UE Métier

UE MÉTIER

Modules Ouverts Métiers

DROIT DE L'ENTREPRISE

COMPANY LAW

Lecturers: **Sylvie MIRA**

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

The course aims to bring basics notions on corporate law and its institutions

Keywords : Business law, tax law, social law

Programme

Business law
Tax law
Social law

Learning outcomes

- Be able to understand regulation for companies: organisation and process
- Be able to understand basis for business law and social law
- Be aware of important points in a contract

Independent study

Objectifs : Be able to understand legal documents

Méhodes : Case Studies

Core texts

BRAUD, A., *L'ESSENTIEL DU DROIT COMMERCIAL ET DES AFFAIRES*, GALINEAU, 2014
GRANDGUILLOT, D. *DROIT SOCIAL*, GALINEAU, 2014

Assessment

INTELLIGENCE ÉCONOMIQUE ET PROPRIÉTÉ INDUSTRIELLE

INTELLIGENCE ÉCONOMIQUE ET PROTECTION DE L'INFORMATION

Lecturers: Sylvie MIRA

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Make engineers aware of the need for companies to collect, process and disseminate relevant information through various forms of business intelligence, and to take into account the strategic importance of protecting knowledge and know-how. Understand the mechanisms of industrial property (patents, trademarks, models and copyrights, etc.).

Keywords : Information system, intellectuel property, patent, trade mark, model

Programme

Economic intelligence
Intellectual Property
Information system security

Learning outcomes

- Understand the scope of economic intelligence
- Understand the mecanisms of intellectual property
- Be able to apply for a patent, a trade mark or a copy right

Independent study

Objectifs : Implement concepts

Méhodes : Case studies

Core texts

LORHO, T., *PROFESSION CAMÉLÉON - DE LA DGSE À L'INTELLIGENCE ÉCONOMIQUE*, FAYARD, 2015
HARBULOT, C. *MANUEL D'INTELLIGENCE ÉCONOMIQUE*, PUF , 2015
POLLAUD-DULIAN, F.*LA PROPRIÉTÉ INDUSTRIELLE - PROPRIÉTÉ INTELLECTUELLE*, ECONOMICA, 2010

Assessment

Case studies

MANAGEMENT DE LA QUALITÉ

QUALITY MANAGEMENT

Lecturers: **Elisabeth COUZINEAU-ZEGWAARD**

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

MANAGEMENT DE L'ENTREPRISE INDUSTRIELLE

OPERATIONS & INFORMATION MANAGEMENT (OPIM)

Lecturers: Elisabeth COUZINEAU-ZEGWAARD

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

MANAGEMENT DES RESSOURCES HUMAINES ET DES ORGANISATIONS

ORGANISATIONS AND TEAM MANAGEMENT

Lecturers: **Philippe THIMONIER**

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Estelle M. MORIN, Caroline AUBE, Kevin J. JOHNSON, *PSYCHOLOGIE ET MANAGEMENT*, Chenelière Education, 2015
Jean-Pierre TAÏEB *LE PETIT RH 2021*, Dunod, 2021
Antonio R. DAMASIO*L'ERREUR DE DESCARTES (NOUVELLE ÉDITION)*, Odile Jacob (poches sciences), 2010

Assessment

RISQUES NATURELS

NATURAL RISKS

Lecturers: Richard PERKINS

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : AN

Objectives

The objective of this course is to present the different types of environmental hazards, and the associated risks. Prevention, forecasting and protection techniques will be presented for each type of risk.

Keywords : Hazards, risks, environment, urbanisation, volcanoes, earthquakes, avalanches, landslides, hurricanes, storms, floods

Programme

1. Definition of risk
Different types of hazard, geographical distrbution, impact, notions of frequency and intensity

2. Tectonic risks
Volcanoes, earthquakes, landlsides, avalanches

3. Meteorological and hydrological risks
Hurricanes, storms, floods, tsunamis, climatic events

Learning outcomes

- Students should understand the links between natural phenomena and their impact on human society
- For each type of risk, students should be aware of the possible ways of handling the risk (prevention, protection, prediction....) and their limitations.
- For a given location, students should be able to identify the different types of natural risk to which the population is exposed.

Independent study

Objectifs :

Méhodes :

Core texts

BERNSTEIN, P., *AGAINST THE GODS: THE REMARKABLE STORY OF RISK* , Wiley
SMITH, K. & PETLEY, D.N. *ENVIRONMENTAL HAZARDS: ASSESSING RISK AND REDUCING DISASTER*, Routledge
VOSE, D. *RISK ANALYSIS: A QUANTITATIVE GUIDE.* , Wiley

Assessment

Report on a subject related to natural hazards.

SYSTÈMES D'INGÉNIERIE

ENGINEERING SYSTEMS

Lecturers: **Patrick SERRAFERO**

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Modules Spécifique Métiers

UE MÉTIER

Métier Ingénieur Consultant

LES FONDAMENTAUX

THE FUNDAMENTALS

Lecturers: **Laure FLANDRIN, Philippe THIMONIER**

| Lecturers : 4.0 | TC : 19.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

GESTION DE PROJET, TECHNIQUES FINANCIÈRES ET TECHNIQUES DE COMMUNICATION

CONSULTING PROJECT MANAGEMENT

Lecturers: **Laure FLANDRIN, Philippe THIMONIER**

| Lecturers : 6.0 | TC : 27.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

DEVENIR CONSULTANT

BECOME A CONSULTANT

Lecturers: **Laure FLANDRIN, Philippe THIMONIER**

| Lecturers : 22.0 | TC : 12.0 | PW : 0.0 | Autonomy : 0.0 | Study : 8.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

PROJET ICS

ICS PROJECT

Lecturers: **Laure FLANDRIN**

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

UE MÉTIER

Métier Ingénieur Eco-Conception et Innovation

PROCÉDÉS DE CONCEPTION AVANCÉE

ADVANCED DESIGN PROCESSES

Lecturers: Olivier DESSOMBZ

| Lecturers : 18 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Awareness of sustainable development issues and the ecodesign approach. The purpose of setting the context is to re-anchor the engineering student in a societal reality. Use examples to integrate the concepts and put them into practice. Through creativity exercises, learn to develop the ability to project towards future scenarios.

Keywords : Eco-design, circular economy, environmental and social impacts, sustainable development

Programme

From the planet to the products:
- Approach to sustainable development, social responsibility of organizations.
- Limits of resources.
- Ecosystem services, biomimicry.
- Issue of sustainable development, social responsibility of organizations, dimension environmental, social, societal.
- The challenges of eco-design in your design strategy.
- Sustainable development, environmental impacts, eco-design, life cycle ...
- Define the basic functional unit of any Life Cycle Analysis (LCA).

Learning outcomes

- To be able to integrate environmental and social criteria into the design process.
- Understanding of social, environmental, planetary and local issues.
- Create new paradigms, innovate, question what already exists.

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

mini-project

OUTILS MODERNES DE CONCEPTION

MODERN DESIGN TOOLS

Lecturers: Olivier DESSOMBZ

| Lecturers : 16 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 4.0 | Project : 0.0 | Language : FR

Objectives

Provide an overview of the optimization methods and the taking into account of uncertainties.
Know the sensory design processes in innovation

Keywords : Optimization, Meta-Heuristics, Meta-models, Uncertainties, Iso-geometry, Sensory Design, Innovation

Programme

Learning outcomes

- Theoretical knowledge: taking into account uncertainties and optimization
- Knowing how to set up a sensory design process

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

mini-projects

CONCEPTION ET CHOIX TECHNOLOGIQUES

DESIGN AND TECHNOLOGICAL CHOICES

Lecturers: Olivier DESSOMBZ

| Lecturers : 48 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Provide knowledge in multiphysics design, manufacturing methods and eco-design in Civil Engineering
The branch courses (Civil Engineering or Electro-mechanical) given by specialists in the field allow to deepen knowledge in these fields.

Keywords : Multiphysics, manufacturing processes, eco-design

Programme

A course deals with the implementation and expertise of numerical and experimental methods applied to the implementation and optimization of control strategies for the stabilization and isolation of dynamic systems.
A second course deals with manufacturing methods for mechanical parts.
A third course deals with eco-design in Civil Engineering and recycling

The branch courses (Civil Engineering or Electro-mechanical) given by specialists in the field allow to deepen knowledge in these fields.

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Mini-projects

PROJET ICO

FIRST DESIGN OF INNOVATIVE PRODUCTS

Lecturers: **Olivier DESSOMBZ**

| Lecturers : 12 | TC : 0.0 | PW : 0.0 | Autonomy : 10 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Imagine innovative products using a "Design thinking" process and check their feasibility in a pre-conception phase . To lay the foundations of a "business model" with an entrepreneurial vision.

Keywords : Innovation, design, entrepreneurship

Programme

- Creativity session for the definition of innovative products
- Competition analysis
- Functional analysis
- Pre-design
- Construction of a business model

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Report + Defense

CONFÉRENCES

CONFERENCES

Lecturers: **Olivier DESSOMBZ**

| Lecturers : 10 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Openness to industrial subjects

Keywords :

Programme

According to the availability of industrial stakeholders

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Attendance

UE MÉTIER

Métier Ingénieur Management des risques industriels et environnementaux

INGÉNIEUR MANAGEMENT DES RISQUES INDUSTRIELS ET ENVIRONNEMENTAUX

ENGINEER INDUSTRIAL RISK AND ENVIRONMENT MANAGEMENT

Lecturers: **Pietro SALIZZONI, Richard PERKINS**

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : MI

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

IMR 3.1 :25%
IMR 3.2 : 20%
IMR 3.3 : 25%

LES IMPACTS SUR L'HOMME, L'ENVIRONNEMENT ET LA SANTÉ

IMPACTS ENVIRONMENT AND HUMAN HEALTH

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 18 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 14 | Project : 0.0 | Language : FR

Objectives

Present the phenomena that are responsible for the major natural and technological hazards. Provide an introduction to the different modelling approaches that are used to assess and quantify environmental impact.

Keywords :

Programme

Pollution: types and impacts (CM 6h)
1. Air pollution
2. Soil and water pollution
3. Acoustic waves and radiation

Human health and environmental risk assessment: epidemiology (CM 8h)
1. Environmental exposures and the risk of cancer
2. Known risks and perceived risks
3. Risk factors for cancer

Learning outcomes

- Identify the risk exposure of a population or an industrial process.
- Master the modelling tools that are used to assess the environmental or human impact of different types of risk

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Savoir faire : 50%
Méthodologie : 50%

EVALUATION ET QUANTIFICATION DES RISQUES

EVALUATION AND QUANTIFICATION OF RISKS

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 22 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 8 | Project : 0.0 | Language : MI

Objectives

Construct models to quantify the risks and uncertainties related to different hazards. Develop tools to quantify the economic consequences of events arising from human actions or natural processes.

Keywords :

Programme

Technological risks (8h CM + 8h BE) F. Rosset ODZ Consultants
The objective of this course will be to provide a historical overview of various industrial accidents and the impact they have had on the development of industrial safety regulations and legislation. Different hazardous phenomena will be presented, together with the ways in which they are modelled.

Risk Economics (14h CM) L. Abdelmalki Lyon 2
1. Well-being & Efficiency
   • Economic & market efficiency

Learning outcomes

- Be able to identify the main types of industrial hazard
- Master different modelling techniques
- Understand how to formulate a problem in economic terms, and be able to express it using the appropriate terms and vocabulary.
- Know how to integrate the non-market values of the environment into a cost-benefit analysis

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Savoir: 50%
Savoir-faire: 25%
Méthodologie: 25%

GESTION, PRÉVENTION ET MITIGATION DES RISQUES

MANAGEMENT, PREVENTION AND MITIGATION OF RISKS

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 27 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 3 | Project : 0.0 | Language : FR

Objectives

Define the legislative framework for the prevention and management of environmental risk
Analyse the psychological processes that underlie decision making.

Keywords :

Programme

Law and standards (15h CM) I. Michallet Lyon 3
1. Sources of environmental legislation (in France)
2. The sources of environmental legislation (outside France)
3. The principles of environmental legislation and the different actors
4. Classified Installations for the protection of the environment (ICPE)
5. Water rights
6. Air quality legislation
7. Waste-disposal legislation
8. Environmental assessment

Learning outcomes

- Understand the hierarchy of standards and their interaction
- Be familiar with the general prinicpies of environmental law, and their implemntation in specific legislation
- Relate environmental legislation to its implementation in specific industrial examples

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Savoir: 50%
Savoir-faire: 25%
Méthodologie: 25%

PROJET IMR

IMR PROJECT

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 30 | Language : FR

Objectives

Address the management of a research project aimed at determining the impacts of environmental pollution on human health. Understand the techniques of communication and public communication concerning the results of epidemiological studies.

Keywords :

Programme

This independent work will concern problems related to technological risks, and will be supervised F. Rosset (ODZ Consultants), an engineer working in the field of industrial risk management . It will require a multidisciplinary approach, and should include legal, economic and technical aspects of the problem.

Examples of subjects proposed in previous years:
1. Analysis of an accident and its impact on regulatory and industrial practices: the Buncefield accident
2. Risk associated with ammonium nitrate

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Savoir-faire : 50%
Méthodologie : 50%

UE MÉTIER

Métier Ingénieur Recherche Innovation et Développement

GESTION DU PROJET DE RECHERCHE ET INTERDISCIPLINARITÉ

RESEARCH-PROJECT MANAGEMENT

Lecturers: José PENUELAS, Mathieu CREYSSELS

| Lecturers : 10.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 21.0 | Project : 0.0 | Language : FR

Objectives

The objective of this course is to train students in the management of the research project and its specificities (Go / No Go). This is done by a real situation on a case study which justifies a need for innovation (evaluation of a technological modification / breakthrough, ...), in an often multidisciplinary context, both at the level of the subject but also methods. Students must provide quantified answers to the problem posed.

Keywords : Innovation, transversality.

Programme

Course on project management and the specificities of R&D projects.
Case study sessions: long case study in groups of 5/6 students.
Mini-colloquium: presentation of case studies.

Learning outcomes

- To be able to lead a R&D project.
- Know how to implement innovation / creativity methods.
- Knowing how to quantify a response (technical gain, cost of implementation, etc.)
- To be able to defend an innovation project.

Independent study

Objectifs : Case study: R&D project.

Méhodes : Supervised case study sessions and personal work.

Core texts

Assessment

Written and oral presentation of case studies (70%), microtest on the course (30%)

CRÉATIVITÉ, ERGONOMIE, DESIGN, INNOVATION, COMPÉTITIVITÉ

INNOVATIVE DESIGN AND CREATIVITY

Lecturers: Damien CONSTANT, José PENUELAS

| Lecturers : 14.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 11.0 | Project : 0.0 | Language : FR

Objectives

Starting from the concept of values in the company, and the positioning of the company in the socio-economic context, the need for innovation in the company is explained; the positioning of Research and Development within the framework of an innovation strategy is underlined. The emphasis is on financing innovation. Innovation monetization and market approach strategies are built using marketing techniques, product positioning, pricing and value proposition development.

Students will be made aware of the process of creativity and put in a situation to become aware of the

Keywords : TRIZ, Design Thinking, C&K, innovation, marketing, strategy

Programme

Part 1 :
1. Strategic marketing
2. The need to innovate
3. Quantitative and financial analysis
4. R&D and innovation management
5. Build a business plan

Part 2 :
1. Different approaches to creativity. Problem solving method (TRIZ method):

Learning outcomes

- Modeling a problem within a technical system: Idealities, technical contradictions.
- Offer innovative solutions based on TRIZ principles.
- Analyze a design proposal.
- Establish a business plan based on a case study.

Independent study

Objectifs : Case study in innovation.

Méhodes : Work in groups of 3 students, oral restitution.

Core texts

Altshuller G., , *ET SOUDAIN APPARUT L'INVENTEUR : LES IDÉES DE TRIZ.*, Seredinski (Avraam), 2016

Assessment

Part 1:
Restitution of the case study.

STRUCTURES DE RECHERCHE NATIONALES ET INTERNATIONALES - PHILOSOPHIE,

PHILOSOPHY, SCIENCES AND SOCIETY

Lecturers: José PENUELAS, Romain SAUZET

| Lecturers : 6.0 | TC : 6.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Research consists of confronting what is not known or what does not yet exist. We are not starting from scratch, since we already have many resources (pre-existing knowledge; skills; models, etc.). These resources will constitute some steps of the research process, but they will not answer all the problems, especially the general problems: why do we do research? What are we trying to promote? How should we do it? On what subjects? For what objectives?
This course therefore proposes to take on these questions whether it is by addressing research methods (interdisciplinarity), the condition of contemporary research (technoscience) or even the role and place of

Keywords : Technosciences, Interdisciplinary, Transdisciplinarity, Values, Progress, Big Science, Sustainable Development, Environment.

Programme

- 4 lectures on two main themes: Interdisciplinarity & The place and role of values in science.
- 2 tutorials on case studies illustrating the two main themes: Big Science projects (Manhattan Project) and what value do we want to promote through research (transhumanism).
- A series of conferences on the means of financing research and the major challenges in terms of energy resources.

Learning outcomes

- Develop a critic on the resources and values carried by R&D.
- Understand the characteristics of contemporary research beyond immediate projects.
- To be able to debate socio-technical controversies.
- To be able to identify the major national and European research structures.

Independent study

Objectifs :

Méhodes :

Core texts

Douglas, Heather., *SCIENCE, POLICY AND THE VALUE-FREE IDEAL*, Pittsburgh: University of Pittsburgh Press, 2009
Bensaude-Vincent, Bernadette. *LES VERTIGES DE LA TECHNOSCIENCE*, Paris : La découverte, 2009
Galison, Peter*MEANINGS OF SCIENTIFIC UNITY: THE LAW, THE ORCHESTRA, THE PYRAMID, QUILT, AND RING.", PURSUING THE UNITY OF SCIENCE: IDEOLOGY AND SCIENTIFIC*

Assessment

- A two-hour table assignment combining a text study and a general question about the course.
- Report on the conference cycle.

FORMATION MASTER

MASTER'S COURSE

Lecturers:

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

UE MÉTIER

Métier Ingénieur Excellence Opérationnelle (Lean Supply Chain)

MANAGEMENT DES OPÉRATIONS

BASICS OF OPERATIONS MANAGEMENT

Lecturers: Elisabeth COUZINEAU-ZEGWAARD

| Lecturers : 12 | TC : 8 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

EXCELLENCE OPÉRATIONNELLE

LEAN MANAGEMENT

Lecturers: **Elisabeth COUZINEAU-ZEGWAARD**

| Lecturers : 16 | TC : 16 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

PRINCIPES DE LA SUPPLY CHAIN

BASICS OF SC : FORECAST, MRP, PURCHASING, IS

Lecturers: Elisabeth COUZINEAU-ZEGWAARD

| Lecturers : 24 | TC : 22 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

MANAGEMENT DE PROJET AGILE ET INNOVATION

LOGISTICS

Lecturers: **Elisabeth COUZINEAU-ZEGWAARD**

| Lecturers : 12 | TC : 8 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

PROJET INTÉGRATIF IEO

IEO PROJECT

Lecturers: **Elisabeth COUZINEAU-ZEGWAARD**

| Lecturers : 0.0 | TC : 4 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

Rapport d'étude

PARTICIPATION

PARTICIPATION

Lecturers: **Elisabeth COUZINEAU-ZEGWAARD**

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs :

Méhodes :

Core texts

Assessment

UE MÉTIER

Métier Intrapreneur et Entrepreneur

INGÉNIEUR INTRAPRENEUR ET ENTREPRENEUR

INGÉNIEUR STARTUP ET BUSINESS DEVELOPPER

Lecturers: Marie GOYON

| Lecturers : 12 | TC : 6 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

The program concern all students willing to create value by designing a new business, either as an entrepreneur developing her/his own startup , or as a business developer enlarging an existing company's activities portfolio.
The program relies on two main methodologies: design thinking, project management .
The course is organized with 2 tracks: startup creation and business development, each track with specific courses.
The two tracks aim to enable a project to be developed and piloted, from the idea to its technical, social and

Keywords : creativity, analysis, fieldwork, value creation, social innovation, entrepreneurship, intrapreneurship

Programme

Introduction to design thinking, theory and methods
Creativity, ideation trainings : developing new ideas
How to analyse innovation in a global context within economical, sociological, technological frameworks
Initiation to ethnographic fieldwork and empathy methods
Social entrepreneurship and social innovation
Transform new ideas into business : introduction to value creation and marketing
Communication
Project

Learning outcomes

Independent study

Objectifs : Teamworking : ideation, debate, structure, test, fieldworking. Negociation, management and communication

Méhodes : Project based learning : Teamworking, workshops, coaching and pitchs

Core texts

YUNUS Muhammad, *BUILDING SOCIAL BUSINESS: THE NEW KIND OF CAPITALISM THAT SERVES HUMANITY'S MOST PRESSING NEEDS*, Public Affairs, 2010
ROGER Martin *DESIGN OF BUSINESS: WHY DESIGN THINKING IS THE NEXT COMPETITIVE ADVANTAGE*, Harvard Business School Press, 2009
BARTHELEMY A. et SLITINE R.*ENTREPRENEURIAT SOCIAL INNOVER AU SERVICE DE L'INTÉRÊT GÉNÉRAL*, Vuibert, 2014

Assessment

Project based evaluation : oral presentations and report

DESIGN THINKING ET CRÉATIVITÉ

DESIGN THINKING

Lecturers: **Marie GOYON**

| Lecturers : 26 | TC : 4 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

The program understands innovation and its management by a global, multidisciplinary approach linking the analytical thought and the intuitive thought. Design thinking methodology implements a process of creativity involving user's feedbacks and usages, iteration in conception and prototyping .
Students will learn how to place a problem in a global perspective (economic, technical, sociological …) and how to transform an idea into a business. The students will use the three pillars of design thinking approach : desirability, viability and feasibility.

Keywords : creativity, ideation, design thinking, user empathy

Programme

Introduction to design thinking theory and methods
Creativity and ideation workshops
Research and analysis
Ethnography fieldwork
Uses

Learning outcomes

- Be able to get an overview on a specific problem : desirability, viability, feasibility
- Work creatively and transversaly
- Adopt an iterative and user centered point of view
- be able to work in an interdisciplinary context, manage an innovative project

Independent study

Objectifs : Group work
Creativity and ideation workshops
fieldwork

Méhodes : Learning by doing on the project, coaching

Core texts

BROWN Tim, *L'ESPRIT DESIGN: COMMENT LE DESIGN THINKING CHANGE L'ENTREPRISE ET LA STRATÉGIE*, Pearson, 2014
ROGER Martin *DESIGN OF BUSINESS: WHY DESIGN THINKING IS THE NEXT COMPETITIVE ADVANTAGE*, Harvard Business School Press, 2009
FOREST Joelle*CREATIVE RATIONALITY AND INNOVATION*, Wiley Blackwell, 2017

Assessment

Project evaluation : oral presentations and report

RÉSEAUX D'ACTEURS ET ÉCOSYSTÈMES

MARKETS AND STAKEHOLDERS

Lecturers: Marie GOYON

| Lecturers : 12 | TC : 8 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Identify the actors of an ecosystem and their interactions
Understand the dynamics and the structure of relevant markets
Understand which are the levers
Understand and build stakeholders' strategies
Identify relevant support for the project's success

Keywords : ecosystems, actors networks, stakeholders, marketing, strategy

Programme

Actor's network theory and methods applied to innovation management and value creation
Identification and mapping of actors and stakeholders networks
Understanding a market : clients, customers, users.
Marketing Strategy
Project Strategy

Learning outcomes

- identify the actors and stakeholders of an innovation ecosystem
- mapping the actors and stakeholders networks of an innovation ecosystem
- establish a strategy for stakeholder engagement
- value creation

Independent study

Objectifs : Implementation into the project

Méhodes : Workshop on the project

Core texts

Akrich M., Callon M. et Latour B., *A QUOI TIENT LE SUCCÈS DES INNOVATIONS? GÉRER ET COMPRENDRE*, Annales des Mines, 1988
Leger Jarniou C., Certoux G., Degeorges J.M., Lameta N., Legoff H. *ENTREPRENEURIAT*, Dunod, 2016
Hillen V.*101 REPÈRES POUR INNOVER*, Paris-Est D. School, 2016

Assessment

Project evaluation (oral presentations and report)

MODÈLES ÉCONOMIQUES

NEGOCIATION AND COMMUNICATION

Lecturers: Marie GOYON

| Lecturers : 16 | TC : 6 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

Define how to transform an idea into value creation.
Identify which offer is going to bring to customers a value for which they will be ready to pay.
Think how to organize the processes and the partners allowing to produce the offer
Analyse how income can balance costs.
Build a viable consistency among the social, economical, financial and technical dimensions of a business.

Keywords : Buisness models canevas, value proposition, profit and loss statement, cashflow statement, financial forecasts

Programme

Design an value proposition adapted to targeted customers
Business models and business plans
Finance for entrepreneurship
Build the customers relationship
Forecast revenues

Learning outcomes

- Be able to build a value proposition adapted to targeted customers
- State financial forecasts for a business developement
- Evaluate financial risks

Independent study

Objectifs :

Méhodes :

Core texts

Alexander Osteralder, *BUSINESS MODEL NOUVELLE GÉNÉRATION : UN GUIDE POUR VISIONNAIRES, RÉVOLUTIONNAIRES ET CHALLENGERS*, Pearson, 2011
Philippe Silberzahn *EFFECTUATION : LES PRINCIPES DE L'ENTREPRENEURIAT POUR TOUS*, Pearson, 2014
Carlier F.*RÉUSSIR SON PREMIER BUSINESS PLAN*, Studyrama, 2015

Assessment

Project evaluation

PROJET DE CRÉATION D'ACTIVITÉ

BUSINESS CREATION PROJECT

Lecturers: Marie GOYON, Sylvie MIRA

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 30.0 | Language : FR

Objectives

Develop one's creativity and use it to create a new business or a startup
Develop capacities to manage a business development project
Learn how to collect data relevant to manage the project
Identify and organize relevant resources to manage the project
Learn how to communicate with partners, customers or VCs

Keywords : Project management, innovative project conception, teamworking, communication, analysis

Programme

Students chose to build a project as business developer for a company or as an entrepreneur.
They are asked to lead the project for the creation of an innovative activity either for a sponsoring company, or for the creation of their own start-up.
The project begins with the ideation step and ends with the final pitch with the pedagogic team and the sponsoring company

Learning outcomes

- Develop one's creativity to create value
- Develop one's team and project management skills
- Identify and organize relevant resources to manage the project
- Develop one's communication and reporting skills

Independent study

Objectifs : Improve one's conception and innovation management skills. DIY and DIWO. Applying a transversal and global approach for innovation (desirability, feasibility and viability)

Méhodes : Project based learning, workshops and coaching

Core texts

Assessment

Project based evaluation : teamwork attendance, oral presentations and report.

UE MÉTIER

Métier en Entreprise