Strengths

› An integrated, interdisciplinary program, provided by both academic and industrial experts. The Master is embedded in a cross-fertilizing research environment, adapted to future professions within photonic industries.

› A cross-cutting and immersive training for students, thanks to the strong involvement of 13 research laboratories as well as industrial R&D centers.

› A "hands-on" training approach to provide graduates with valuable professional attributes. Training is delivered in state of the art research facilities and infrastructures.

› Dual Master degree opportunity with Canada.

› International mobility and/or training within the industrial sector.

› Support provided by the International Masters program within the Bordeaux ‘Initiative of Excellence’ and the French National Research Agency.
The first semester is composed of:
› Preparatory courses: fundamentals of modern optics, structure of matter, quantum mechanics, thermodynamics and statistical physics, cell biology;
› Core courses provide a comprehensive education in laser systems, light matter interaction, photonics, materials properties;
› Practicum courses introduce experimental techniques in optics, chemistry and biophotonics.

As of the second semester, students carry out an internship and follow a mix of core and specialization courses. They experience practical training, preferably within the industrial sector and/or abroad.

Specialization courses continue during the third semester along with laboratory courses delivered in cutting edge infrastructures and facilities. The fourth semester is dedicated to a Master thesis carried out in an advanced research lab.

→ And after?

After graduation, students are fully prepared to pursue doctoral studies and a career in research. They may also work as scientists or R&D engineers within the industrial field.

Associated business sectors:
› Light sources
› Laser processing and 3D manufacturing
› Sensors and multi-responsive detection systems
› Smart and reconfigurable integrated photonics systems based on innovative hybrid nanotechnologies
› Optical components and devices manufacturing
› Innovative optical materials
› Pharmaceutical companies (drug screening and testing)
› Bio-imaging

Academic research domains:
› Extreme Regimes of Light
› Light Generation Manipulation & Detection
› Light Imaging & Biophotonics

Other opportunities:
› Teaching, education and dissemination of scientific knowledge
› Linking public and private actors in research, development and marketing
› Participating in the purchase and investment of scientific equipment

Contacts
DIRECTOR: Prof. Brahim LOUNIS
brahim.lounis@u-bordeaux.fr
ACADEMIC OFFICER: Prof. Emmanuel d’HUMIERES
emmanuel.dhumieres@u-bordeaux.fr
PARTNERSHIP OFFICER: Prof. Evelyne FARGIN
evelyne.fargin@u-bordeaux.fr

How to apply?
› Applications may be completed online: www.u-bordeaux.com/Education/Admissions

www.u-bordeaux.com
@univbordeaux univbordeaux