

The Erasmus Mundus Joint Master's Degree "Advanced Spectroscopy in Chemistry" (ASC EMJMD) is a two-year (120 credits) programme within 5 European countries, providing students with a cross cultural education and expertise in state of the art spectroscopic techniques in a broad range of modern chemistry applications.

A CONSORTIUM OF 5 UNIVERSITIES

- **University of Lille**, France
(Coordinating institution)
- **Alma Mater University of Bologna**, Italy
- **University of Helsinki**, Finland
- **Jagiellonian University** in Krakow
- **Leipzig University**, Germany



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APPLY ONLINE

www.master-asc.eu



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Advanced Spectroscopy in Chemistry

Erasmus Mundus Joint Master Degree



With the support of the
Erasmus+ Programme
of the European Union





OBJECTIVES

The ASC EMJMD is a programme of excellence which has been awarded the Erasmus Mundus label three times since 2008. The five European universities of the ASC consortium offer state of the art equipment and expertise covering applications of spectroscopic techniques to chemistry in a broad sense (from material sciences, environmental sciences, biomedical/health sciences, etc.). Mobility within this network prepares students to become experts and develop international skills towards doctoral studies, and/or professional industrial careers in chemical analysis and characterization of the structure of materials.

A **WINTER SCHOOL** is organized each year in a different location on a chosen topic to deepen one specific field of spectroscopy. This joint social event gathers students, members of the ASC institutions as well as industrial and research associated partners, and ASC alumni.

SCHOLARSHIPS

The Erasmus Mundus programme can help you with a full financial support depending on your country of residence:

- **Up to 1.000 € per month**
- **Up to 1.000 € for your installation costs**
- **Up to 3.000 € for your travel costs**

A scholarship scheme is also available for inviting highly qualified lecturers (1.200 € / week).

CONTENTS

The curriculum consists of 3 semesters (30 credits) of integrated courses and a 4th semester dedicated to a master thesis (30 credits) in a research laboratory.

The first semester provides all students with a common platform in advanced spectroscopic methods, including magnetic resonance, mass spectrometry, optical spectroscopy and diffraction techniques.

In the second and third semesters, more specialized instruction is provided with applications in molecular synthesis, material sciences, biology, nanotechnologies, modeling, "green chemistry" and new energy sources. 10 credits are devoted to transferable skills (internship, intercultural communication, bibliographical research, project management, norms and regulations in chemistry).

4th semester - Master thesis: the ASC network offers many opportunities for internships in research laboratories within the ASC institutions.

