

Optimization-based Control Design

Titulaire

Emanuele GARONE (Coordonnateur)

Mnémonique du cours

ELEC-H509

Crédits ECTS

4 crédits

Langue(s) d'enseignement

Anglais

Période du cours

Premier quadrimestre

- > 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
- > Consciousness of the ethical, social, environmental and economic context of his/her work and strives for sustainable solutions to engineering problems including safety and quality assurance aspects
- > An attitude of life-long learning as needed for the future development of his/her career
- > 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.
- > Has a broad overview of the role of electronics, informatics and telecommunications in industry, business and society.
- > 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.
- > Is aware of and critical about the impact of electronics, information and communication technology on society.

Contenu du cours

Voir la version en anglais de cette page.

Objectifs (et/ou acquis d'apprentissages spécifiques)

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Méthodes d'enseignement et activités d'apprentissages

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Contribution au profil d'enseignement

This teaching unit contributes to the following competences:

- > In-depth knowledge and understanding of exact sciences with the specificity of their application to engineering
- > 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)
- > 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

Références, bibliographie et lectures recommandées

Voir la version en anglais de cette page.

Autres renseignements

Contact(s)

Service d'Automatique et d'Analyse des Systèmes Bât. L, porte E, 1er étage Mail : egarone@ulb.ac.be

Programmes

Programmes proposant ce cours à l'école polytechnique de Bruxelles

MA-IREL | **Master : ingénieur civil électricien** | finalité Spécialisée électronique et technologies de l'information/bloc 2 **et** MA-IREM | **Master : ingénieur civil électromécanicien** | finalité Spécialisée/bloc 2