Hes·so
Haute Ecole Spécialisée
de Suisse occidentale

DESCRIPTION OF MAJOR COURSE

Name of the school : Haute Ecole de Gestion de Genève	Academic Year: 2019-2020

FIRST PART: DESCRIPTION OF BOTH MODULES OF THE MAJOR	
1. Domain	Business and Services
2. Department	International Business Management
3. Major name	**Management of innovation and technology**
4. Code	30914 + 30924
5. Type of education	☒ Bachelor ☐ Master ☐ MAS ☐ DAS / CAS / single days
6. Number of ECTS Credits	**9** per semester for each biannual module,
7. Prerequisites	☒ Validation of the modules in semesters 1 and 2 ☒ Attendance of the modules in semesters 3 and 4 for full-time students, and semesters 5 and 6 for part-time students ☐ ……..
8. Teaching language	☐ French ☐ German ☒ English ☐ Other : …….
9. Objectives	Starting with the concept that *an innovation is the right idea on the right market*, this course provides the students with tools, methodologies, and frameworks to manage innovation. It's about learning how to develop the right ideas, and how to target the right markets, and how these tools can then be applied in the technological sector, with all the specificities that it entails. Nowadays, innovation happens within the boundaries of a firm in many different and complementary ways. Firms and entrepreneurs innovate in their products, production processes, organizational setups and marketing strategies. They can explore and exploit different sources of knowledge, combined with a creative process. The first semester of the course focuses on various aspects of the implementation and management of innovation. It provides a knowledge of economics to understand and measure innovation, and a knowledge of the management tools used to create innovative business models. It also introduces the digital dimension of innovation, as well as its creative aspects, using a design thinking methodology. At the end of the first semester, the students will be able to: - Integrate the economics factors in innovation and intellectual property issues.

	- Compare innovative business models with classical business models in the case of innovative products, and know how to monitor progress; - Understand the use of digitalization for a pragmatic implementation of new tools and techniques. - Apply design thinking methodologies in a creative process. The second semester focuses on the technological sector to put these tools into a new perspective. It allows the students to tackle strategic questions in this sector, as well as to have a global view of the whole supply chain applied to industrial or technological products. Some technical skills are introduced to analyze and manipulate data in a business context. The end of the course focuses on experience sharing in several technological fields (technology transfer, fundraising, etc). At the end of the second semester, the students will be able to: - Understand how business and digital strategies can be aligned in the technological sector. - Follow a global supply chain process and recognize its specificities, in the industry sector. - Grasp the business perspective of analyzing data. - Address the specificities of the technological sector, such as technology transfer, or fundraising.
10. Contents *(General themes and descriptions, the accurate content may change)*	**<u>Fall semester:</u> Mechanisms of innovation - economics, management and creativity** **Module 1 : Economics of innovation (approx. 25% of the teaching volume)** This part will provide the students with the economic theory, management conceptual framework, and practical toolkit to understand and analyze the creative process leading to innovation and related intellectual property within the boundaries of the modern-day firm and under different policy contexts. It will define the innovation from an economics perspective, and describes the basic economic principles behind innovation (e.g., advertising, elasticity, market power, information asymmetry). It will introduce some metrics to measure innovation, and tools to assess and value intangible assets. It will demonstrate how intellectual property (IP) rights can be used to promote and regulate innovation. **Module 2 : Business model innovation (25%)** You have a new concept for an innovative product or service that is technology-driven. How do you transform this concept into a lucrative business model that is sustainable, profitable and scalable? Have you ever wondered how startups and existing technology-oriented companies have developed differentiating business models to create competitive advantage? This course will address these topics with a practical approach to understanding, analyzing, and developing innovative business models. At the end of this course, you will be able to: • Comprehend what a business model is (and is not), and how it creates and captures value for a firm, its customers and its stakeholders; • Analyze existing business models and understand how companies innovate those business models; • Develop unique value proposition through innovative business models. **Module 3 : Digital innovation (25%)** Innovation certainly has to do with new products and services for end consumers (B2C). However, it is equally important to innovate by improving existing products, services and even internal processes. The economy is also mostly made of Business to Business trades (B2B). Why does Digital fundamentally push us to rethink all these as potential areas for innovation? How can digital contribute to the improvement of business activity, and to radical product or service innovation, both in B2B and B2C? How does Digital foster new business models and

influence how ideas are implemented ? How does it relate with Agility and Client Centricity ? What are ethical and environmental stakes that should be taken into consideration when thinking about digital innovation? How to implement down to earth digital innovation that really works ? How does change management come into play, what are the impacts of change and how to overcome them ?

Module 4 : Design thinking and creativity (25%)
This part will allow participants to learn the Design Thinking methodology developed by IDEO and used by leading companies like Apple, IBM, Coca-Cola, etc. Beyond learning and applying the different steps of this structured methodology, we will also talk about divergent vs. convergent thinking, discovering and verifying user needs and adopting an innovative mindset.

Spring semester: Specificities of the technological sector, applications and tools

Module 5 : Business technology strategy (approx. 25% of teaching volume)
This part will deliver keys to boosting business success, via insights on emerging trends in digital transformation and IT strategy; practical frameworks you will be able to apply; and guidance from real cases in digital leadership, cloud technologies, investment prioritization, operational excellence, sustainable innovation, change management, enterprise agility, and applying emerging technologies.

Successful companies have reached outstanding performances by incorporating Business strategy at the center of their corporate transformations. At the same time, the potential of digital technologies to transform performance has become widely recognized. However, bringing together Business and digital technology tends to bring about two conflicting scenarios: companies that realize a radical performance increase of up to 50% or more, or companies that become stuck in situations in which initiatives happen in silos, efforts lack coordination, and success is never achieved. This “Business technology strategy” course will offer guidance on transforming companies to digital by developing their business capabilities and embedding technological building blocks into their value streams.

The “Business technology strategy” course will favor the study of real-world situations. The objective is to give the students best practices and Business technology methodologies. Use-cases are based on a panel of industries like cloud providers, communications, manufacturing, business Information, e-commerce, advertising digital platforms or banking. In the second part of the program, the learning process will involve a lot of practice. Students will work in groups, design and present their own Business technology strategies and recommendations based on approaches introduced in the first part of the course. Each parts of the classes are structured by Fundamental Knowledge and use-cases introducing the topics, to give a vision of the best practices and lessons learnt from real cases.

Module 6 : Supply chain and procurement in the technological sector (30%)
This part will allow the students to acquire concepts and tools to develop an optimized supply chain network, understand how supply chain and procurement can bring value in the early phases of product development, develop an understanding of the supplier as a key part of the enterprise ecosystem, and build a negotiation and contracting approach that results in win-win outcomes
The course structure is

1. Concurrent product and supply chain design
2. Developing the supply network
3. Understanding and managing risk
4. Setting up efficient global logistics
5. Sourcing strategies for innovation
6. Creating value via win-win negotiation

	7. Capturing value through flexible contracts 8. Building innovation-oriented alliances 9. Bringing CSR into technology sourcing decisions **Module 7 : Business data manipulation and analysis (25%)** In this part, the students will have a hands-on approach on data manipulation and analysis, mainly using Excel, and from a business perspective. The main objective is to provide tools that are applicable in data-related business environments. It will contain an introduction to VBA and favors a practical approach with use-cases and projects. In a second part, state-of-the-art techniques for prediction or forecasting will be introduced. **Module 8 : Product and business development, and experiences sharing (20%)** This part will cover several business aspects that are very specific to the technological sector, such as product development. It will include (but will not be restricted to) technology transfer, fund raising, or new business development. Selected topics will be included.

11. Evaluation	The grading is based on: **Fall Semester** Each module 1-4 may contain group assignments and/or individual assignments. **Spring Semester** Each module 5-8 may contain group assignments and/or individual assignments. Types and weights for each evaluation will be communicated at the beginning of each semester.
12. Remediation/repetition (per module)	☒ Compulsory remediation if the module grade is between 3.5 and 3.9 / 6. When subject to a remediation, only the grade of the remedial exam will be taken into account (maximum grade 4.0). A repeated module cannot benefit from a remedial exam. ☐ No remediation
13. Coordinator / main instructor	Alexandre Caboussat / Various lecturers
SECOND PART: LOCATION OF THE MODULES IN THE STUDY PLAN	
14. Level	☐ Basic module ☐ Advanced module ☒ Specialized module ☐ Other: ……
15. Characteristics	☒ Both modules are mandatory (which could lead to final dismissal from the program, cf. art.15, al.1, « Statut des étudiant-e-s bachelor »)
16. Type	☒ Main modules ☐ Modules linked to main module ☐ Optional module ☐ Other:

17. Time organization	☒ Modules over 1 semester ☐ Modules over 2 semesters ☒ Spring semester (module 2) ☒ Fall semester (module 1) ☐ Other **A change of major course during the academic year is not authorized**