

EEM - Nano
Erasmus Mundus Master in Nanoscience and Nanotechnology

Duration: 1 year 8 months

Course description:

This two year, 120 ECTS Master's Course provides a top quality and broad multidisciplinary education in the emerging field of nanoscience and nanotechnology, coupled with an individual top-level specialization in one of five defined areas of nanoscience and nanotechnology: nanophysics, nanochemistry, nanoelectronics, biophysics or nanobiotechnology. The Course is organized by the Katholieke Universiteit Leuven (Belgium), Chalmers Tekniska Högskola, Göteborg (Sweden), Technische Universität Dresden (Germany) and the Joseph Fourier Université de Grenoble (France). The course aims to instil in its students the power to work, communicate and think across the boundaries of traditional scientific disciplines.

The course is organized with the support of three associated partners: IMEC in Leuven (Belgium), CEA-LETI in Grenoble (France) and Leibniz Institute for Solid State Materials Research in Dresden (Germany). These institutes are providing access to world class infrastructure for Nanotechnology research and development and opportunities for graduating students to continue their study with a PhD.

The consortium offers a highly integrated programme, based on a jointly developed curriculum and composed of course modules that are fully recognized by all consortium partners. All students start the first year at the KU Leuven, where they follow a set of introductory courses to give them a common starting basis, a compulsory common block of core courses to give them the necessary multidisciplinary background of Nanoscience and nanotechnology, a selection of courses to provide some non-technical skills, and already a profiling block of elective courses, which prepares them for their second year specialisation. In the second year university the students select their specialization area (Nanophysics, Nanochemistry, Nanoelectronics, Biophysics or Bionanotechnology) and follow a compulsory set of specializing courses (15 ECTS), combined with a set of elective broadening courses (15 ECTS), and do their master thesis research project (30 ECTS). Since the Master's course has a strong link with many research groups, the professor/student ratio is very high (more than one professor to every five students).

The language of instruction is English. The Course leads to a joint degree from the two universities at which the student has studied (except for the case of Chalmers where a double degree is given). Application requirements include the completion of a Bachelor's degree in Physics, Chemistry, Biochemistry, Electrical Engineering or Materials Science with a proven background in mathematics and physics or chemistry. English language proficiency is also a requirement.

Graduate students from the EMM-nano program will be well prepared for both continued research in nanoscience for a PhD degree, and a non- academic career in the rapidly emerging nanotechnology industry. The EMM-nano graduates will also be part of the important and challenging task in the coming decades of bringing today's nanoscience into tomorrow's nanotechnology.

Website: www.emm-nano.org

Partners:

CATHOLIC UNIVERSITY OF LEUVEN, Belgium (Co-ordinating institution)
UNIVERSITY OF GRENoble 1 JOSEPH FOURIER, France
TECHNICAL UNIVERSITY OF DRESDEN, Germany
CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden

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