

- 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	écrit: 2 h	6
Bachelor en sciences économiques, orientation économie politique	Cours: 4 ph	écrit: 2 h	6
Bachelor en sciences économiques, orientation management	Cours: 4 ph	écrit: 2 h	6
Bachelor en sciences économiques, orientation ressources humaines	Cours: 4 ph	écrit: 2 h	6
Bachelor en sciences économiques, orientation systèmes d'information	Cours: 4 ph	écrit: 2 h	6

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

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

Prof. Dr. Arsalan Nisar Shah
Chair of Energy and Innovation Management

Office hours: By appointment
Office location: R 165
Email: arsalan.shah@unine.ch
Phone: +41 (0)32 718 15 96

Assistant: Gürkan Balman
Office no. R 170
Email: gurkan.balman@unine.ch

Objectifs:

Organizations can no longer rely solely on low cost manufacturing or access to wider markets as sources of superior value creation. So, more and more organizations are engaging in developing innovative products or services to differentiate for growth/profitability and sustainable value creation. The purpose of this course is to expose you to how organisations make product innovation happen. You will learn about how organizations manage product innovation and new product development. The idea is to make you think strategically about innovation of new products and services and how these are brought into the market. This is largely dependent on the R&D function of an organization and how this function is managed. You will learn about R&D management and its link with business strategy and how organizations make use of R&D function to bring new products to the market. This course is deeply rooted in the concept of technology innovation and as a result will draw greater insights from various backgrounds like entrepreneurship, business strategy and innovation management. The course will make use of case studies, exercises, group presentation and lectures.

- Understand the concepts of innovation, R&D management and new product development.
- Explore the models of innovation
- R&D function at an organizational level
- Managing the R&D function
- R&D strategies, evaluation of R&D projects
- Acquisition of external knowledge and technology transfer
- Enhance verbal skills through class discussions
- Build up judgemental and interpretation skills

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The course can be looked as a combination of three modules:

Module 1:

Module 1 will introduce and explore the concept of innovation management. It will cover different models of innovation by placing emphasis on viewing innovation as a management process. We will also explore social, economic and market factors that facilitate innovation. Most of the innovations take place within the organizational context and as a result this module will explore how organisations manage and foster innovation.

Topics covered under module 1:

- Introduction to innovation management
- Managing innovation within organisations
- Managing intellectual property
- Organizational knowledge and strategic alliances and networks

Module 2:

Module 2 will follow up from what has been gained from module 1. The idea here is to provide a complete picture of how innovation takes place within organizations and its link to R&D management. It will detail the main activities performed by R&D units and how these influence the development of new products. We will look at the various challenges faced by R&D managers. Within this module, we will learn about technology transfer and the process by which organizations can acquire technologies from outside.

Topics covered under module 2:

- Introduction to R&D management
- R&D management context
- Classifying R&D management; R&D expenditure; budget
- Effective R&D management
- External R&D; external technology
- Evaluating R&D projects

Module 3:

In the final module, we will look at the nature and techniques of new product development and explore the process of developing new products by examining new product management. We will discuss the challenges faced by new product managers and most of readings and cases will deliver on such issues.

Topics covered under module 3:

- New product development and innovation management
- New product development through R&D
- Models of new product development
- Managing new product development process

In the classroom

This course will be a combination of lectures, discussions and assignments. Classroom discussion will be an important part of the course. During the lectures, students are encouraged to ask questions and discuss the material. You will need to come to class prepared to discuss the session's case and readings and to respond to the ideas and comments of others. My role will be more of a facilitator for a dialogue among the class participants. I would expect your interactions to be well reasoned and informative.

Forme de l'évaluation:

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Assessment will be based on a combination of two exams and exercises that include group presentations, assignments (a short paper to be handed in), and class participation. Both the exams are open book based and you can bring in your notes and other learning materials like dictionary, research papers, teaching notes to the exam. Please ensure that you cite all the sources correctly. Plagiarism will not be tolerated.

TP: exercices, group presentation, class participation 30 %

EI: examen intermédiaire écrit 2h (open book) : 30 %

E : examen écrit de 2 heures durant la session d'examens (open book) 40 %

Rattrapage examen écrit de 2 heures

Documentation:

- Tidd, J., Bessant, J. and Pavitt, K.: Managing Innovation: Integrating technological, market and organizational change, 3rd edition, John Wiley and Sons, 2005.
- Dodgson, M. Gann, D. and Salter A. The management of technological innovation: strategy and practice, Oxford University Press, 2008.
- Gladwell, M. 2008. Outliers. New York: Little, Brown and Company