

### Module 1: Fundamentals of business start-up and management

Subject 1.5: Emerging Technologies I (6 ECTS). BASIC TRAINING - COMPULSORY

### **Duration and temporal location within the syllabus**

This subject is taught throughout the first year of the degree program.

### Language

Basque/Spanish/English

# **Brief summary of contents**

### **Emerging technologies**

Technology is evolving at incredible speeds and we understand that one may cease to be a potential for another to emerge with great force. At the moment, the topics being are the functioning of algorithms, data compilation and analysis, 3D printing and Arduino programming. The most fundamental concepts are conveyed through games and practical activities.

### Critical thinking about technology

Reflection on the personal use of technology. Is technology there to help humanity or does technology control us? Concepts of "Tech for Good" and "Good Tech".

Alternative movements such as open source and open source. Differences between patents and patents and the concept of "Creative Commons".

Ethical reflection on the use of technology. Using examples of real or even fictitious situations, dialogue is promoted among the teams so that they can reflect on the position they would take in such a situation.

#### **Competencies**

### **Core Competencies:**

(CBI) Students have demonstrated possession and understanding of knowledge in an area of study which builds on a general secondary education, and is usually found at a level which, while relying on advanced textbooks, also includes some aspects involving knowledge from the cutting edge of their field of study.



(CB2) Students should be able to apply their knowledge to their work or vocation in a professional manner and possess the competencies that are typically demonstrated through the development and professional manner and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and the defense of arguments and the resolution of problems within their area of study.

# **Transversal Competences:**

TC3: Critical and analytical

# **General/Personal Competencies:**

GC1 Creative

GC4 Conscientious and forward-looking

# **Specific/Professional Competencies:**

SC4: Digital

# **Learning Outcomes (RA)**

The entrepreneur:

RAI: Is able to understand the basics of emerging technologies, has internalised the importance of technologies from a Startup of technologies from a Startup point of view and has a critical thinking regarding their use.

#### **Training activities**

- Learning sessions (2.4 ECTS, 60 hours)
- Immersion Workshops (1.2 ECTS, 30 hours)
- Simulations/ Prototyping workshops (0.6 ECTS, 15 hours)
- Interdisciplinary discussion spaces to share knowledge from different areas (0.3 ECTS, 7.5 hours)
- Visits to companies (0.3 ECTS, 7.5 hours)
- Projects in multidisciplinary teams (1,2 ECTS, 30 hours)

### **Evaluation system**

All subjects will be assessed by the continuing assessment system through which constant feedback is provided on the student's learning process.

Continuous feedback on the learning process of the entrepreneur, the team, and the company.

Both the teachers/team coaches of the degree, as well as expert profiles, advisors, and mentors, actively participate in this evaluation process with the aim of guaranteeing the coherence and validity of the process.

Bearing in mind that in each of the subjects, both individual and team performance will be assessed, the criteria to be used in the evaluation process will be the following:

- Individual work will be evaluated with evidence that corresponds to a maximum of 30% of the final grade,
- Team work will be evaluated with evidence that corresponds to a minimum of 70% of the final grade.

The evaluation process will be carried out twice a year in a dialogue session and the following learning tools will be used:

- 1. Evaluation of the team entrepreneurship process in all learning modules. The fulfillment of multiple indicators based on the learning outcomes established in the different modules are analyzed and assessed.
- 2. 360° evaluation of competency profile and individual performance. This is a personal self-assessment and co-assessment session with the team and team coaches using different tools to help evaluate the skills profile of the degree within three categories: teampreneur, teamlearner and teamleader. In this session it will be possible to count on the opinion of other agents participating in the learning process, such as clients and users.
- 3. The Personal Portfolio is a document through which all the necessary documents and data that serve as evidence in the entrepreneur's learning process and outcomes are collected.

### **Bibliography**

- Lessig, Lawrence Code 2.0
- Tantek Çelik, HTML5 Now: A Step by Step Tutorial for Getting Started Today
- Anderson, Chris, Makers. The new industrial revolution
- Hatch, Mark, The maker movement manifesto
- Críptica, Resistencia digital
- Srnicek NIck y Williams Alex, Inventing the Future Postcapitalism and a World Without Work
- Stephens-Davidowitz, Seth, Everybody Lies: Big Data, New Data, and What the Internet Reveals About Who We Really Are
- Marr, Bernard, 2016, Big Data in Practice: How 45 Successful Companies Used Big Data Analytics to Deliver Extraordinary Results
- Goodman, Elizabeth, Designing Connected Products: UX for the Consumer Internet of Things
- Kranz, Maciej, Building the Internet of Things: Implement New Business Models, Disrupt