Management of innovation (EM145M44)

Program	PGE
Module / ECTS / Path / Specialisation	**Module :Stratégie et changement : 13 ECTS.** • Entrepreneurship
Discipline	Management
Year	2019
Semester	A
Open for visitors	yes (**4** ECTS)
Available places	35

Coordinator

Eric SCHENK

Lecturers

Instructor	Population	Email
Eric SCHENK	Population	

Course format

Working language :	English
Volume of contact hours :	24 h
Workload to be expected by the student :	72 h

Course track

Track : Attendance

"Attendance" track :
Attendance at lecture / tutorial classes and intermediate / final exams is mandatory. As evaluation of in class work constitutes an essential element of grading, any absence will be penalized and is taken into account for grading purposes (see academic rules and regulations).

"Autonomous" track :
Attendance at intermediate / final exams is mandatory, but students are free to attend lecture / tutorial classes.

For all Master programs and all other programs realized in the form of dual internships (apprentissage), attendence at lecture / tutorial classes and intermediate / final exams is entirely mandatory. Therefore, only the "Attendance" track can be selected.

Contribution of the course to the educational objectives of the programme

How the course contributes to the programme :

Description

Innovations are generally regarded as prerequisites for the long-term survival of companies. This assumption, however, is not a new phenomenon but has been present since the dawn of economic activity. In the framework of innovation research, the past decades have offered a number of insights regarding successful innovation management. Nevertheless, many companies fail in practice. The main problem lies in the unpredictability of the future. The main goal of this lecture is to present methods and instruments through a strategic innovation perspective, which would enable a company to prepare better for and face the unknown and ambiguous future. First of all, the interplay of innovation (in the sense of new products or new services) and an appropriate strategy increases the probability of future success. Thus, innovations can be compatible with the existing strategy and, at the same time, bring about a new strategy. If strategy is considered a starting point for innovations, employing strategic innovation (in other words, an innovative strategy) makes it also possible to reach new markets with already existing products and services.

Educational organisation

In class

Lectures

Learning outcomes

Upon completion of this course, students should be able to: :

- **Recognize** the importance of innovation management
- **Use** methods and instrument through archetype of innovation perspective
- **Prepare** an innovative strategy . innovations are generally regarded as prerequisites for the long-term survival of companies
- **Apply** the main concepts of innovation in a perspective of Business Plan creation

Outline

Introduction
Managing innovation in a knowledge-based economy

Chapter 1
Modeling the innovation process: From the linear model to open innovation

Chapter 2
Innovation cycles and the diffusion of technology

Chapter 3
Innovation strategies and their determinants

Chapter 4
Economic intelligence and technology watch

Chapter 5
Innovation within the firm: Structures, incentives and financing

Chapter 6
The valorization of innovation: Appropriation vs. diffusion strategies

Chapter 7
Strategic management of patents

Chapter 8
The shapes of open innovation: Market for inventions technologies, R&D alliances, crowdsourcing and open source innovation

Chapter 9
The management of technology transfer: Transaction costs and tacit knowledge

Chapter 10
Cases of start-up creation in biotech

Prerequisites

Key concepts to understand :

None

Knowledge of :

Basic economic concepts and strategy

Teaching material

Documents in all formats

- Syllabus
- Newspaper articles
- Books
- Case studies

Recommended reading

Major works :

Afuah A. (2003), Innovation Management, Oxford University Press.
Freeman C. et Soete L. (1997), The economics of industrial innovation, 3ième éd. London, Pinter. Schilling M. (2003), Strategic Management of Technological Innovation, McGraw-Hill.
Tidd J., Bessant J. et Pavitt K. (1997), Managing innovation: integrating technological market and organizational change, john Wiley and sons.
Teece D., (2000), Managing intellectual capital, Oxford University Press.
Chesbrough (2003), Open innovation: The new imperative for creating and profiting from technology, Harvard Business School Press, Boston.
Christensen C. M. (1997), The innovator's dilemma, Harvard business school press.
Articles published in scientific journals
Arora A., Merges R. (2004), "Specialized supply firms, property rights and firm boundaries", Industrial and Corporate Change 13, pp. 451–475.
Bureth A., Pénin J. (2007), « Modular innovations and distributed processes: The case of genetically engineered vaccines », European Journal of Economic and Social Systems, vol. 20/2, pp 251-274.
Bureth A., Mueller M., Pénin J., Wolff S. (2007), « Brevet, innovation modulaire et collaboration : Le cas des vaccins géniques », Revue d'économie industrielle, n°120, pp 135-154. Bureth A., Pénin J., Wolff S. (2010), "Entrepreneurship in biotechnology: The case of four start-ups in the Upper-Rhine Biovalley", International Journal of innovation management.
Bureth A, Levy R., Pénin J., Wolff S (2004), "The ambivalence of the local practices of patenting within the BioValley network", Chimia, vol. 58, n°11, pp. 796-797 (numéro special: Biovalley Life Sciences Cluster – Strategies and Challenges).
Cohen W. M., Levinthal D. A. (1990), « Absorptive capacity: A new perspective on learning and innovation », Administrative Science Quarterly, p 128-152.

Cohendet P., Farcot M., Pénin J. (2006) « Entre incitation et coordination : repenser le rôle économique du brevet d'invention dans une économie fondée sur la connaissance », Management international, vol. 10, pp. 65-84.
Gambardella A., Giuri P., Luzzi A. (2007), "The Market for patents in Europe", Research Policy, 36 (8), pp. 1163-1183.
Guellec D., Pluvia Zuniga M. (2008), "Who licenses out and why ? Lessons from a survey of European and Japanese firms", OECD document.
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Hamel G. (1999), « Bringing the Silicon Valley inside », Harvard Business Review, p; 70- 94.
Heller M., Eisenberg R. (1998), "Can Patents Deter Innovation? The Anticommons in Biomedical Research", Science, vol. 280, pp. 698-701.
Jaffe A. (2000), « The US Patent System in Transition: Policy Innovation and the Innovation Process », Research Policy, Vol. 29, p. 531-557.
Levin R.C., Klevorick K., Nelson R.R., Winter S. (1987). « Appropriating the Returns from Industrial Research and Development », Brooking Papers on Economic Activity, Vol. 3, p. 783-820. Freeman C. (1991), « Networks of innovators: A synthesis of research issue », Research Policy, vol. 20, p 449-514.
Pénin J., Wack J-P. (2008), « Research Tool Patents and Free-Libre Biotechnology: A Unified Perspective », Research Policy, vol 37, pp 1909-1921.
Pénin J. (2008), « Enveloppe Soleau et droit de possession antérieure : Définition et analyse économique », Revue d'économie industrielle, n°121, pp 85-102.
Pénin J. (2008), "More open than open innovation? Rethinking the concept of openness in innovation Studies", Document de travail BETA 2008-18.
Prahalad C. et Hamel G. (1990), « The core competence of the corporation », Harvard business review.
Shapiro, C., 2001. Navigating the patent thicket: cross licenses, patent pools, and standard setting. In: Jaffe, A., Lerner, J., Stern, N. (Eds.), Innovation Policy and the Economy,

Assessment
vol. MIT Press.
Teece D. (1998), « Capturing value from knowledge assets: The new economy, markets for know-how and intangible assets », California management review.
Teece D. (1986), "Profiting from technological innovation: implications for integration, collaboration, licensing and public policy", Research policy 15, 285-305.
Walsh J., Cohen W.M., Cho C (2007), "Where excludability matters: Material vs. Intellectual property in academic biomedical research", Research Policy, vol. 36, pp. 1184-1203.

Further reading :

Other references
Amin A., Cohendet P. (2004) Architectures of Knowledge: Firms, Capabilities and Communities, Oxford University Press, Oxford.
Arora A., Fosfuri A., Gambardella A. (2001), Markets for Technology: The Economics of Innovation and Corporate Strategy, MIT Press, Cambridge, MA.
Breesé P. (2002), Stratégies de propriété industrielle, Dunod.
Breesé P., Kaiser A., Pompidou A (2004), L'Evaluation des DPI, ed. Gualino.
Breese P., de Kermadec Y. (2004), La PI au service de l'innovation , ed. Nathan. Burgelman.R., Maidique M., Wheelwright (2001), Strategic Management of Technology and Innovation.
Corbel Pascal (2010), Technologie, innovation, stratégie : de l'innovation technologique à l'innovation stratégique, Gualino ed.
Corbel P. (2007), Management stratégique des droits de la propriété intellectuelle, Gualino ed., collection Memento LMD.
Cusumano A., Gawer M. A. (2002), Platform Leadership, MacGraw Hill.
De Brabandère L. (2003), Le management des idées : De la créativité à l'innovation, Dunod. Foray D. (2002), Economie de la connaissance, éd La Découverte, coll. Repère.
Foray D. (2004), The economics of knowledge, MIT Press.
Gawer A. (2010), Platforms, markets and innovation, elgar ed.
Guellec D. (1999), Economie de l'innovation, éd La Découverte, coll. Repère.
Guilhon B. (2004), Les marchés de la connaissance, Economica.
Hamel G., Prahalad C.K. (1994), Competing for the future, Harvard Business School Press. Heller M. (2008), The gridlock economy : how too much ownership wrecks markets, stops innovation and costs lives, Basic Books.
Hope J. (2008), Biobazaar : The open source revolution and biotechnology, Harvard University Press.
Jaffe A., J. Lerner J. (2006), Innovation and its discontents: How our broken patent system is endangering

innovation and progress and what to do about it.
Jakobiak F. (2006), L'intelligence économique - La comprendre, l'implanter, l'utiliser, Editions d'Organisation.
Le Bas C. (2007), Economie et management du brevet, Economica.
Loilier T. et Tellier A. (1999), Gestion de l'innovation : Décider, mettre en œuvre, Diffuser, ed. Management société.
March J., Simon H. (1958), Organizations, Wiley and sons, New York.
Marcon C., Moinet N. (2006), L'Intelligence Economique, Dunod, les Topos.
Martinet B., Marti Y-M (2001), L'Intelligence Économique : Comment donner de la valeur concurrentielle à l'information, Ed. d'Organisation.
Nonaka I., Takeuchi H. (1995), The knowledge-creating company: how Japanese companies create the dynamics of innovation, New York. Oxford University Press.
Porter, M. E. Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: Free Press, 1980. (Republished with a new introduction, 1998)
Prax J-Y., Buisson B., Silberzahn P. (2005), Objectif innovation : Stratégie pour construire l'entreprise innovante, Dunod, Polia ed.
Rivette, Kline (2000), Rembrandts in the attic: Unlocking the hidden value of patents, Harvard Business School Press.
Rogers E. (1983), Diffusion of Innovations. New York: Free Press.
Scherer F. (1970), Industrial market structure and economic performance.
Scotchmer, S., 2004. Innovation and Incentives. MIT Press, Cambridge,MA.
Simon H. (1947), Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations, 4th ed. in 1997, The Free Press
Encyclopédie de l'innovation (2003) sous la direction de Philippe Mustar et Hervé Penan, ed. Economica.
Special Issue Harvard business Review (1997), Innovation.
Le financement des stratégies d'innovation - Jean Lachmann - économia (technique de gestion "T6").

Research works by EM Strasbourg :

Assessment

Intermediate evaluation / continuous assessment 1 : last session
oral (30 min) / in group / English / weighting : 40%

Intermediate evaluation / continuous assessment 2 : last session
written / individual / English / weighting : 0%
This evaluation serves to measure LO1.1, LO1.2, LO1.3, LO4.1

Intermediate evaluation / continuous assessment 3 : last session
written / individual / English / weighting : 0%
This evaluation serves to measure LO1.1, LO1.2, LO1.3, LO4.1

Final assessment : last session
written (120 min) / individual / English / weighting : 60%

Grounds for expulsion from classes

Such behaviors as...

arriving late, leaving early or unannounced leaving of the classroom during class time

disruptive eating or drinking in class

using smartphones and laptops for non class-related purposes

reading non class-related documents

chatting on non class-related issues

showing disrespect towards lecturers

... may lead to expulsion from classes.