primarily English, although some lectures can be given in the local languages supported by training.

Website: europotonics.org; master-europotonics.org

Partners:

UNIVERSITY OF AIX-MARSEILLE III PAUL CÉZANNE , France (Co-ordinating institution)
UNIVERSITY OF KARLSRUHE, Germany
TECHNICAL UNIVERSITY OF CATALONIA, Spain
AUTONOMOUS UNIVERSITY OF BARCELONA, Spain
UNIVERSITY OF BARCELONA, Spain
INSTITUTE OF PHOTONIC SCIENCES, Spain

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