

- Faculté des sciences économiques
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R&D Management (5EN1033)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Bachelor en sciences économiques, orientation comptabilité/finance	Cours: 4 ph	Voir ci-dessous	6
Bachelor en sciences économiques, orientation économie politique	Cours: 4 ph	Voir ci-dessous	6
Bachelor en sciences économiques, orientation management	Cours: 4 ph	Voir ci-dessous	6
Bachelor en sciences économiques, orientation ressources humaines	Cours: 4 ph	Voir ci-dessous	6
Bachelor en sciences économiques, orientation systèmes d'information	Cours: 4 ph	Voir ci-dessous	6
Master of Arts en innovation, orientation Innovation et société	Cours: 4 ph	Voir ci-dessous	
Master of Law en innovation	Cours: 4 ph	Voir ci-dessous	
Master of Science en innovation, orientation Management de la R&D	Cours: 4 ph	Voir ci-dessous	6
Pilier principal B A - management	Cours: 4 ph	Voir ci-dessous	6

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

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Objectifs:

R&D MANAGEMENT is an introduction to innovation and new product design & development (NPD) enforcing the management aspect of the issue. It aims at giving to the participants:

- an understanding of the processes of NPD in modern organizations
- an understanding the concepts of R&D, innovation and project management that are deeply involved or related to the NPD processes
- an awareness of the difficulty to work in a multidisciplinary environment
- a culture in the fields of industrial design, of eco-design and of engineering management.

- Build up judgmental and interpretation skills

Contenu:

1. Introduction to innovation & R&D management
2. Introduction to industrial design
3. New product development & organizations
4. Product portfolio planning
5. NPD project & quality management
6. Searching for new ideas; Identifying customer needs
7. Specification writing; requirement engineering
8. Concept generation, selection & testing
9. NPD project planning
10. DFM/A; NPD economics; project costing
11. Design for environment; ethical & social issues
12. NPD project risk management
13. Project monitoring and follow-up

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Additional topics addressed:

- Intellectual Property Rights & licensing
- Design thinking & open innovation
- Biomimicry & applied ethnography
- Technology transfer contracts
- Prototyping & robust design

Forme de l'évaluation:

Assessment will be based on a combination of group presentations given in class, an individual write-up (case analysis), a final exam, and class participation. The exam is open book based and you can bring in your notes and other learning materials. Please ensure that you cite all the sources correctly. Plagiarism will not be tolerated.

TP: group presentations, class participation: 40 %

CA: case analysis (individual assignment): 20%

E: final examination (the last course of the semester), 3 hours (open book): 40 %

Retake exam : written exam (open book) 2 hours, during the exam session

Important: computers, connected phones and other connected electronic devices are not allowed in the examinations.

In case of violation of these rules, these items will be removed and the exam will be considered void.

Documentation:

Ulrich & Eppinger (2011) Product Design and Development, 6th edition, McGraw-Hill/Irwin [<http://www.ulrich-eppinger.net>]

Tidd & Bessant (2009) Managing Innovation: Integrating technological, market and organizational change, 4th edition, John Wiley and Sons