DIPLÔME D'UNIVERSITÉ « LANGUE, CULTURE ET INNOVATION POUR L'ENTREPRENEURIAT »
'LANGUAGE, CULTURE AND INNOVATION FOR ENTREPRENEURSHIP' UNIVERSITY DIPLOMA

Motto

Fast-learning, Global and Entrepreneurial.

Description

With the world moving as fast as it is, junior engineers and managers have to be able to take advantage of the latest technologies in order to address the challenges of the intense urban development.

This programme is aimed at future entrepreneurs and organizations' *intrapreneurs* intending to innovate and build tomorrow's livable and appealing cities in an ethical and socially-responsible way.

Along the semester, students develop their potential **entrepreneurial behavior, agile mind, and** "**sense of exploration**".

Students are shifting how **to learn and keep up** with the latest thinking by using the technology to find the best sources of information and keep knowledge and skills current. Students are trained to apply **technology-watch methods** and take part in a programme resulting from a partnership between UTSEUS and the Paris-based Netexplo programme - an affiliate of UNESCO. This assignment involve other students from 20 top world universities such as Stanford, MIT Media Lab, Oxford, National university of Singapore, KAIST, HEC Paris.

The project-based courses "Innovation in smart cities" and "Entrepreneurship in China" are the backbone of the LCIE programme. In order to ensure an optimum learning process, a reinforced team of more than 15 academics, industrial experts, and entrepreneurs-mentors is providing weekly classes (1), intensive workshops (2), and mentoring (3).

This course aims at:

- stimulating students' **curiosity** and **creativity** to tackle major urban issues
- converting students' ideas into viable projects using the methods of **lean startup, design thinking, business canvas, etc.**
- **connecting** students with the makers & entrepreneurs **innovative ecosystems**
- **understanding** the **key human, technical, commercial, environmental and financial issues** entrepreneurs or intrapreneurs must face when creating and managing a new venture

(1) Weekly classes consists of expert advices, practical methodological sessions as well as testimonies of entrepreneurs and iconic players in the innovation and *tech* ecosystem.

(2) Workshops objectives are to turn students to '**makers**', develop their **creativity, resourcefulness** and **team work spirit.** They are organized in partnership with other schools or local organizations such as Shanghai makerspace (*Xinlab/Xinchejian).*

(3) Mentoring consists of orienting the student teams to **external resources** and **advisors** to organize the team work, develop strategies, integrate lead-time factors, and make progress by **seeking and finding skills, data, external advice**, etc.

In parallel of the weekly classes of Project management, the students must lead their entrepreneurial project. One day per week is dedicated to this project. They learn how to adapt their project management methods and tools to ensure the delivery of the best results taking in account quality, cost and time limits. They get **efficient and agile management skills.**

Communication skills and **in-depth understanding of the various Chinese cultures** and **traditions** is one of the key to succeed as an entrepreneur or project leader operating in China. Lectures, cultural activities as well as a 5-days study trip in a Chinese province give the students valuable knowledges on China's history, philosophies, demography, business culture, and Mandarin language.

With more than 60% of the courses given by entrepreneurs and professionals, students are developing their **professional attitudes** such as ability to perform outstanding pitches or ensure smooth written and oral communication in English and Chinese in an international environment.

Keywords

- Agile management applied to innovative projects
- Entrepreneurial behavior and mindset
- Innovation and tech-watch methods
- Professional attitudes and skills
- English proficiency language skills
- In-depth understanding of Chinese culture
- Specificities of the tech ecosystem in Shanghai and another province of China
(Study trip)
- Intercultural cities, smart cities (datapolis / participolis)

2017 YEAR

LIST OF LECTURES

Course category	Course name	ECTS credits	Compulsory (C) or optional (O)	
			Autumn	Spring
Scientific knowledge	Data science literacy	4	O	O
Scientific methods & tools	Innovation in smart cities	6	C	C
	Data Science: Advanced visualization and cartography	6	O	O
	Project management	6	C	C
Social sciences	Intercultural communication and international management	6	C	C
	Entrepreneurship in China	6	C	C
	Leadership & presentation skills	3	O	O
	Approaching China	6	O	
Languages	Chinese Mandarin for beginners LCIE	6	C	C
	Chinese Mandarin Intermediate LCIE	6		
	Chinese Mandarin Advanced LCIE	6		
Other	Project realisation	3	C	C
	Chinese Traditional Arts & Games	0	O	O

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US02 Data Science Literacy

Category:	Scientific knowledge

Language of instruction	English
Number of hours	
- In-class	24H
- Project	20H
- Non-supervised	60H
ECTS	4

Open to IE program	No
Open to LCI program	Yes, as optional lecture
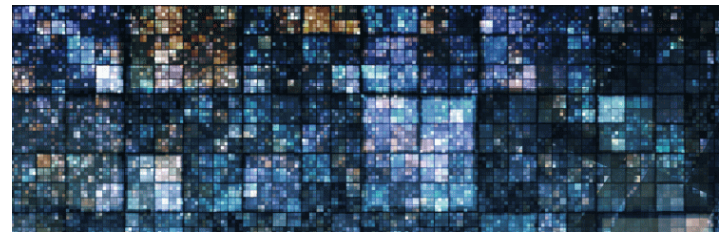
Prerequisites

This course is aimed at students with little or no prior programming experience. Since Data Science involves its own modes of thinking, a logical aptitude and a desire to understand computational approaches to problem solving will be necessary to succeed.

Course Overview and Objectives

The course objective is to give student an overview of the various areas of application of Data Science. It covers the major theories, methods, and tools to get data, explore large heterogeneous datasets and visualize them in a relevant and efficient way. Student will be introduced to Python ecosystem, and must apply the acquired knowledges with practical exercices.

The evaluation takes the shape of a hackathon. More information : http://utseus.com/en/news/2016/12/05/hackathon-urban-data-challenge-2016/

Course Planning

	course	tutorial	technology
1	Data Science Philosophy	jobs opportunities and tools	
2	Python Intro	Python Intro	Python
3	Python Advanced	Python Advanced	Python
4	Network Theory	Network Visualization	Gephi
5	Search Engine	Network Creation & Design	networkx
6	Data Harversting	Crawler Design	Sqlite + Networkx + Requests
7	Data Visualization	Maps and Diagrams	cartodb, d3.js
8	Complex Systems Introduction	Simulation	Netlogox
9	Complexcity Project Competition	Hackathlon	all

Professors

Fabien Pfaender
Associate Professor | UTSEUS | utseus.com
Researcher & Coordinator | ComplexCity Lab | complexcity.org
Chair | UNESCO International CS-DC e-lab Urban Complex Systems

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UM02 Data Science: Advanced visualization and cartography v.2017

Category:	Scientific methods & tools

Language of instruction	English
Number of hours	
- In class	40H
- Project	20H
- Non-supervised	100H
ECTS	6

Open to IE program	Yes, as optional lecture
Open to LCI program	Yes, as optional lecture

Course Overview and Objectives

This course will teach you how to effectively present any information in a visual way using theories ranging from art, statistics, design and computer graphics. That is becoming an expert in creating diagrams/charts, learning how to present your thoughts, ideas and results through very effective visualization and get familiar with new interactive visualizations techniques. Hence you will get strategic skills into communicating your ideas and explore datasets to create value. Moreover the course introduces advanced graphic techniques and tools to manipulate graphs as well as latest mapping tools and services to create very effective geographic and semantic maps.

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UM10 Project Management v.2017

Category:	Scientific methods & tools

Language of instruction	English
Number of hours	
- In class	30H
- Non-supervised	45H
ECTS	3

Open to IE program	No
Open to LCI program	Yes, as compulsory lecture

Course Overview and Objectives

This course includes in-class lectures, workshops, coaching, and a real entrepreneurial project led by groups of 2 to 4 students from the beginning until the end of the semester.

Students teams and projects are defined at the very beginning of the semester with partners companies.

The course aims:

- to let students understand and practice project management using different processes, methodologies (agile, scrum, waterfall, lean, etc.) and tools (collaborative platforms, plannings, presentations, etc.)

- to bring different backgrounds students to learn and work in a collaborative mind-set to achieve one common goal

- to let students working together solving real issues with concrete outputs for a company, a research lab or other organization with quantified expectations

- to learn how to communicate and motivate Chinese and international professionals in international organizations

Students teams have a mentor and get teaching and coaching sessions on project management all along the semester.

One day per week is dedicated to the entrepreneurial project.

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UH01 Intercultural Communication & International Management   v.2017

Category:	Social Sciences

Language of instruction	English
Number of hours	
- In class	30H
- Project	30H
- Non-supervised	90H
ECTS	6

Open to IE program	No
Open to LCI program	Yes, as compulsory lecture

Course Overview and Objectives

The cities and workplace are more and more intercultural. To evolve in intercultural cities it will require to master intercultural communication and international management knowledge.

This module, built on two chapters, gives not only tools but also new possible ways of thinking and behaving:
- Prepare the skills to be effective abroad, in multicultural teams and international companies.
- Build an awareness on the importance of cultural factors, including as future entrepreneur.
- Understand the origins and reasons of cultural differences, the value judgments, the stereotypes and their functions. -
- Learn to decipher the signs to be adequate and operational.
- Build a toolbox and the systems of thinking that are essential in the « intercultural comfort zone ».

Students will have to apply knowledges and methodology acquired during the lectures into a research work on an contemporary intercultural issue.

Lecturer

Christine Gastinel held several responsibility positions in **TOTAL GROUP** :
    - Director of the Social Observatory (worldwide),
    - Director Press Relationships and Communication (for the Professional Union of Oil and Gas Companies,
    - Head of Communications Division Exploration and Production,
    - Head of Geopolitical and Intercultural Division···

She was also **consultant** for world size Companies in Finance, Energy, Transports industries.

Christine kept a strong link with the academic world all along her career by giving lectures as **professor** in many countries and top universities in France:
Sorbonne University in Paris and Abu Dhabi, Ecole Centrale Paris and Beijing, ENSAM, HEC, Stanford (USA), Bauman (Russia), Abu Dhabi, Koweit, Qatar, Iran, Morocco, etc.

Christine takes part in the French startup ecosystem as a **business angel.**

UM01 Innovation in Smart Cities v.2017

Category:	Social Sciences
Language of instruction	English
Number of hours	
- In class	40H
- Project	40H
- Non-supervised	100H
ECTS	6
Open to IE program	No
Open to LCI program	Yes, as compulsory lecture

Course Overview and Objectives

This course aims to provide the fundamentals of innovation and design thinking, engaging students in practical experiences.

With a strong link with the course 'Entrepreneurship in China', students get to explore design process and put their science, engineering and business skills to the test.

• Learn about innovation methods: Design & Collaboration with Design Thinking
• Experiment interdisciplinary design workshops
• Learn to build and use an MVP to iterate using fast-prototyping tools (3D modeling, 3D printing, laser-cutting, etc.)
• Imagine innovative solutions for cities, government, citizens or industrie associated with in-situ data captured in the city of Shanghai
• Understand the impact of innovation and new technologies on society and business, by getting involved in an assignment on economic intelligence and watch in partnership with NETEXPLO Observatory on Digital Innovation (UNESCO).

UH02 Entrepreneurship in China

Category:	Social Sciences
Language of instruction	English
Number of hours	
- In class	40H
- Project	10H
- Non-supervised	100H
ECTS	6
Open to IE program	No
Open to LCI program	Yes, as compulsory lecture

Course Overview and Objectives

This program aims to provide the fundamentals of entrepreneurial behavior, mindsets and tools for innovation, engaging students in practical experiences through idea generation and opportunity identification to implementing, managing and harvesting a venture.

Students are invited to try out their own start-up ideas.
All students' must develop their own startup projects by teams during the program.

During weekly classes, students are guided through an iterative process using LEAN principles, and specialists' advices and coaching to:
- Learn how to identify a real pain point
- Test a business model: Is it worth pursuing?
- Figure out the potential of development and risks of the business model in China
- Define, build and use a minimum viable product (MVP - related workshop in the course 'Innovation in Smart Cities')
- Find paying customers
- Define the best fund raising solution for the company
- Learn how to elaborate a customer acquisition plan
- Convince an audience about a business idea
- Pitch in front of real investors and professionals

In addition to the weekly classes, students have the chance to boost and enhance their projects by leveraging Shanghai entrepreneurial eco-system :
- Mentoring by successful entrepreneurs of Shanghai, allowing them to accelerate their project while learning from others' experiences, successes and failures
- Visits of co-working spaces, incubators, maker spaces and labs, etc.
- Get access to a pool of tech/industry advisors who are willing to share precious data and recommendations

Learning by doing

Peer-to-peer support

Real world experience

Intercultural understanding

Positive impact of new technologies

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UH03 Leadership and Presentation Skills   v.2017

Category:	Social Sciences

"You're not allowed to use the sprinkler system to keep your audience awake."

Language of instruction	English
Number of hours	
- In class	30H
- Non-supervised	45H
ECTS	3

Open to IE program	Yes, as optional lecture
Open to LCI program	Yes, as optional lecture

Course Overview and Objectives

This course is divided in two modules of 15 hours. It includes coaching and thematic seminars to help future engineers, managers and entrepreneurs get more confidence when addressing a public, or when performing job interviews.

The first module "Which leader are you?" is about know yourself better, identify your strengths, weaknesses and enhance your inner motivation.

The second module will help you design your presentations and deliver your ideas using various techniques, such as professional keynote address or elevator pitch.

UH05 Understanding Modern China   v.2017

Category	Social Sciences

Language of instruction	English
Number of hours	
- In class	40H
- Non-supervised	120H
ECTS	6
Open to IE program	Yes, as optional lecture
Open to LCI program	Yes, as optional lecture

Course Overview and Objectives

This course aims to provide the key concepts to understand Modern China, with an emphasis on the social, economical, anthropology contexts. Students following this course will get a deeper and broader insights into China's position in the global economy.

The Chinese management specificities at the corporate level will also be introduced and provide student best business practices to develop strategic thinking and leadership skills.

At the end of this module, students should be able to:

- Define main concepts, historical facts and dates of Modern China
        (19's century to now)
- Understand the legacy of past events and reforms
- Discuss China's position in the global economy
- Develop professional collaboration in English in a Chinese context

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UL04-06 Chinese Mandarin v.2017

Category:	Social Sciences

Language of instruction	Chinese
Number of hours	
- In class	80H
- Non-supervised	100H
ECTS	6

Open to IE program	No
Open to LCI program	Yes, as compulsory lecture

Course Overview and Objectives

This course enable students to master language syntax and structure, related cultural knowledge, reading and writing comprehension, gradually develop the ability to use Chinese language flexibly and effectively for social and professional purpose.

The students will be expose to real-life situations during extra-scholar activities with their teachers.

The students will be encouraged to take reference HSK Chinese Mandarin test at the end of the semester.

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UX02 Chinese Traditional Arts & Games   v.2017

Category:	Social Sciences

Language of instruction	English
Number of hours	
- In class	30H
- Project	0H
ECTS	0

Open to IE program	No
Open to LCI program	Yes, as optional lecture

Course Overview and Objectives

Developing appreciation and awareness of the Chinese culture is the objective of this programme.

4 optional monthly activities engage students in an exploration of various arts and games, reflecting Chinese traditions and culture.

The course is taught in Chinese and English. Students are expected to speak Chinese as much as possible.

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