

Master thesis in Electromechanical Engineering

Titulaires

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Mnémonique du cours

MEMO-H502

Crédits ECTS

24 crédits

Langue(s) d'enseignement

Anglais

Période du cours

Année académique

- › Correctly report on research or design results in the form of a technical report or in the form of a scientific paper
- › 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.

Pré-requis et co-requis

Cours pré-requis

MATH-H407 | Control system design | 5 crédits et MECA-Y401 | Piston engines | 3 crédits

Méthodes d'enseignement et activités d'apprentissages

Contribution au profil d'enseignement

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

Méthode(s) d'évaluation

Autre

Programmes

Programmes proposant ce cours à l'école polytechnique de Bruxelles

MA-IREM | Master : ingénieur civil électromécanicien | finalité Spécialisée/bloc 2 et finalité Operation engineering and management/ bloc 2