Teaching Digital Entrepreneurship

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Digital Entrepreneurship Curriculum

DIGITAL ENTREPRENEURSHIP

CURRICULUM

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PREFACE

"The one who does the work does the learning."
(Terry Doyle)

Digitization not only has an impact on existing companies, but also offers new business opportunities for start-ups in particular: Sound business knowledge meets innovative business models, new technologies and diverse forms of teamwork. These digital entrepreneurs need not only technical know-how, but also leadership skills adapted to the challenges of a digitalized working world. More specifically, managers and entrepreneurs working in technology-oriented companies should be able to shape the entrepreneurial future and have the ability to act in the face of uncertainty, but also need to expand their management and leadership competencies with regard to the digital transformation of companies.

This booklet represents the fourth step of the 'Teaching Digital Entrepreneurship' (TDE) journey. Building on the three former tasks, (1) the development of guidelines for TDE, (2) the development of the textbook covering the theoretical foundations of management for TDE, and (3) the casebook consisting of practical case studies in the area TDE, this fourth part focuses on how to transfer the knowledge from these former tasks into competences in the classroom. The overall goal is to build content that will help students to develop and learn new skills about how start-ups and how entrepreneurial thinking may disrupt existing and incumbent processes and business models, fitting into the overarching topic of organizational change in organizations and businesses.

This booklet's content is based on the structure from the textbook and adopts a modular structure, i.e. depending on preferences, each chapter can be selected by students/teachers or course designers. In other words, the modular structure allows students/teachers or course designer to use selective modules (i.e. topics) independently what, in turn, ensures flexibility / options in the implementation at Higher Education Institutions. Each chapter/curriculum follows the same logical flow and consists of the following seven points: a) Course Description, b) Course Objectives and Learning Outcomes, c) Course Design / Organization, d) Syllabus, e) Assignment / Grading, f) Readings, g) Hours.

Following the outline from the textbook, this book is also structured into 16 chapters/curricula:

- *Introduction to Industry 4.0* – introduces the starting point of the fourth industrial revolution and its consequences from the economic and social point of view and the advantages and disadvantages of Industry 4.0.
- *Introduction to Industry 4.0 with a contribution on Society 5.0* – points out the concept of "Society 5.0", identifies the role of the digital technology in the development of the next Society, and recognizes the opportunity of "Society 5.0" for Digital Entrepreneur.
- *Disruptive technology* – explains the foundations behind Clayton's Christensen "Disruptive Innovation Theory" with its advantages and drawback and distinguishes between "disruptive" and "sustaining" technologies.
- *Digital business and digital transformation in business* – defines what digital business is and the pillars and critical factors of digital business development and identifies the digital business models and the enablers, barriers, and challenges of digital transformation.
- *Opportunities and threats for digital business and digital entrepreneurship* – points out fundamental modes of measuring digital business / digital entrepreneurship, identifies the current stage of digital business and digital entrepreneurship development and key benefits as well as threats originating from an increasingly digitized world and explains the complexity of digital business and digital transformation.

- *Digital infrastructure* – distinguishes between "hard" and "soft" digital infrastructure, identifies the impact of the Internet of Things on the quality of digital infrastructure and its socio-economic benefits and threats, and analyzes the latest Blockchain technology.
- *Digital strategies* – clarifies the reasons why both firms and entrepreneurs need a digital strategy and how they align and/or integrate with and support firms' business goals and objectives, develops a framework for Digital Strategy formulation and implementation, and detects firms' strengths and weaknesses in answering to the digital change.
- *Digital firm's activities* – addresses to manage the supply chain and be aware how to turn it into digital supply chain, to learn and understand the digital evolutions, to manage digital marketing strategies and instruments, and successfully to implement digital firm's activities.
- *Digital Business Ecosystems* – develops the infrastructure of digital business ecosystem, finds out the competitiveness and benefits of digital business ecosystem, investigates the experience of some institutions of digital business ecosystems.
- *Developing success digital venture: resources and competences analysis* – identifies the elements that characterize the digital entrepreneurial mindset, how technological trends that contribute to the digital entrepreneurial mindset generate entrepreneurial opportunities in digital entrepreneurship and identifies and defines the set of resources and skills to support the development of entrepreneurial opportunities in the digital context.
- *The six building blocks for creating high-performing digital enterprises* – recognizes the different building blocks for creating a high-performing digital enterprise and the how they may be developed within firms to get success, identifies the firms' capabilities and their linkage with each block of the model and employs the model in practice.
- *Business model innovation* – analyses the construct of Business Model Innovation (BMI) in the new digital landscape, clarifies the critical role of boundary management capabilities to implement new BMI, and adopts a future-looking perspective in implementing successful BMI, considering the fundamental challenges to face on digital transformation.
- *Digital business plan and start-up* – explains the basics of business plans and of digital business plans, how to write a business plan, basics on start-ups, and financing possibilities for start-ups.
- *Digital Entrepreneurship: best practices for success* – explores some salient traits of Digital Entrepreneurship, clarifies the infusion of Digital Technologies in Entrepreneurship research fields, describes Digital Entrepreneurship along the firm's life cycle, and implements a successful business idea in a digitized world.
- *Socio-materiality and digitalization* – explains how technology can impact business practices on organizational practices, points out how digital artifacts can be perceived by entrepreneurs, identifies how digital technology interacts with the human factor.
- *Skills for disruptive digital business. A Talent Management approach* – identifies how the different Talent Management models can be used in knowledge-intensive companies (KIF) with disruptive digital business models.

David M. Herold
Editor

INTRODUCTION TO INDUSTRY 4.0

Course Description

Industry 4.0 has become mainstream in the industrial economy, especially in recent years. This term, which was born at the beginning of the decade in Germany to name the process of digital transformation of the industry, is currently very present in most of the subsectors that make up the industry. This digital transformation process is mainly based on the application of various enabling and emerging technologies to production processes, new business models and the different services that make up the economic environment of any region, simultaneously increasing its efficiency. This course describes the fundamental aspects and the definition of the Industry 4.0 concept, starting from the description of the historical evolution of the different industrial revolutions, as well as its applications and the advantages and disadvantages derived from its implementation in the industry. Also, it provides the student with the necessary skills to understand how the digital transformation procedure of the industry is being implemented.

Course Objectives and Learning Outcomes

Having successfully completed this course you will be able to:

- Know the evolution of the industry during all its stages.
- Recognize which is the starting point of the fourth industrial revolution and the consequences it generated in the economic and social spheres.
- Analyse the concept of Industry 4.0 and know the integration methods that exist in a connected industry.
- Identify the fundamental aspects of the enabling technologies that make up Industry 4.0.
- Identify the digital transformation process of the industry and know how a smart factory can be structured from the conceptual point of view.
- Know the advantages and disadvantages of Industry 4.0.

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• know the historical evolution of the industry and the socioeconomic consequences of industry 4.0;			✓				✓
• analyse the concept of Industry 4.0 and know the integration methods that exist in a connected industry;	✓			✓			
• identify the digital transformation process of the industry and know how a smart factory can be structured;	✓	✓		✓		✓	
• analyze the pros and cons of the digital transformation of the industry;			✓				✓
• analyze, interpret and evaluate information from the recommended bibliographical references			✓				

• identify personal skills related to different entrepreneurial situations in digital contexts;					✓		
• self-manage the development of learning and study skills, both individually and as part of a collaborative learning group			✓				✓
• work together and cooperate with others to develop ideas and turn them into action				✓		✓	✓
• demonstrate effective communication, persuasion, negotiation and leadership	✓		✓	✓		✓	

Course Design

- Lecture by the teacher (Power Point presentation), on the theoretical contents of the subject taught.
- Readings have to be done before the class. Essential reading material will be provided.
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources (success cases in the process of digital transformation through enabling technologies).
- Computer models will be used to measure the digital maturity of a company (Impuls, Grown 4.0, etc.)
- Activities will be carried out using digital tools, such as real-time quizzes, Kahoot, One Minute Papers, etc.
- During the last class, you will have to deliver a presentation of your case study. A written report, based on this presentation and the feedback received in class, will complete the evaluation for this course. More details will be given in class.
- Private study.

Syllabus

The topics studied in the course:

- Evolution of the industry from the first industrial revolution to the current state, assessing the socioeconomic changes that have been generated in each stage.
- Definition of Industry 4.0.
- Enabling technologies that enable the digital transformation of the industry.
- Industry 4.0 applications.
- Smartization as a way to optimize digital transformation processes.
- Advantages and disadvantages of industry 4.0.

Assignment / Grading

Details will be provided in class.

Readings

Calabrese, A., Dora, M., Levialdi Ghiron, N., Tiburzi, L. (2020). Industry's 4.0 transformation process: how to start, where to aim, what to be aware of. *Production Planning & Control, 1–21,* https://doi.org/10.1080/09537287.2020.1830315

Cugno, M., Castagnoli, R., Büchi, G. (2021). Openness to Industry 4.0 and performance: The impact of barriers and incentives. *Technological Forecasting and Social Change, 168.* https://doi.org/10.1016/j.techfore.2021.120756.

Frank, A. G., Dalenogare, L. S., Ayala, N. F. (2019). Industry 4.0 technologies: Implementation patterns in manufacturing companies. International Journal of Production Economics, Elsevier, vol. 210(C), pages 15–26. https://doi.org/10.1016/j.ijpe.2019.01.004

Khan, A., Turowski, K. (2016). A Perspective on Industry 4.0: From Challenges to Opportunities in Production Systems. Conference: International Conference on Internet of Things and Big Data. DOI:10.5220/0005929704410448.

Nakagawa, E.Y., Antonino, P.O., Schnicke, F., Capilla, R., Kuhn, T., Liggesmeyer, P. (2021). Industry 4.0 Reference Architectures: State of the Art and Future Trends. *Computers & Industrial Engineering, 156,* https://doi.org/10.1016/j.cie.2021.107241.

Popkova, E. G., Ragulina, Y. V., Bogoviz, A. V (2019). *Industry 4.0: Industrial Revolution of the 21st Century.* Studies in Systems, Decision and Control – Springer. https://doi.org/10.1007/978-3-319-94310-7.

Rossit, D. A., Tohmé, F., Frutos, M. (2018). Industry 4.0: Smart Scheduling. *International Journal of Production Research, 57(12), 3802–3813.* https://doi.org/10.1080/00207543.2018.1504248.

Sanghavi, D., Parikh, S., Raj, S. A. (2019), Industry 4.0: tools and implementation. *Management and Production Engineering Review, 10(3), 3–13*, https://doi.org/10.24425/mper.2019.129593.

Schwab, K. (2016). *The Fourth Industrial Revolution*. World Economic Forum. ISBN-13: 978-1-944835-01-9.

Vogelsang K., Packmohr S., Liere-Netheler K., Hoppe U. (2018) Understanding the Transformation Towards Industry 4.0. In: Zdravkovic J., Grabis J., Nurcan S., Stirna J. (eds) *Perspectives in Business Informatics Research. BIR 2018. Lecture Notes in Business Information Processing, 330, 99–112,* Springer, Cham. https://doi.org/10.1007/978-3-319-99951-7_7

Hours

3 hours: 2 contact hours (the classroom teaching) and 1 hour individual study

ENTREPRENEURSHIP IN THE AGE OF SOCIETY 5.0

Course Description

The emergence of digital technologies has unlocked new opportunities for companies and entrepreneurs, leading to the development of Industry 4.0. Today, the digitization also affects public administration and their relationships with citizens. In particular, Digital technologies open the door to new organizational arrangements between public administrations, entrepreneurs, and citizens in giving answers to the urgent social needs posed by climate change and rising social inequalities. Society 5.0, a concept drafted initially by the Japanese Government, to counter global and national challenges through the implementation of digital technologies, encapsulate the idea of a co-production process through which Entrepreneurship can implement a triple bottom line approach. This course provides an insight into the emergence of a new context in which to do business and make positive impact on society. Students will develop an analysis of this entrepreneurial model through the study of a real Case described in the Casebook, gathering additional information online. This course will be of interest to students who plan to develop their own business, or who plan to work in a dynamic enterprise able to make a positive impact on society.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning.

This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• synthesize, analyse, interpret, and evaluate information from a range of sources. Information about the company and the micro and macro context in which the company to do business.	✓		✓	✓			✓
• identify own personal attributes applicable to entrepreneurial situations in this modern era		✓	✓		✓		
• contribute successfully to a peer work group;		✓			✓	✓	
• self-manage the development of learning and study skills, both individually and as part of a collaborative learning group			✓		✓		✓

Course Design / Organization

This may contain examples/references/guidance for the teaching strategy, e.g.:

Readings have to be done before the class. Essential reading (cases study and literature) material will be provided.

The students will be split up into random groups and they will have to carry out a reflection, analysis of data, discussion, and synthesis around a case topic. It will be normal that more groups will work on the same case study. The distribution will depend on the numerosity of the class.

Experimental learning through the analysis, interpretation, and evaluate the information of a national case study.

During the last class, the teams will have to expose in a pitch, a slide presentation of their case study.

The lecture and the laboratory activities support the development of a new entrepreneurship approach based on digital technology and sustainable management, in line with the SDGs and modern Society.

Syllabus

The topics studied in the course:

- Analyse the rise of a new Society, digital and interconnected, and the business opportunity.
- Discovering and analysing the links between Society 5.0 and Humane Entrepreneurship.
- Developing a new business vision, able to capture the value of global and local challenges and how to build Triple bottom line approach upon digital technology.
- Become confident with the process of assessment, evaluation, and analysis of different data, to understand and innovate the business management approach.
- Identify the key actors, resources, and technologies to facilitate a new approach to digital entrepreneurship.
- Understand the digital businesses' role in social and sustainable development.
- Digital businesses' role in social and sustainable development.

Assignment / Grading

Before the lesson, the student be split up into groups (max 5 students) and they must read a case study of the Casebook and are encouraged to read the recommended readings. Students can choice free the case that you want study (when possible, it is preferable to choose a local case). Also, before the lesson, students must communicate the group composition, and the chosen case.

After the lesson, students must analyse the argument discussed, like Digitalization, Society 5.0, Industry 4.0, and Human Entrepreneurship, and develop these points:

- Delve into the strategic approach of your chosen case company, through research on the web: visit the company website and search for more information online.
- Reflect on global and national social challenges that the company faces and could face through its business: try to understand if there are already SDGs the company is facing or if there are SDGs it could face through its business.
- Analyses the role of digital technologies in the promotion of a 5.0 Society, about the company under study: studies how the technologies used in the company, or those that could be used to develop a Human-Centered business.
- To apply design thinking methodology in planning entrepreneurial models compliant with the Triple bottom line approach and Humane Entrepreneurship.
- Analyses the company's business model and tries to develop strategies that, through the use of digital technologies, can introduce at least one SDGs objective into the company.

Students are invited to develop a report and a ppt presentation.

Grading

- Active class participation (40%);
- Group presentation and written report (60%).

Readings

Mandatory:

Parente, R., Vesci, M., & Celenta, R. (2021). Introduction to Industry 4.0 with a contribution on Society 5.0. In Magliocca, P. (Ed.). (2021). Doing business digitally. A textbook (pp. 25-40). Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics.

Optional:

Cabinet Office (Council for Science, Technology and Innovation) (2016) The 5th Science and https://www8.cao.go.jp/cstp/kihonkeikaku/5basicplan_en.pdf

Cabinet Office-Council for Science, Technology, and Innovation, (2017). Comprehensive strategy on science, technology and innovation (STI) for 2017, released on June 2, 2017.

Ferreira, C. & Serpa, S. (2018). Society 5.0 and Social Development: Contributions to a Discussion. Management and Organizational Studies, Vol. 5, No.4.

Parente, R., ElTarabishy, A., Vesci, M., & Botti, A. (2018). The epistemology of humane entrepreneurship: Theory and proposal for future research agenda. Journal of Small Business Management, Vol. 56, No.3.

Parente, R. (2020). Digitalization, Consumer Social Responsibility, and Humane Entrepreneurship: Good news from the future. Journal of the International Council for Small Business, Vol.1, pp. 56-63.

Hours

5 hours: 2 contact hours (the classroom teaching) and 3 hour individual study

DISRUPTIVE TECHNOLOGY

Course Description

How can start-ups disrupt traditional companies? Or: How can successful companies, often market-leaders, be disrupted through technological innovations? What is the process behind disruption? In this course, students will be introduced to the key concepts behind Clayton's Christensen 'Disruptive Innovation Theory'. In particular, students will be able to identify the key characteristics of disruptive technologies, the processes and mechanisms that affect both entrepreneurs as well as incumbent companies.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• identify the characteristics of disruptive technologies				✓			
• Be able to distinguish between "disruptive" and "sustaining" technologies		✓		✓	✓		
• Apply the concepts to a real-case study			✓			✓	✓

Course Design / Organization

- Readings have to be done before the class. Essential reading material will be provided.
- Best practices from industry
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources.

Syllabus

After this course, you will able to:

- Understand the foundations behind Clayton's Christensen 'Disruptive Innovation Theory'
- Distinguish between "disruptive" and "sustaining" technologies
- Explain the characteristics of disruptive innovation
- Elaborate on how incumbents / traditional companies may defend themselves
- Gain an understanding why entrants may have a competitive advantage
- Identify mechanism how to recognize disruptive innovation
- Discuss advantages and drawback of Christensen's theory

Assignment / Grading

Details will be provided in class (case study)

Readings

Christensen, C. M., & Raynor, M. E. (2003). The Innovator's Solution. Boston, MA: Harvard Business School Publishing Corporation.

Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What is disruptive innovation. Harvard Business Review, 93(12), 44-53.

Hours

3 hours: X contact hours (the classroom teaching) and X hour individual study

DIGITAL BUSINESS AND DIGITAL TRANSFORMATION IN BUSINESS

Course Description

The digital revolution is changing the economy and society. The rise of digital technologies is radically transforming products, services, businesses, industries, and people's lives. While digital technologies play a key role in digital transformation, they alone are not central to digital transformation. From a business perspective, the essence is the combination of these technologies along with business logic that can transform a business into a digital business.

Digitalization and digital transformation are seen as a factor in changing the business model as well as the entire business paradigm. Digitalization changes consumers' behavior, and on the supply side, changes the way value is created, which for many products is not tied to their immediate tangible value. The way products and services are created is also changing, the process is no longer linear. Today's enterprises create and operate in vast ecosystems. Therefore, these current trends bring a new paradigm in which traditional and new businesses are redefined, as a result, the business model of traditional businesses is changing, and digital businesses are creating their own business model different from the traditional.

This course provides an overview of the transformation of traditional business caused by digitization and how to run and grow a digital business. Students will identify and design ways to grow a digital business and then present this plan in a business presentation. This course will be of interest to students planning to run or transform a digital business.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• analyze, interpret, and evaluate information from various sources			✓				
• identify attributes applicable to entrepreneurial situations in digital contexts		✓		✓	✓		
• Design a development path for a digital business	✓	✓		✓			
• contribute successfully to a peer work group;						✓	✓
• self-manage the development of learning and study skills, both individually and as part of a collaborative learning group			✓		✓		

Course Design / Organization

- It will be necessary to read the sources before the class. Necessary reading materials will be provided.
- Content will cover the business, directions and models of digital business development
- Best practices from the industry will be presented
- During the class, participants will be divided into random groups and will adapt a business model to a genuine business situation or design a transformation path from traditional to digital business.
- In the last class you will be required to prepare a report and presentation on a case study. More details will be provided in class.
- The class will start with an introductory lecture
- Debate and discussion will take place in class
- Case studies, analysis, interpretation and evaluation of information from various sources will be used during the class.
- Video and internet materials will be used

Syllabus

The topics studied in the course:

- Identifying how businesses operate
- Identifying business models for digital entrepreneurship
- Identifying the development objectives of enterprises
- Matching and designing digital enterprise growth paths
- Designing an enterprise digital transformation path
- Enterprise development in the digital space
- Developing, assessing and evaluating opportunities
- Identifying key resources and technologies to facilitate the development and operation of digital entrepreneurship
- Creating and developing a business report that defines the business area, identifies resources and directions, and presents the business model

Assignment / Grading

Course credit will be based on a business report incorporating the guidelines presented in class. Detailed information will be provided in class.

Readings

Deloitte (2011). The digital workplace: Think, share, do. Transform your employee experience. https://www2.deloitte.com/content/dam/Deloitte/mx/Documents/human-capital/The_digital_workplace.pdf

EnterprisersProject.com (2021). What is digital transformation? Your top questions answered, https://enterprisersproject.com/sites/default/files/what_is_digital_transformation_2020.pdf

Helmy Ismail Abdelaal, M., Khater, M., & Zaki, M. (2018). *Digital Business Transformation and Strategy: What Do We Know So Far?* https://doi.org/10.13140/RG.2.2.36492.62086

Mckinsey (2017). A roadmap for a digital transformation, https://www.mckinsey.com/cl/~/media/ClientLink/A%20Roadmap%20for%20a%20Digital%20Transformation/A-roadmap-for-a-digital-transformation.pdf

Van Alstyne, M., Parker G., Digital Transformation Changes How Companies Create Value, HBR webinar, https://hbr.org/2021/12/digital-transformation-changes-how-companies-create-value

Hours

3 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

OPPORTUNITIES AND THREATS FOR DIGITAL BUSINESS AND DIGITAL ENTREPRENEURSHIP

Course Description

The aim of the course is to present the current stage of digital business and digital entrepreneurship development and to identify key benefits/opportunities as well as threats originating from an increasingly digitised world.

The course consists of three parts. First, the issue of identifying digital business will be briefly discussed and exercised in the context of current business situation and the future development path. This analysis will be based on data from the World Bank, Eurostat, and other specialized databases. Identifying the leading application of digitalisation and presenting the main sectors digital business is expanding, a special emphasis is put on two fields: marketing and healthcare. Digital marketing which allows companies to reach a global audience possesses special importance for small and medium-size firms. In turn, the healthcare sector is increasingly dependent on digital applications.

The second part is devoted to digital entrepreneurship. First, the leading technologies like cloud services, augmented and virtual reality, artificial intelligence and blockchains etc. will be discussed. Second, the impact of these and other digital solutions on entrepreneurship will be examined. This part also provides an overview of digital solutions for the inclusion and participation of people with disabilities in social and working life.

The third part selected existing and potential threats of digital business and digital entrepreneurship will be examined. Threats of digital business and digital entrepreneurship will be discussed in different perspectives: institutional (formal) origin, technological origin and social origin.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• analyze, interpret, and evaluate information from various sources			✓	✓			
• identify attributes applicable to entrepreneurial situations in digital contexts		✓		✓	✓		
• Design a development path for a digital business	✓	✓		✓			
• contribute successfully to a peer work group;						✓	✓
• self-manage the development of learning and study skills			✓		✓		

Course Design / Organization

- It will be necessary to read the sources before the class. Reading materials will be provided.
- Content will address digital business development opportunities and potential threats

- Best practices from the industry will be presented.
- During the class, participants will be divided into randomly selected groups and will identify possible threats and opportunities in the case of a particular business and its chosen growth path
- In the last class you will be required to prepare a report and presentation on a case study.
- More details will be provided in class.
- The class will start with an introductory lecture
- Debate and discussion will take place in class
- Video and internet materials will be used
- Case studies, analysis, interpretation and evaluation of information from various sources will be used during the class.

Syllabus

The topics studied in the course:

- Define what are the pillars of digital business and digital entrepreneurship development.
- Point out key modes of measuring digital business / digital entrepreneurship.
- Identify the current stage of digital business and digital entrepreneurship development
- Identify key benefits as well as threats originating from an increasingly digitized world
- Understand the complexity of digital business and digital transformation.
- Identify the enablers, barriers, and challenges of digital transformation
- Point out some practical examples.
- Creating a business report that identifies and defines Opportunities and threats for digital business and digital entrepreneurship

Assignment / Grading

Course credit will be based on a business report incorporating the guidelines presented in class. Detailed information will be provided in class.

Readings

Deloitte. (2021). What is digital economy? Unicorns, transformation and the internet of things. Deloitte. https://www2.deloitte.com/mt/en/pages/technology/articles/mt-what-is-digital-economy.html, July 12,2021

Jalan, N., & Gupta, V. (2019). Scope, opportunity and challenges to digital entrepreneurship. Conference Paper. Conference: Proceedings of ISER 222nd International Conference, Sydney, Australia.

Pereira, A. G., Lima, T. M., & Charrua-Santos, F. (2020). Industry 4.0 and Society 5.0: Opportunities and Threats. International Journal of Recent Technology and Engineering, 8(5), 3305–3308. https://doi.org/10.35940/ijrte.D8764.018520

Nambisan S (2017) Digital entrepreneurship: toward a digital technology perspective of entrepreneurship. Entrepreneurship Theory Pract 41(6):1029–1055

Recker J, von Briel F (2019) The future of digital entrepreneurship research: existing and emerging opportunities. In: ICIS 2019 Proceedings, Munich, paper 1848

Shen KN, Lindsay V, Xu Y (2018) Digital entrepreneurship. Inf Syst J 28(6):1125–1128

Mckinsey (2017). A roadmap for a digital transformation, https://www.mckinsey.com/cl/~/media/ClientLink/A%20Roadmap%20for%20a%20Digital%20Transformation/A-roadmap-for-a-digital-transformation.pdf

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

DIGITAL INFRASTRUCTURE

Course Description

Infrastructure has always been particularly important in reducing poverty: access to minimum infrastructure services is one of the criteria for determining the well-being of the population. Much of the world's population is still below the poverty line, lacks access to clean water and lives in unsanitary conditions, with extremely limited mobility and communications. Digital technologies of the Fourth Industrial Revolution are becoming the basis of modern society and a universal synonym for digital infrastructure. Digital infrastructure is a complex concept, as it includes cellular infrastructure and satellite networks. Combined with other digital technologies such as personal computers and smartphones, these innovations have changed the daily lives of society and the way we do business around the world. Digital technologies are changing the nature of economic relations, forms of relations between different institutions, areas of digital enterprises. Digital Infrastructure of Industry 4.0 is primarily an infrastructure access to the state-of-the-art trunk and mobile networks, along with a service infrastructure. Today, digital infrastructure is a platform for the development of all spheres of society in any country.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	LO1	LO2	LO3	LO4	LO5	LO6	LO7
On completion of this unit, students should be able to:							
• synthesise, analyse, interpret and evaluate information from a range of sources			✓				
• identify own personal attributes applicable to entrepreneurial situations in digital contexts					✓		
• self-manage the development of learning and study skills, both individually and as part of a collaborative learning group							✓
• select and use effective digital infrastructure tools in practice				✓			
• establish the values, vision, mission, goals and criteria by which the entrepreneur determines the further directions of digital development and entry into digital infrastructure		✓		✓			
• master and learn to work with digital technologies throughout life					✓		
• make, justify and ensure the implementation of management decisions in unpredictable conditions, taking into account the requirements	✓						✓

of law, ethical considerations and social responsibility							

Course Design / Organization

Follow the logic of studying the course as follows:

- Get acquainted with the materials of Chapter 6 "Digital infrastracture" a textbook "Doing business digitally" (see Readings) and other relevant literature on this topic.
- View the prepared presentation for Chapter 6 "Digital infrastracture" and use active links to Internet resources, watch videos, etc.
- Independently find and get acquainted with the practical experience of building digital infrastructure. Based on the obtained data, using both individual (critical thinking, generalization, analysis, etc.) and collective methods (brainstorming, discussion, etc.) to intensify their creative thinking and develop approaches to assess the effectiveness of digital infrastructure management.
- The class is divided into groups of 3-4 people each and work together to solve case problems (DIYA (State and I), Beatik, Delsol, Cargometer and others), presented in a casebook "How to do business in digital era". Answer the questions and discuss in class, reflect.
- In the class, each student independently performs Task 1 (presented in Assignment / Grading) on the level of development of digital infrastructure in a particular country and presents to the audience the results obtained, concludes.
- Each student independently performs Task 2 (presented in Assignment / Grading) to assess the state of digital infrastructure in a particular field of life and in class demonstrates a prepared presentation with a speech, draws a conclusion and answers questions from the audience.

Syllabus

The topics studied in the course:

- Definition of infrastructure
- The essence of digital infrastructure
- The growing role of infrastructure in digital space
- The impact of soft digital infrastructure on digital business
- Opportunities provided by the supporting (“solid”) digital infrastructure for digital entrepreneurship
- Criteria for assessing the level of digital infrastructure development
- Positive and negative consequences of the impact of IoT technology as a structural element of digital infrastructure
- Digital tourism infrastructure and characteristics of tourism business
- Key players, resources and technologies to promote digital infrastructure
- Research teams of researchers, practitioners and socio-technical systems that produce successful digital infrastructure
- The role of digital infrastructure in the socio-economic and sustainable development of entrepreneurship
- Digital infrastructure for environmental protection and ecology: creation and innovative developments
- Digital transformation of medical infrastructure
- Analysis of technologies, products and services of digital infrastructure as innovative trends of entrepreneurship
- FinTech market structure and analysis of its key elements

- Possibilities of digital transformation of enterprises with the help of the latest Blockchain technology
- Socio-economic benefits and threats from digital infrastructure
- The role of the city's Smart Infrastructure for digital business development

Assignment / Grading

One case and practical tasks will be presented for assignment/grading

1. https://ted.uek.krakow.pl/wp-content/uploads/2022/04/Casebook_v.1.pdf case 4 (as a group case study),
2. To look for practical tasks as an individual work.

During activities, you will be split up into random groups and you will have to carry out a reflection, a discussion, and a synthesis around a present topic.

In the course of studying and mastering the course "Digital infrastructure" a number of practical tasks are expected to be performed. More details will be given in class.

During the last class, all together of you (sharing the activities equally) will have to deliver, introduce, and discuss a presentation of your group case study. The feedback received in class, will complete the evaluation for this course. More details will be given in class.

Grading:

1. In class case studies and random groups activities (30%),
2. Individual practical tasks (30%),
3. Group presentation (40%).

Final grading is:
- Excellent (1): 90%–100%
- Good (2): 80%–89%
- Satisfactory (3): 70%–79%
- Sufficient (4): 60%–69%
- Fail (5): <59%

Prerequisite for passing the course: minimum performance of 40% in the final examination.

Readings

Mandatory:

Botti, A., Parente, R. & Vesci, R. (Eds.) (2021). How to do business in digital era? A casebook. Salerno-Cracow: Cracow University of Economics. URL: https://ted.uek.krakow.pl/wp-content/uploads/2021/12/Casebook-31122021.pdf#page=38 (accessed 27 March 2022).

Optional:

Andrusiak, N.O., Kraus, N.M. & Kraus, K.M. (2021). Training in digital entrepreneurship: innovative techniques, technologies, types and techniques. Efficient economy, 2. URL: http://www.economy.nayka.com.ua/?op=1&z=8643 (accessed 27 Jule 2021). https://doi.org/10.32702/2307-2105-2021.2.7.

Kliushnyk, I.A., Kolesnykova, T.O., Shapoval, O.S. (2019). The only digital infrastructure of a modern scientific library based on web-technologies. Science and progress of transport, 1 (79). URL: http://stp.diit.edu.ua/article/view/160434/162288 (accessed 27 Jule 2021).

Kraus, K., Kraus, N. & Pochenchuk, G. (2021). Digital infrastructure in the conditions of virtualization and new quality of economic relations management. Efektyvna ekonomika,

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vol. 9. URL: http://www.economy.nayka.com.ua/?op=1&z=9279 (accessed 05 Oct 2021). https://doi.org/10.32702/2307-2105-2021.9.82.

Magliocca, P. (Ed.) (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics. ISBN 978-83-89410-44-3 URL: https://ted.uek.krakow.pl/wp-content/uploads/2021/12/Textbook-31122021.pdf (accessed 30 March 2022).

Markevych, K. (2021). Smart-infrastructure in sustainable urban development: world experience and prospects of Ukraine. Kyiv: Razumkov Center, Publishing House "Zapovit". 400 p. URL: https://razumkov.org.ua/uploads/other/2021-SMART-%D0%A1YTI-SITE.pdf (accessed 20 Jule 2021).

Smart Sustainable Cities at a Glance (2021). ITU. URL: https://www.itu.int/en/ITU-T/ssc/Pages/info-ssc.aspx (accessed 23 Jule 2021).

Teaching Guidelines for Digital Entrepreneurship, eds. Kateryna Kraus, Nataliia Kraus, Olena Shtepa, Cracow University of Economics, Kiev-Cracow 2021, 76 p. ISBN: 978-83-959463-6-3. URL: https://ted.uek.krakow.pl/output-1-teaching-guidelines/) http://webgate.ec.europa.eu/eac/mobility/systemLayers/5_FE/dist/index.html#/project/272256/view/0 (accessed 23 March 2022).

Zaporozhets, T.V. (2020). Development of digital infrastructures as a factor in bridging digital divide. Public administration: improvement and development, 5. URL: http://www.dy.nayka.com.ua/pdf/5_2020/58.pdf (accessed 24 Jule 2021). https://doi.org/10.32702/2307-2156-2020.5.56.

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

DIGITAL STRATEGY

Course Description

Digitalization often resembles a patchwork of ambitious, but uncoordinated initiatives. The novelty and complexity of the digitalization for organization and management cause difficulties for many players, developing a digital strategy represents a major challenge for companies. Nevertheless, companies need a digital strategy and a digital agenda in order to establish guide rails so that they do not get lost in the jungle of possibilities. Therefore, detailing how to structure, formulate, and implement a Digital Strategy is essential for firm success. A Digital Strategy should provide consistent direction for an organization's online activities and channel integration, thus supporting the overall business objectives and firm's competitive advantage.
In line with the above considerations, this course aims to explore the notion of Digital Strategy, and to investigate how planning, implementing, and managing digital strategies to sustain the business success. In so doing, students will understand the impact of digital disruption and the reasons why both firms and entrepreneurs need a Digital Strategy. Moreover, they will clarify how Digital Strategies align and/or integrate with and support firms' business goals and objectives.

Course Objectives and Learning Outcomes

This course introduces students to the relevance and importance of Digital Revolution and Digital Strategy within the new dynamic environments. Important learning objectives are to increase students' awareness and understanding how support successful firms' strategies. The ultimate intent of the course is to leave students better equipped to design, develop, and manage a Digital Strategy.

Students graduated of this course should develop knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist the students to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Synthesize, analyses, interpret and compare, information from a range of sources	✓						
• Come up with original ideas that have value in different situations		✓					
• Recognize the consequences of choices and actions regarding self, others involved and the community			✓				
• Recognize the main advantages of Internet and its use for strategy; • Define firms' strategic aims and resources, particular referring to the digital environment; • Develop a framework for Digital Strategy formulation and implementation				✓			

• Identify opportunities and threats arising from the digital media and technologies • Detect firms' strengths and weaknesses in answering to the digital change • Select the most effective Digital Strategy among the available options • Successfully implement transformation programmes							
• Develop new personal skills in designing and developing successful decisions in digital environment • Develop personal skills in the field of Digital Strategy					✓		
• Contribute successfully to a peer work group						✓	
• Develop cultural capabilities supporting collaboration and knowledge sharing within multicultural and multi-language team-works							✓

Course Design / Organization

The course will be organized in lessons, discussions of the suggested readings and teams works. Reading materials will be provided during the class. Discussion about specific topics will be carry out during the activities. Students will be invited to present and discuss best practices and empirical evidences. They will be also involved in the design of a successful Digital Strategy in a given industry. A written report and a ppt presentation will be required to the students, as part of their assessment.

Notably, the course will be organized as follow:

- Lectures around the core topics of the course;
- Discussions about additional exploitative readings and materials
- Analysis and Interpretation of case examples and case studies
- Private study
- Presentation and discussion of the students' project work

Use of video and online materials will be also planned to support the achievement of the learning objectives.

Syllabus

The following topics will be examined during the lectures:

- Understanding the impact of digital disruption
- IT vs Digital Strategy
- Level and positioning of Digital Strategies
- The digital strategy formulation process (The external strategic analysis; the internal strategic analysis; setting visions and goals for Digital Strategy; strategic options and strategy formulation)
- The Bowman's strategy clock
- The corporate Digital Strategies (Growth Strategies and Digitalization; Digital Growth Strategies for Platform Firms)

Assignment / Grading

For attending students, the final evaluation will be based on the following:

- Class attendance and student's participation to lectures, and to the planned individual and team works (40% of the final evaluation);
- Development and presentation of a project work (40% of the final evaluation);
- Oral exam about the topics covered during the lectures (20% of the final evaluation)

The final evaluation will be the result of the three previous assessments. The final note will be the result of the three parts. If a student get a note below "sufficient" in one of the planned stage of assessment, He should take a full oral exam about all the topics covered during the course aiming to assess the level of learning achieved by the student himself.

Readings

Mandatory:

Canestrino R., Schiavone F.; Leone, D., "Digital Strategies". In Magliocca, P. (ed.). (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics, pp. 91-112 (ISBN: 978-83-89410-44-3).

Optional:

Additional readings will be suggested during the class.

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

DIGITAL FIRM'S ACTIVITIES

Course Description

This course aims to describe the digital activities implemented by the firms starting with the digital supply chain and its features, and then shifting to the concepts of Digital Marketing and the Customer Relationship Management (CRM) system with the purpose to share and spread the new strategies implemented by the enterprises in order to keep up with times.

As matter of fact, the enterprises have been restructuring both their strategies and operations by taking in account digitalization phenomena, which is influencing the all business world. That is why that the enterprises are getting their operations digital as well as rethinking about its sale strategies with the digital marketing. Moreover, the enterprises have been implementing new technologies like CRM system for satisfying a new type of customer, more demanding and advised, also defined "cyber customer".

This course will start with the digital supply chain and its features, then it will shift to the concepts of Digital Marketing and the CRM system. At the end, it will be explained the essential relationship between these three elements and their mutual influence.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Synthesize, analyses, interpret and compare, information from a range of sources	✓						
• Come up with original ideas that have value in different situations		✓					
• Recognize the consequences of choices and actions regarding self, others involved and the community			✓				
• Recognize the main advantages of digitalization and digital firm's activities • Manage supply chain and be aware how to turn it into digital supply chain • Learn and understand the digital evolutions • Manage digital marketing strategies and instruments • Understand and control the use of CRM systems within firm's reality • Successfully implement digital firm's activities • Develop a digital vision of your firm's activity, knowing where to invest				✓			

and what learn to struggle against the digital evolution							
• Develop new personal skills in designing and developing successful decisions in digital environment • Develop personal skills in the field of Digital firm's Activities					✓		
• Contribute successfully to a peer work group						✓	
• Develop cultural capabilities supporting collaboration and knowledge sharing within multicultural and multi-language team-works							✓

Course Design / Organization

- Readings have to be done before the class. Reading material about traditional activities to be turn it into digital.
- Insights from basic digital and digital firm's activities principles and models.
- Experimental learning using software or knowledge about basic software.
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources.
- Students will be organized to develop group and individual works.
- Work team: during the course, students will be split up into random groups and they will have to carry out a reflection, a discussion, and a synthesis around a present topic.
- Students' presentation: during the last class, students will have to deliver a presentation of their case study. A written report, based on this presentation and the feedback received in class, will complete the evaluation for this course. More details will be given in class.
- Introductory lectures.
- In class, virtual debate and discussion.
- Private study.
- Use of video and online materials.
- Insights from scientific literature.

Syllabus

The topics studied in the course:

- Defining digital firm's activities,
- Literature background from Supply Chain to the Digital Supply Chain,
- The concept of virtual value creation,
- The drivers of Digital Supply Chain,
- Comparison between Digital and Traditional Supply Chain,
- The transformation of the Traditional Supply Chain into Digital,
- The digital marketing. Definition and its components,
- Advantages of the Digital Marketing and Differences between Traditional and Digital Marketing,
- The Customer Relationship Management (CRM),
- CRM types, components and process,

- Advantages of CRM.

Assignment / Grading

Two different cases will be presented for assignment/grading

1. https://ted.uek.krakow.pl/wp-content/uploads/2022/04/Casebook_v.1.pdf case 12 (as a group case study),
2. To look for a case study, as an individual work.

- During activities, you will be split up into random groups and you will have to carry out a reflection, a discussion, and a synthesis around a preset topic.
- During the penultimate lesson, you will have to introduce, explain, and present your individual case study to the teacher and all colleagues. A written report, based on this presentation and the feedback received in class, will complete the assessment for this course. More details will be provided in class.
- During the last class, all together of you (sharing the activities equally) will have to deliver, introduce, and discuss a presentation of your case study. The feedback received in class, will complete the evaluation for this course. More details will be given in class.

Grading:
1. In class case studies and random groups activities (30%),
2. Individual case study presentation and written report (30%),
3. Group presentation (40%).

Final grading is:

- Excellent (1): 90%–100%
- Good (2): 80%–89%
- Satisfactory (3): 70%–79%
- Sufficient (4): 60%–69%
- Fail (5): <59%

Prerequisite for passing the course: minimum performance of 40% in the final examination.

Readings

Mandatory:

Magliocca P., Riefolo M., "Digital firm's activities". In Magliocca, P. (ed.). (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics, pp. 116-133 (ISBN: 978-83-89410-44-3).

Optional:

Accorsi, R., Cholette, S., Manzini, R., & Tufano, A. (2018). A hierarchical data architecture for sustainable food supply chain management and planning. Journal of cleaner production, 203, 1039-1054.

Charoensukmongkol, P., & Sasatanun, P. (2017). Social media use for CRM and business performance satisfaction: The moderating roles of social skills and social media sales intensity. Asia Pacific Management Review, 22(1), 25-34.

Garay-Rondero, C. L., Martinez-Flores, J. L., Smith, N. R., Morales, S. O. C., & Aldrette-Malacara, A. (2020). Digital supply chain model in Industry 4.0. Journal of Manufacturing Technology Management, 31(5), 887-933

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Ghobakhloo, M. (2020). Industry 4.0, digitization, and opportunities for sustainability. Journal of cleaner production, 252, 1-21.

Hopkins, J. L. (2021). An investigation into emerging industry 4.0 technologies as drivers of supply chain innovation in Australia. Computers in Industry, 125, 103323.

Hopp, W. J. (2011). Supply chain science. Waveland Press.

Khlif, H. (2021). Factors for Success in Customer Relationship Management (CRM) Systems. World Academics Journal of Management, 9(1), 16-20.

Mehdouani, K., Missaoui, N., & Ghannouchi, S. A. (2019). An approach for Business Process Improvement Based on Simulation Technique. Procedia Computer Science, 164, 225-232.

Mero, J., Tarkiainen, A., & Tobon, J. (2020). Effectual and causal reasoning in the adoption of marketing automation. Industrial Marketing Management, 86, 212-222.

Yang, M., Fu, M., & Zhang, Z. (2021). The adoption of digital technologies in supply chains: Drivers, process and impact. Technological Forecasting and Social Change, 169, 120795.

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

DIGITAL BUSINESS ECOSYSTEMS

Course Description

This course aims to describe the digital business ecosystem, which is characterized by network interconnections and interactions in the future, will have synergistic effects for digital business. Digital business ecosystem is the key to the success of the effective functioning of digital entrepreneurship, as it allows through network interactions to respond quickly to overcome socio-economic challenges in terms of innovation. Digital transformation of business and its systematic modernization lays the foundation for the formation and development of Industry 5.0 on the basis of digital ecosystem of entrepreneurship. This course provides an overview of the features of digital business ecosystem, in particular using some visual representation. During the study of this section, students will be able to get acquainted with the features of the infrastructure elements and components of digital business ecosystem, the operation of digital platforms, areas of ecosystem functionality (Value Chain, Innovators, Incubation, Experience and Testing). As a result of studying this topic, students will get acquainted with the visualization of digital business ecosystem through the prism of augmented and virtual reality.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Develop the infrastructure of digital business ecosystem	✓			✓			
• Find out the competitiveness and benefits of digital business ecosystem	✓			✓			
• Investigate the experience of some institutions of digital business ecosystems	✓	✓			✓		
• Describe digital platforms and areas of operation of digital business ecosystems				✓	✓		
• Consider digital business ecosystems through the prism of different realities	✓	✓		✓			
• Visualize digital business of augmented reality space	✓	✓		✓	✓		
• Identify innovative changes in ecosystem enterprises in the context of digitalization	✓			✓	✓		

Course Design / Organization

This may contain examples/references/guidance for the teaching strategy, e.g.:

- Readings have to be done before the class. Reading material about traditional activities to be turn it into digital.
- Insights from basic digital business ecosystem.
- Experimental learning using software.
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources.
- Students will be organized in groups in order to carry out a discussion around the present topic.
- Students are required to prepare a report and presentation on a case study. More details will be given in class.
- Introductory lectures.
- Debate and discussion will take place in class.
- Private study.
- Video and online materials will be used.
- Reading scientific literature.

Syllabus

The topics studied in the course:

- Defining ecosystem
- Defining digital ecosystem
- Analysis of structural elements of the digital business ecosystem
- Institutes of digital business ecosystem development and features of their functioning
- Competitiveness conditions and benefits for enterprises operating in the digital ecosystem
- Criteria for successful operation of digital ecosystems and digital enterprises
- Analysis of the experience of digital ecosystems of post-industrial countries
- Key players in digital platforms and areas of digital ecosystems
- Factors of technological evolution of business ecosystems into digital
- Network interactions of digital ecosystems and synergy effects for digital entrepreneurship
- Principles of digital enterprises operating in the structure of digital ecosystems
- Types of realities that determine the features of digital ecosystems
- Stages of transformation of digital technologies by enterprises of digital ecosystem

Assignment / Grading

Course credit will be based on a business report incorporating the guidelines presented in class. Details information will be provided in class.

Readings

Mandatory:

Kraus, K., Kraus, N., Shtepa, O., “Digital Business Ecosystems”. In Magliocca, P. (ed.). (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics, pp. 134-154 (ISBN: 978-83-89410-44-3).

Kraus, K., Kraus, N., Shtepa, O., “Diya.Business”; “Monobank-Ukrainian virtual bank”. In Botti, A. (ed.). (2021). How to do business in digital era? A casebook. Salerno-Cracow: Małopolska School of Public Administration, Cracow University of Economics, pp. 32-42 (ISBN: 978-83-89410-44-3).

Optional:

Babkina, A.V. (2017). Digital transformation of economy and industry: problems and prospects. *St. Petersburg: Polytechnic University Publishing House.*

Kupriianovskii, V.P. (2017). Digital supply chains and blockchain-based technologies in a collaborative economy. *International journal of open information technologies,* 5 (8). 80–95.

Landscape Industry 4.0 in Ukraine (2019). *Analytical review of innovators and the state of innovation in Ukraine in the field of Industry 4.0.* Reference edition. APPAU. Kyiv.

Shtepa, O.V., Kraus, K.M. & Kraus, N.M. (2021). Formation of the X.0 industry on the basis of digital entrepreneurship in the conditions of innovation of economic relations in gig economy. *Efficient economy,* 7. URL: http://www.economy.nayka.com.ua/?op=1&z=9042 (accessed 27 Jule 2021).

Senyo, P.K., Liu, K. & Effah, J. (2019). Unpacking the role of political-will in digital business ecosystem development for socioeconomic benefits. Association for Information Systems AIS Electronic Library (AISeL): *27 European Conference on Information Systems (ECIS2019),* Stockholm-Uppsala, Sweden. URL: https://aisel.aisnet.org/ecis2019_rp/22 (accessed 15 November 2021).

Senyo, P.K., Liu, K. & Effah, J. (2019). Digital business ecosystem: literature review and a framework for future research. *International Journal of Information Management,* 47, 52–64.

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

DEVELOPING SUCCESS DIGITAL VENTURE: RESOURCE AND COMPETENCE ANALYSIS

Course Description

Digital entrepreneurship is broadly defined as the pursuing of "new venture opportunities presented by new media and internet technologies. In the digital age, business opportunities are growing dramatically, radically transforming entrepreneurs and firms. In fact, digital entrepreneurship is not limited to how perform the business, but it involves all processes of an organisation holistically. Organizations are done by people, so digital entrepreneurship requires people adopting a digital entrepreneurial mindset. In addition, the specific characteristic of digital ventures suggests analysing resources and competences. The chapter focus on competencies enabling digital venture and, more specifically, it deals with entrepreneurial competencies and entrepreneurial digital competencies (EDCs). For this reason, the chapter discusses about knowledge and skills required to search and acquire new information, as about ICT competencies, such as technological capabilities used to build the technology infrastructure and to integrate business processes and build a brand's community. Moreover, in line with the Resource-Based View (RBV), every firm need to develop resources and dynamic capabilities, which are the firm's ability to integrate, build, and reconfigure internal competences to address, or in some cases to bring about, changes in the business environment. Starting from these premises, the aim of the chapter is to qualify the digital entrepreneurial mindset analysing resources and competencies necessary for the creation of a digital venture.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and technological competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Identify elements that characterize the digital entrepreneurial mindset				✓			
• Identify how technological trends that contribute to the digital entrepreneurial mindset generate entrepreneurial opportunities in digital entrepreneurship		✓		✓			
• Identify and define the set of resources and capabilities to support the development of entrepreneurial opportunities in the digital context					✓		
• Define and identify the main dynamic capabilities in the context of digital entrepreneurship		✓		✓			

Course Design / Organization

- Readings have to be done before the class. Essential reading material about RBV and Entrepreneurial mindset will be provided.
- Presentation of the content of the course.
- Laboratory project: The student will be divided in groups to analyze some technological trends and their impact on the emergence of digital business opportunities.
- During the last class, the teams will prepare and discuss in a pitch the main results of their project.
- Case examples and case studies.

Syllabus

The topics studied in the course:

- Defining Digital Entrepreneurial Mindset
- Analyze Technological Phenomena implementing digital mindset
- Analyze the set of resources and capabilities to support the development of entrepreneurial opportunities in the digital context
- Define and identify the main dynamic capabilities in the context of digital entrepreneurship.

Assignment / Grading

Before class, students have to read the chapter and are encouraged to read the recommended readings.

In Class students will have the opportunity:

- Step I: to reflect about mindset able to intercept digital entrepreneurial opportunities;
- Step II: to discuss about technological trends and their impact on entrepreneurship;
- Step III: To reflect about resources and competences necessary in a digital context.

During the course a laboratory project will be realized. The student will be divided in groups to analyze some technological trends and their impact on the emergence of digital business opportunities. During the last class, the teams will prepare and discuss in a pitch the main results of their project.

For attending students, the final evaluation will be based on the following:

Class attendance and student's participation to lectures, and to the planned team works (30% of the final evaluation);

Oral exam about the topics covered during the lectures (70% of the final evaluation).

Readings

Mandatory:

Botti, A., Crudele, C., Feola, R., Monda, A. (2021). Developing successful digital venture: resources and competences analysis. In Magliocca, P. (Ed.). (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics. ISBN 978-83-89410-44-3 (pp. 154-172).

Optional:

Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. Journal of Management, 27, 755-775.

Soltanifar M., Hughes M., Göcke L. (Eds) (2021), Digital Entrepreneurship. Impact on Business and Society, Springer, Cham (CH).

Teece, D.J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28 (13), 1319 -1350.

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study.

THE BUILDING BLOCKS FOR HIGH-PERFORMING DIGITAL ENTERPRISES

Course Description

Since technological changes and digitalization have become increasingly important, business are accelerating their transformation, leveraging digital tools to create new processes, services, products, and business models. Unfortunately, not all digital transformation initiatives get their goals, and the 70% fail in doing that. The reason is quite simple: managing transformation is not easy. The technology is important, but both organization (operating model, processes, and culture) and the human dimension (people knowledge; competences; value and beliefs) are crucial to get success, since organizational routines and embedded behaviors may be an obstacle to change. In line with the mentioned considerations, this course aims to detail the building supporting firm's development and scale of digital offering and explore how they may be managed to get success. In so doing, a capability-based perspective will be provided to better clarify the extent to which new skills and competences are crucial for the effectiveness of any organizational transformation and cultural change. Notable, *digital sensing*, *digital seizing*, and *digital transforming* capabilities will be examined to understand how firms modify their internal resources, processes, and structures, in order to adapt to changing environment.

Course Objectives and Learning Outcomes

This course introduces students to pillars of successful digital transformation, as well as to the risk of failures arising from the lack of competences in managing organizational transformation. Important learning objectives are:

- Recognize the different building blocks for creating a high-performing digital enterprise and how they may be developed within firms to get success;
- Identify the firms' capabilities and their linkage with each block of the model
- Employ the model in practice

The ultimate intent of the course is to leave students better equipped to design and manage a successful Digital Transformation.

Students graduated of this course should develop knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist the students to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Synthesize, analyses, interpret and compare, information from a range of sources	✓						
• Come up with original ideas that have value in different situations		✓					
• Recognize the consequences of choices and actions regarding self, others involved and the community			✓				
• Recognize the different building blocks for creating a high-performing digital enterprise and how they may be developed within firms to get success;				✓			

• Identify the firms' capabilities and their linkage with each block of the model • Employ the model in practice							
• Develop new personal skills in designing and developing successful decisions in digital environment • Develop personal skills in the field of digital environment					✓		
• Contribute successfully to a peer work group						✓	
• Develop cultural capabilities supporting collaboration and knowledge sharing within multicultural and multi-language team-works							✓

Course Design / Organization

The course will be organized in lessons, discussions of the suggested readings and teams works. Reading materials will be provided during the class. Discussion about specific topics will be carry out during the activities. Students will be invited to present and discuss best practices and empirical evidences. They will be also involved in the identification of the six building block of successful Digital Strategy in a selected sample of companies. In class participation and students' presentation and discussion will be part of their assessment.

Notably, the course will be organized as follow:

- Lectures around the core topics of the course
- Discussions about additional exploitative readings and materials
- Analysis and Interpretation of case examples and case studies
- Private study
- Presentation and discussion of the students' team works

Use of video and online materials will be also planned to support the achievement of the learning objectives.

Syllabus

The following topics will be examined during the lectures:

- How Creating High – performing Digital Enterprises (Strategy and Innovation; The customer decision journey; Process Automation; Organization; Technology; Data and Analytics)
- From the Digital Building Blocks to the Digital Capability Framework

Assignment / Grading

For attending students, the final evaluation will be based on the following:

- Class attendance and student's participation to lectures, and to the planned individual and team works (40% of the final evaluation);
- Oral exam about the topics covered during the lectures (60% of the final evaluation)

The final evaluation will be the result of the two previous assessments. The final note will be the result of the two parts. If a student get a note below "sufficient" in one of the planned stage of assessment, He should take a full oral exam about all the topics covered during the course aiming to assess the level of learning achieved by the student himself.

Readings

Mandatory:

Canestrino R., Schiavone F.; Leone, D., "The six Building Blocks for creating high-performing Digital Enterprises". In Magliocca, P. (ed.). (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics, pp. 168-179 (ISBN: 978-83-89410-44-3).

Optional:

Additional readings will be suggested during the class.

Hours

2 hours: 1 contact hours (the classroom teaching) and 1 hour individual study

BUSINESS MODEL INNOVATION

Course Description

The digital era is radically changing our societies and how firms do business. New competitive contexts, network dynamics and digitalization represent a continuous stimulus to renew the sources of competitive advantage. Under such circumstances, scholars developed new frameworks and practices to capture the complex interrelationship between the value creation and value appropriation, and to understand the dynamics lying under the process. Within this framework designing and managing innovative business model has become crucial to survive the competition. Business Model Innovation (BMI) supports firms' capability to innovate by involving the set of players acting in the wide ecosystem for value creation, thus emphasizing the relevance of boundary resources and boundary management. Notably, the speed of the technological changes disclosed the relevance of resources, which are neither internal nor external, to reach competitive advantage. These resources are usually intangible assets - corporate image, social capital, management relationship skills – and be physiologically placed in the boundary area, and should be managed in the most effective way to consistently trigger innovation and market expansion. In line with the mentioned considerations, this course aims to detail the notion of BMI and boundaries management to explore how boundary resources may be managed to get firm's success.

Course Objectives and Learning Outcomes

This course introduces students to the notion of Business Model Innovation (BMI) as a crucial capability to survive competition. Since the BMI involves the redefinition of the business model developed by the firms, students will be required to identify "who" (customers), "what" (products/processes) and "how" traditional business model may be re-shaped to achieve firms' competitiveness.

The ultimate intent of the course is to leave students better equipped to identify and manage resources, particularly referring to the boundary resources, to develop new successful business model.

Students graduated of this course should develop knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist the students to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Synthesize, analyses, interpret and compare, information from a range of sources	✓						
• Come up with original ideas that have value in different situations		✓					
• Recognize the consequences of choices and actions regarding self, others involved and the community			✓				
• Analyze the construct of Business Model Innovation (BMI) in the new digital landscape;				✓			

• Identify and manage the relevant resources in the boundary area and take care of their management; • Understand the key role of boundary management capabilities to implement new BMI; • Successfully exploit the opportunities offered by the new digital technologies by creating more innovative and co-creational business models; • Examine the interplay among innovative business model, digitalization and boundary management; • Adopt a future looking perspective in implementing successful BMI, considering the fundamental challenges to face on digital transformation							
• Develop new personal skills in designing and developing successful decisions in digital environment • Develop personal skills in the field of boundary management					✓		
• Contribute successfully to a peer work group						✓	
• Develop cultural capabilities supporting collaboration and knowledge sharing within multicultural and multi-language team-works							✓

Course Design / Organization

The course will be organized in lessons, discussions of the suggested readings and team works. Reading materials will be provided during the class. Discussion about specific topics will be carry out during the activities. Students will be invited to present and discuss best practices and empirical evidences. In class participation and students' presentation and discussion will be part of their assessment.

Notably, the course will be organized as follow:

- Lectures around the core topics of the course
- Discussions about additional exploitative readings and materials
- Analysis and Interpretation of case examples and case studies
- Private study
- Presentation and discussion of the students' team works

Use of video and online materials will be also planned to support the achievement of the learning objectives.

Syllabus

The following topics will be examined during the lectures:

- The interplay among innovative business model, digitalization and boundary management;
- The construction of Business Model Innovation (BMI) exploiting the opportunities and challenges in the new digital landscape;
- Identify the relevant resources in the boundary area and take care of their management by creating more innovative and co-creational business models.

Assignment / Grading

For attending students, the final evaluation will be based on the following:

- Class attendance and student's participation to lectures, and to the planned individual and team works (40% of the final evaluation);
- Oral exam about the topics covered during the lectures (60% of the final evaluation)

The final evaluation will be the result of the two previous assessments. The final note will be the result of the two parts. If a student get a note below "sufficient" in one of the planned stage of assessment, He should take a full oral exam about all the topics covered during the course aiming to assess the level of learning achieved by the student himself.

Readings

Mandatory:

Garzella S., Fiorentino R., Capurro R. Business Model Innovation in the Digital Landscape, In Magliocca, P. (ed.). (2021). Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics, pp. 185-202 (ISBN: 978-83-89410-44-3).

Optional:

Additional readings will be suggested during the class.

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

DIGITAL BUSINESS PLAN AND STARTUPS

Course Description

The emergence of the digital economy has unlocked new opportunities for entrepreneurs, leading to the creation of new business models, innovations and value in data driven sectors. Entrepreneurs have been particularly keen to locate opportunities where digital business models can be created to unleash disruptive innovation, with serial venturing teams becoming digital entrepreneurs. Considerable wealth has been accumulated through digital entrepreneurship, but developing successful and sustainable ventures is a complex task. In this course, students will learn not only the key characteristics of start-ups, but also how to develop a business idea for a digital enterprise. This course will be of interest to students planning on developing their own enterprise, or who intend on working in dynamic, digital businesses.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• apply the key concepts of a business plan			✓				
• identify own personal attributes applicable to entrepreneurial situations in digital contexts		✓			✓		
• contribute successfully to a peer work group;	✓					✓	
• self-manage the development of learning and study skills, both individually and as part of a collaborative learning group			✓			✓	✓

Course Design / Organization

This may contain examples/references/guidance for the teaching strategy, e.g.:

- Readings have to be done before the class. Essential reading material will be provided.
- Best practices from industry
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources.
- During activities, you will be split into random groups and you will have to carry out a reflection, a discussion and a synthesis around a digital enterprise.
- During the last class, you will have to deliver a presentation of your business idea.

Syllabus

In this course, students will learn:

- The key concepts of a business plan

- Understand the need for business plans in a digital world
- How to write a business plan
- The key characteristics of start-up ventures
- Insights into the financing possibilities for start-ups
- Overview of the life-cycle of start-ups

Assignment / Grading

You are required to conceptualize, identify and describe a new venture and provide a maximum of 15 PowerPoint slides to be used as a sales pitch to potential investors in a maximum 20-minute presentation. You can choose any sector/category, but your venture must be related to a digital environment.

Readings

Kuratko, D. F. (2016). Entrepreneurship: Theory, Process, and Practice. Cengage learning.

Morabito, V. (2022). Digital Entrepreneurship: Management, Systems and Practice. Cambridge University Press.

Hours

3 hours: 2 contact hours (the classroom teaching) and 1 hour individual study

DIGITAL ENTREPRENEURSHIP: BEST PRACTICES FOR SUCCESS

Course Description

The predominance of innovations in technology, digital platforms and infrastructure has led to a new challenge for entrepreneurship: digital entrepreneurship. This kind of entrepreneurship concerns the creation of new firms or as the transformation of existing business by developing novel digital technologies and/or novel usage of such technologies. Doing business digitally involves both implementing innovative behaviors (e.g., the introduction of a new technology), such as integrate the digitalization in the long-term strategy, avoiding the trap of the lack of clear vision or the spot-reaction to a temporary market exigency or to customer expectations. An important consideration correlated with this broad theme arise in the impossibility to delimit a battery of best practices or models that are tout court applicable to all types of businesses ignoring their life cycle. Considering the premise highlighted, this course investigates the different best practices useful for start-ups and mature firms by assuming that both types engage with Business Model Innovation. However, differentiating along the firm life cycle allows us to consider multiple theoretical insights that are tailored for start-ups and mature firms. For the former, Lean Startup Approaches and Agile Development will be considered. For the latter, Digital Inertia and Culture Changes will be employed in the analysis of the best practices.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Synthesize, analyses, interpret and compare, information from a range of sources	✓						
• Come up with original ideas that have value in different situations		✓				✓	
• Recognize the consequences of choices and actions regarding self, others involved and the community				✓			✓
• Explore some salient traits of the Digital Entrepreneurship • Clarify the infusion of Digital Technologies in Entrepreneurship research fields • Describe the Digital Entrepreneurship along the firm's life cycle • Give some details regarding the most common managerial approaches followed in both a startup and a mature firm				✓	✓		✓

• Defining the cultural changes with respect to the digital context • Successfully handle an entrepreneurial ecosystem • Identify the most relevant issues in the definition of an open governance path • Implement a successful business idea in a digitized world							
• Develop new personal skills in designing and developing successful decisions in digital environment • Develop personal skills in the field of Digital Entrepreneurship					✓		
• Contribute successfully to a peer work group						✓	
• Develop cultural capabilities supporting collaboration and knowledge sharing within multicultural and multi-language team-works							✓

Course Design

This may contain examples/references/guidance for the teaching strategy, e.g.:

- Readings have to be done before the class. Propaedeutic reading material will be provided.
- Insights from basic Digital Entrepreneurship principles and models
- Best practices from digital firms
- Case examples and case studies, analyze, interpret, and evaluate information from a range of sources.
- Work team: during the course, students will be split up into random groups and they will have to carry out a reflection, a discussion, and a synthesis around a present topic.
- Students' presentation: during the last class, students will have to deliver a presentation of their case study. A written report, based on this presentation and the feedback received in class, will complete the evaluation for this course. More details will be given in class.
- Introductory lectures
- In class, virtual debate, and discussion
- Individual study
- Use of video and online materials
- Insights from scientific literature

Syllabus

The following topics will be examined during the lectures:

- Defining digital entrepreneurship
- The digitalization' consequences on entrepreneurial initiatives
- The three growth horizons of the digitization process
- Digital entrepreneurship along firm's cycle: distinction between startup and mature firms
- Theoretical insights used in the analysis of best practices in managing startups: Lean Startup and Agile Development

- Theoretical insights used in the analysis of best practices in managing mature firms: Digital Inertia and Culture Changes
- The different stages regarding the infusion of digital technologies in the entrepreneurial processes
- A framework for the examination of digital entrepreneurship
- Determinants of the success: create an entrepreneurial ecosystem and Business Model Innovation (BMI)

Assignment / Grading

Two different cases will be presented for assignment/grading

- https://ted.uek.krakow.pl/wp-content/uploads/2022/04/Casebook_v.1.pdf case 12 (as a group case study),
- To look for a case study, as an individual work.

• During activities, you will be split up into random groups and you will have to carry out a reflection, a discussion, and a synthesis around a preset topic.

• During the penultimate lesson, you will have to introduce, explain, and present your individual case study to the teacher and all colleagues. A written report, based on this presentation and the feedback received in class, will complete the assessment for this course. More details will be provided in class.

• During the last class, all together of you (sharing the activities equally) will have to deliver, introduce, and discuss a presentation of your case study. The feedback received in class, will complete the evaluation for this course. More details will be given in class.

Grading:
1. In class case studies and random groups activities (30%),
2. Individual case study presentation and written report (30%),
3. Group presentation (40%).

Final grading is:
- Excellent (1): 90%–100%
- Good (2): 80%–89%
- Satisfactory (3): 70%–79%
- Sufficient (4): 60%–69%
- Fail (5): <59%

Prerequisite for passing the course: minimum performance of 40% in the final examination.

Readings

Mandatory:

Cirillo A., Corvino A., Intenza M., Magliocca P. (2021) Digital Entrepreneurship: Best Practices For Success. In Magliocca, P. (Ed.), Doing business digitally. A textbook. Foggia-Cracow: Małopolska School of Public Administration, Cracow University of Economics. ISBN 978-83-89410-44-3.

Optional:

Chesbrough, H. (2019). Open innovation results: Going beyond the hype and getting down to business. Oxford: Oxford University Press.

Ghezzi, A. (2020). How Entrepreneurs make sense of Lean Startup Approaches: Business Models as cognitive lenses to generate fast and frugal Heuristics. Technological Forecasting and Social Change, 161, 120324.

Ghezzi, A., & Cavallo, A. (2020). Agile business model innovation in digital entrepreneurship: Lean startup approaches. Journal of Business Research, 110, 519–537. https://doi.org/10.1016/j.jbusres.2018.06.013

Soltanifar, M., Hughes, M., & Göcke, L. (2021). Digital entrepreneurship: impact on business and society. Springer Nature. https://doi.org/10.1007/978-3-030-53914-6

Hours

4 hours: 3 contact hours (the classroom teaching) and 1 hour individual study

SOCIOMATERIALITY AND DIGITALIZATION

Course Description

The rise of new technology caused work automation and increased digitalization. These phenomena appeared in certain organizational setting with humans being involved in interaction with technology. It was observed that the tool used can influence behaviour of its user. For digital technology, often being complex, quickly responding to users' requests, information impacts behavior which impacts the material work environment etc. Therefore awareness of its relations and perception of difficulties to separate analysis of workers from technology, allows to embrace such routines as a whole, entanglement of human and non-human agency. This course provides insights into the interdependence of human and material world created during working with digital tools, brings closer social theories explaining how reality is changing. Students will understand how such relations between digital technology user and technology itself change them, what results can appeared delivers new situations. This topic will be of interest to students using digital technology on their daily basis, as well as planning to use them in professional life.

Course Objectives and Learning Outcomes

As a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• Identify and understand the impact of technology into personal and organizational routines				✓	✓		
• Explain how technology can impact business practices on organizational practices,	✓						
• To identify the consequences of mutual inferences of human and non-human factors			✓				✓
• To work in group and present the results						✓	✓

Course Design / Organization

- Readings have to be done before the class. Essential reading material will be provided.
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources.
- During activities, you will be split up into random groups and you will have to carry out a reflection, a discussion and a synthesis around a present topic.
- During the last class, you will have to deliver a presentation of your case study. A written report, based on this presentation and the feedback received in class, will complete the evaluation for this course. More details will be given in class.
- In class, virtual debate and discussion
- Use of video and online materials

Syllabus

- Defining sociomateriality
- Defining Digital artifacts
- Theories explaining impact of digitalization on organizational practices
- Examples of interactions among human and digital technology
- Influence of information technology on company's performance and vice versa

Assignment / Grading

- Class attendance and student's participation to lectures, and to the planned individual and team works (40% of the final evaluation).
- Development and presentation of a project work (40% of the final evaluation).

Readings

Mandatory:

Ćwiklicki M., Mirzyńska A., Pilch K. (2021), Sociomateriality and Digitalization, In: P. Magliocca (ed). Doing Business Digitally. Textbook. Pp. 226-235 Foggia-Cracow, 2021.

Optional:

Hultin, L. (2019). On becoming a sociomaterial researcher: Exploring epistemological practices grounded in a relational, performative ontology. Information and Organization, 29(2), 91–104. https://doi.org/10.1016/j.infoandorg.2019.04.004

Hours

3 hours: 2 contact hours (the classroom teaching) and 1 hour individual study.

SKILLS FOR DISRUPTIVE DIGITAL BUSINESS: A TALENT MANAGEMENT APPROACH

Course Description

IT-based companies operate in a turbulent environment, which means that the employees of this type of company face a very intense and frenetic workload. In these environments, managing the talent of employees and detecting their capabilities and knowledge in order to develop them or generate new ones is a source of competitive advantage. But there are several models of TM, and each of them is particularly interesting in its use associated with the way companies compete especially in the case of ITbased companies. This course focuses on this issue, and analyzes TM in IT-based companies, as well as the management of the skills and knowledge that are necessary in the new disruptive digital businesses. To do this, a tour is made of the concept of Talent, Talent Management and the various phases that comprise it. Different types of TM models are also shown: External Talent Capture model, Internal Talent Development model and Accelerated Internal Talent Development model (Fast-track Internal Talent Development model). These models are contextualized in the case of disruptive IT-based businesses. In addition, associated with the phases of TM and development models, it is related which skills and knowledge are necessary in disruptive digital businesses and the management that the TM process should perform of these skills and knowledge.

Course Objectives and Learning Outcomes

After this course, you will able to:

- Understand the concepts of Talent and Talent Management.
- Identify the phases associated with the Talent Management process.
- Identify the Talent Management models and their relationship with the competitive strategy used by the company.
- To know how the different Talent Management models can be used in knowledge intensive companies (KIF) with disruptive digital business models, and how depending on the moment of their life cycle this type of companies will use one model or another.
- To know the capabilities and knowledge that KIF with disruptive digital business models should consider in their Talent Management processes.

On the other hand, as a student graduate of this course, you will have developed knowledge, skills and social competences that are essential for gaining employment and advancing lifelong learning. This course refers to them as Learning Outcomes (LO) and identifies them as follows: LO1 Intellectual rigor, LO2 Creativity, LO3 Ethical practice, LO4 Knowledge of a discipline, LO5 Lifelong learning, LO6 Communication and social skills, LO7 Cultural competence.

This course will assist you to develop the following learning outcomes:

Learning outcome for this course	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
On completion of this unit, students should be able to:							
• know the concepts of Talent, Talent Management, Talent Management models and their association with the competitive strategy of companies with disruptive digital models	✓			✓			

• identify the best Talent Management model to apply in a disruptive digital business, according to the moment of time in which it is located	✓			✓			
• know and manage the skills and knowledge needed in people in the context of disruptive digital business models	✓			✓			
• synthesise, analyse, interpret and evaluate information from a range of sources		✓	✓	✓			
• identify own personal attributes (skills and knowelled) applicable to entrepreneurial situations in digital contexts	✓			✓	✓		✓
• contribute successfully to a peer work group	✓				✓	✓	✓
• self-manage the development of learning and study skills, both individually and as part of a collaborative learning group	✓		✓		✓	✓	✓

Course Design / Organization

- Lecture by the teacher (Power Point presentation), on the theoretical contents of the subject taught.
- Use of video and online materials related to contents and/or case studies.
- Introductory classes. Readings must be done before class. Essential reading material will be provided.
- Case examples and case studies, analyze, interpret and evaluate information from a range of sources.
- During the activities, you will be divided into random groups and will be required to engage in reflection, debate and synthesis around a current topic.
- In class, debate and discussion
- During the last class, you will have to make a presentation of your case study. A written report, based on this presentation and the comments received in class, will complete the evaluation of this course. More details will be provided in class.
- Private Study.

Syllabus

The topics studied in the course:

- Defining Talent
- Defining Talent Management
- Know the phases of a Talent Management process
- Identify the different existing Talent Management models.
- To associate talent management models with the competitive strategy of companies.
- Identify which talent management model is best for a disruptive digital business depending on the moment of time in which the company is, and why.
- To know the skills and knowledge that people working in disruptive digital businesses must have, to provide success to their companies.

- Identify in case studies the talent management models used and the advantages they bring to companies.
- Work in groups and communicate and defend ideas

Assignment / Grading

- Class attendance and student's participation to lectures, and to the planned individual and team works (40% of the final evaluation).
- Development and presentation of a project work (40% of the final evaluation).

Readings

Mandatory:

Maqueira, J.M., Moyano-Fuentes, J., Bruque-Cámara, S. and Núñez-Cacho, P. (2021). Case2: The leadership of Information Technology suppliers and the role of advanced people management practices in digitization; The case of DELSOL Software. In Botti, A., Parente, R. and Vesci, M. (editores) (2021) How to do business in digital era? Casebook, Małopolska School of Public Administration, Cracow University of Economics, Cracow, Poland, pp. 18-22.

Optional:

Maqueira, J.M., Bruque, S., and Uhrin, A. (2019). Talent management: two pathways to glory? Lessons from the sports arena. Employee Relations, 41(1), 34-51.

Maqueira, J.M., Núñez-Cacho, P., Fernández-Menéndez, J. and Minguela-Rata, B. (2022). Fast-track talent to compete in the short term. Looking at the soccer mirror: Atlético de Madrid FC versus FC Barcelona. Managerial and Decision Economics, (in press).

Hours

3 hours: 2 contact hours (the classroom teaching) and 1 hour individual study.

UNIWERSYTET EKONOMICZNY W KRAKOWIE

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