Name of Module: Basics I&E	Credit Points (ECTS): 6 in Semester 1	Module-ID: Basics in I&E (code EIINE711 for 3 ECTS) + Business intelligence 1 (code EIINE713 for 3 ECTS). Part of the UE Innovation & Enterpreneurship S7 block, code EIUIN74)
Person Responsible for Module: I&E UCA coordinator, Martino Matijevic		
Université Côte d'Azur	**Department: Polytech Nice Sophia**	

1. Prerequisites for Participation

According to general prerequisites for EIT Digital Master school programs.

2. Intended Learning Outcomes

- In depth understanding of the general process and roles involved in developing an idea and starting up a new technology-based company
- The ability to systematically explore customers and markets
- In depth understanding and the ability to systematically explore business organization and projects
- In depth understanding and the ability to systematically explore basic product and process development
- In depth understanding and the ability to systematically explore basic entrepreneurial finance
- In depth understanding and the ability to systematically explore the important elements in managing companies and developing its human resources

3. Content

Idea generation, technology-based entrepreneurship, marketing and markets, organization and project management, new product and process development, entrepreneurial finance, human resource development

4. Teaching and Learning Methods

This module (officially named Innovation 1), is split into two courses.

The first one "Basics" is organized along on-line and in class courses. Total hours 20.

- Technology-based entrepreneurship, product ideation, and development cycle [Cedric Ulmer, FranceLabs] (3 lessons x 3h and 1h for exam)
- Online course (6h30 videos, 2h30 research, 1h oral presentation):
    - Theory and models
    - Technology delta and barriers
    - Customer and market focus
    - Reaching product-market fit
    - Initial Go-to-Market
    - Market-by-market expansion
    - Value networks

For each topic whenever possible, the students get lectures/presentations from entrepreneurs. In particular, occasionally an entrepreneurship lunch is organized, participation is mandatory for EIT Digital students.

The second one is entitled “Business intelligence”. Total hours 24.

The success or failure of organizations of all sizes mainly depends on the quality of their decision- making, especially in the strategic levels. Rational and fact-based decision-making process is expected to lead to higher value for businesses and facts require data to back them up—otherwise they are just opinions. Fact-based decision making is a disciplined process that requires careful thought in order to collect the right data from the proper sources and then have unbiased, non-judgmental analysis to extract those facts that are important in firstly understanding the situation, formulating the problem and then forecasting the future. This module provides a broad understanding of the wider context analysing business data, including the importance of visualizing and understanding data, representing data in a meaningful way to be used for decision making. It then explores effective methods for describing and summarizing data, as well as the 4 principle types of analytics, descriptive, diagnostic, predictive and prescriptive analytics. The module is designed to give you a practical grounding in the skills and techniques necessary to conduct data analytics and anticipate the effects of the data analytics on both short- and long-term strategy. As future business leaders, students will learn to understand and explore data analytics trends, investigate the market disruptions caused by technology and the impact of data science in industries worldwide.

After studying this module, you should be able to:

- Understand and appreciate the importance of good data and information to support decision making and knowledge creation.
- Understand basic data types and analysis issues that can help create valid data and information for decision-making and operational purposes.
- Critically assess and apply theories and models of data, information, knowledge, and decision making within a variety of organizational arenas.
- Critically evaluate the drivers and strategies for advanced analytics and its impact on organizational decision-making.
- Develop a critical understanding of how different data supports and is used by different activities within organisations and through its customer and supply networks.
- Develop an understanding of organisational capability in the development of supportive information systems, using such techniques as benefits realization.
- Use data information and knowledge to create competitive advantage and support adaptable organisations.

Content:

- Big data
- Business Intelligence
- Business analytics
- Data Analytics
- Data-driven decision making
- Business strategy

This module encompasses a wide range of cognitive skills in computational thinking and its relevance to business concepts, critical evaluation and professional considerations and practical skills in the deployment and use of tools and critical evaluation of complex problems. So, it enables you to develop a deep understanding of the impact of data, the meaning of the data (including in terms of statistics), and to give you an opportunity to examine data analytics technique in terms of problem solving, predicting and decision-making in business context.

Lectures and work on presentations: 24h

5. Assessment and Grading Procedures

50% first course (3 ECTS) + 50% second course (3 ECTS)

For the first course the decomposition is:

- Technology-based entrepreneurship: 50% of mark (multiple-choice questions)
- Online course from Moodle EIT Digital: 50% of mark (oral presentation)

The in-class courses are assessed based on assignments about real business cases. These business cases are used in lectures as practical illustrations.

Second course is graded as follows:

- Project management basics: 60% of mark
- Work on project: 40% of mark

6. Workload calculation (contact hours, homework, exam preparation,..)

See above

7. Frequency and dates

Once fall term

8. Max. Number of Participants

20

9. Enrolment Procedure

Automatic enrollment of EIT Digital Master 1 students. (Reserved seats)

10. Recommended Reading, Course Material

For the basis courses: per addressed topic:

- Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. Strategic entrepreneurship journal, 1(1-2), 11-26.
- Banks, R., Thorlund, J., Laursen, G. (2016) “Business analytics for managers: taking business intelligence beyond reporting”, published by Audible Studios on Brilliance; Unabridged edition
- Byers, T. H., Dorf, R. C., & Nelson, A. J. (2011). Technology Ventures From Idea to Enterprise, McGraw-Hill. New York.
- Davenport, T.H., (2014) “Big Data at Work: Dispelling the Myths, Uncovering the Opportunities” published by Harvard Business Review Press
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. Journal of management, 29(3), 333-349.
- Erl, T., Khattak, W., Buhler, P. (2016) “Big Data Fundamentals, Concepts, Drivers & Techniques” published by Prentice Hall
- Gedajlovic, E., Honig, B., Moore, C. B., Payne, G. T., & Wright, M. (2013). Social capital and entrepreneurship: A schema and research agenda.
- Han, J., Kamber, M., Pei, J. (2011) “Data mining: concepts and techniques”, published by Morgan Kaufmann; 3rd edition
- Innovation and Small Business, Vol. 1&2, Brychan Thomas, Christopher Miller & Lyndon Miller (ebook)
- Maindonald, J., Braun, W.J., (2010) “Data analysis and graphics using R: an example-based approach” published by Cambridge University Press
- Phillips, J. (2013) “Building a Digital Analytics Organization: Create Value by Integrating Analytical Processes, Technology, and People into Business Operations”, published by Pearson FT Press
- Provost, F., Fawcett, T. (2013) “Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking” published by O'Reilly Media
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. Academy of management review, 25(1), 217-226.
- Stephenson, D., (2018) “Big Data Demystified: How to Use Big Data, Data Science and AI to Make Better Business Decisions and Gain Competitive Advantage” published by FT Press
- Understanding Organizations, Tony Greener (ebook)

11. Other information

General EIT Digital I&E Minor structure at UCA :

Semester 1 - S7-UE3 Innovation & Entrepreneurship	9 ECTS
Basics in Innovation and Entrepreneurship (coeff 0.3) code EIINE711	Cédric Ulmer Martino Matijevic
Business Development Lab Introduction (coeff 0.3) code EIINE713	Christine Drouot
Business Intelligence (coeff 0.3) code EIINE713	Galena Pisoni
Foreign Language (coeff 0.1)	

Semester 2 - S8-UE3 Innovation & Entrepreneurship	15 ECTS
Business Development Lab (coeff 0.35) code EIERO826	Michel Callois Sophie Monteil Martino Matijevic
Business Intelligence 2 (coeff 0.15)	Martino Matijevic
I&E Complementary course (coeff 0.15)	Jean Piroddi Olga Lazko
EIT summer school (coeff 0.25)	
Foreign Language (coeff 0.1)	

Overall, the minor in I&E in the EIT Digital UCA Data science track accounts for a total of 24 ECTS.