

Master thesis in Electromechanical Engineering

Lecturers

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Course mnemonic

MEMO-H502

ECTS credits

24 credits

Language(s) of instruction

English

Course period

Academic year

- Present and defend results in a scientifically sound way, using contemporary communication tools, for a national as well as for an international professional or lay audience
- Develop, plan, execute and manage engineering projects at the level of a starting professional
- Think critically about and evaluate projects, systems and processes, particularly when based on incomplete, contradictory and/or redundant information
- A creative, problem-solving, result-driven and evidence-based attitude, aiming at innovation and applicability in industry and society
- A critical attitude towards one's own results and those of others
- An attitude of life-long learning as needed for the future development of his/her career
- Has an active knowledge of the theory and applications of electronics, information and communication technology, from component up to system level.
- Has a profound knowledge of either (i) nano- and opto-electronics and embedded systems, (ii) information and communication technology systems or (iii) measuring, modelling and control.
- Is able to analyse, specify, design, implement, test and evaluate individual electronic devices, components and algorithms, for signal-processing, communication and complex systems.
- Is able to model, simulate, measure and control electronic components and physical phenomena.

Pre-requisites and co-requisites

Pre-requisites courses

MATH-H407 | Control system design | 5 crédits

Teaching method and learning activities

Contribution to the teaching profile

This teaching unit contributes to the following competences:

- In-depth knowledge and understanding of integrated structural design methods in the framework of a global design strategy
- In-depth knowledge and understanding of the advanced methods and theories to schematize and model complex problems or processes
- Reformulate complex engineering problems in order to solve them (simplifying assumptions, reducing complexity)
- Conceive, plan and execute a research project, based on an analysis of its objectives, existing knowledge and the relevant literature, with attention to innovation and valorization in industry and society
- Correctly report on research or design results in the form of a technical report or in the form of a scientific paper

Evaluation method(s)

Other

Programmes

Programmes proposing this course at the Brussels School of Engineering

MA-IREM | **Master of science in Electromechanical Engineering** | finalité Professional/unit 2 and finalité Operations engineering and management/unit 2