



## Project “Enhancing capacity of universities to initiate and to participate in clusters development on innovation and sustainability principles” (UniClaD)

Program Erasmus +, projectKA2 n° 609944-EPP-1-2019-1-LT-EPPKA2-CBHE-JP

### Entrepreneurship in innovative milieu

#### Azerbaijan Technical University

#### 1. Learning outcomes of the whole course

*“Entrepreneurship rests on a theory of economy and society. The theory sees change as normal and indeed as healthy. And it sees the major task in society - and especially in the economy - as doing something different rather than doing better what is already being done. That is basically what Say, two hundred years ago, meant when he coined the term entrepreneur. It was intended as a manifesto and as a declaration of dissent: the entrepreneur upsets and disorganizes. As Joseph Schumpeter formulated it, his task is “creative destruction.”*

#### Need for this course:

- Businesses need more agile and flexible human resources that are capable to promote, generate and adopt innovations, transfer them into business and operate businesses in a sustainable manner
- Businesses today are more dynamic and transformative and human resources needs to understand ongoing progress in the innovation world and follow them tensely and make quick decisions for adoption of them.
- The surveys among the engineering students of previous years shows that they are in need for specific knowledge on entrepreneurship that would enhance their capacity and competencies to understand trends on technology development and guide them to alignment with this development within the industries and enterprises.

#### Learning Objectives:

- Develop an overall understanding of Entrepreneurship and new venture processes
- Develop core concept and principles of innovation driven entrepreneurship
- Develop analytical tools to be able to analyze entrepreneurship and innovation capacity of current business, and identify new business opportunities
- Develop management skills to be able to run current and new ventures
- Develop product development skills to be able to create new business values
- Develop Business plan writing
- Develop capacities that would lead intrapreneurship and social entrepreneurship
- Look at innovation and new business creation in its context; both at local, national or even global level.



## Competencies

The students will be able to acquire the following competencies upon completion of the course:

- Identify business needs and new business opportunities;
- Identify and assess entrepreneurial opportunities in emerging markets and innovative fields;
- Generate and apply creative solutions to complex problems in entrepreneurial ventures;
- Make informed, strategic decisions within an uncertain and fast-paced environment;
- Identify and acquire necessary resources (capital, talent, technology) to successfully launch and scale an entrepreneurial venture;
- Lead and manage teams effectively in an entrepreneurial setting, fostering creativity and collaboration;
- Understand and navigate innovation ecosystems, including incubators, accelerators, venture capital, and corporate partnerships;
- Adapt to challenges, setbacks, and changes in the entrepreneurial journey, while maintaining focus and flexibility;
- Understand the ethical, legal, and regulatory challenges in innovation-driven entrepreneurship;
- Operate within and adapt to diverse cultural and international environments in global markets;
- Articulate a compelling vision for a venture and persuade key stakeholders, including investors, customers, and partners;
- To leverage digital tools, platforms, and emerging technologies to drive innovation and enhance business operations.

## 2. Overall structure of the course

### Title and brief content of the units:

1. Introduction to Entrepreneurship and Innovation
2. Identifying Opportunities in an Innovative Milieu
3. Design Thinking and Innovation Frameworks
4. Building the Entrepreneurial Team
5. Financing Innovation
6. Intellectual Property and Legal Considerations
7. Marketing and Commercializing Innovation
8. Scaling and Growing an Innovative Business
9. Social Entrepreneurship and Innovation
10. Entrepreneurial Failure and Risk Management
11. Future Trends in Entrepreneurship

- The concept of entrepreneurship innovative milieu in the context of a new business venture creation (this implies: the identification of opportunities, the direction and financing of the new company, business modelling, mobilizing resources, the recruitment, the value creation, the realization of growth),
- The extension of the concepts of entrepreneurship and innovation to customized paths such as: new ventures, corporate entrepreneurship, and social entrepreneurship.



- The concept of entrepreneurship in the context of established organization (rallying managerial support, coping with strategic misalignment, corporate venturing)
- De-risking the engaging in inherently risky endeavours, learning from failure.

### 3. Unit description

#### Description of Unit 1:

<p><b>Name of the Unit: Introduction to Entrepreneurship and Innovation</b></p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Definition and characteristics of entrepreneurship</li> <li>• The role of innovation in entrepreneurship</li> <li>• Types of entrepreneurs (serial, lifestyle, etc.)</li> </ul> <p>Innovation ecosystems and entrepreneurial ecosystems</p>	<p><b>Competences:</b></p> <ul style="list-style-type: none"> <li>• Ability to screen surrounding environment including policy making, identify opportunities, develop action plan, and challenge the status quo.</li> <li>• Risk-taking, resilience, and a growth-oriented perspective.</li> <li>• Skills in identifying and evaluating business opportunities based on market needs.</li> </ul>
<p><b>Plan</b></p> <p>3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b></p> <p>Self-assessment</p> <p>Quiz, case study, survey, reflection on the content</p>



## Description of Unit 2

<p><b>Name of the Unit:</b> Identifying opportunities in an Innovative Milieu</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Opportunity recognition and evaluation</li> <li>• Sources of innovation: disruptive, incremental, and radical innovations</li> <li>• Creativity and idea generation</li> <li>• Market needs assessment and trends in innovation</li> </ul>	<p><b>Competences:</b></p> <p>The learner will be able to:</p> <ul style="list-style-type: none"> <li>• Analyze market trends and identify gaps.</li> <li>• Generate innovative solutions to identified problems.</li> <li>• Conduct thorough market research to uncover potential opportunities.</li> <li>• Develop a mindset that embraces risk-taking and resilience.</li> <li>• Build relationships with stakeholders to identify and validate opportunities.</li> <li>• Assess the viability of potential opportunities.</li> <li>• Adjust strategies based on evolving market conditions.</li> <li>• Effectively communicate ideas and opportunities to diverse audiences.</li> <li>• Leverage technology tools for research and opportunity identification.</li> </ul>
<p><b>Plan</b></p> <p>3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b></p> <p>Self-assessment</p> <p>Quiz, case study, survey, reflection on the content</p>

## Description of Unit 3

<p><b>Name of the Unit: Building the Entrepreneurial Team</b></p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<ul style="list-style-type: none"> <li>• Team dynamics and leadership in startups</li> <li>• Building and managing high-performing teams</li> <li>• Networking and leveraging mentors, advisors, and investors</li> </ul>	<p><b>Competences:</b></p> <p>The learner will be able to:</p> <ul style="list-style-type: none"> <li>• Identify and articulate different roles within an entrepreneurial team (e.g., visionary, executor, facilitator).</li> <li>• Develop skills for clear and open communication among team members.</li> <li>• Learn techniques for resolving conflicts and fostering a collaborative environment.</li> <li>• Enhance skills in group decision-making processes and consensus building</li> </ul>



<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, role play, reflection on the content</p>
---	--

## Description of Unit 4

<p><b>Name of the Unit:</b> Design Thinking and Innovation Frameworks</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Introduction to design thinking</li> <li>• Human-centered design in product/service development</li> <li>• Lean startup methodology</li> <li>• Business model innovation and the business model canvas</li> </ul>	<p><b>Competences:</b></p> <p>The learner will be able to:</p> <ul style="list-style-type: none"> <li>• Develop the ability to deeply empathize with users by understanding their needs, pain points, and desires;</li> <li>• Develop skills to correctly define and frame problems from a user’s perspective.</li> <li>• techniques like brainstorming, mind mapping, SCAMPER, etc., to generate a broad range of ideas;</li> <li>• Adept at creating quick and rough versions of solutions (low-fidelity prototypes) for early testing and feedback;</li> <li>• To work effectively in teams that may include individuals from diverse disciplines, combining different perspectives and expertise</li> <li>• To Cultivate attitude of continuous learning, open-mindedness, and a willingness to take risks and embrace failure as part of the innovation process</li> <li>• Ability to perform research to understand trends, market needs, and technological advancements that could influence innovative solutions.</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>



## Description of Unit 5

<p><b>Name of the Unit:</b> Financing Innovation</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<ul style="list-style-type: none"> <li>• Sources of funding for startups: bootstrapping, angel investors, venture capital, crowdfunding</li> <li>• Financial planning, projections, and valuation</li> <li>• Venture financing and term sheets</li> <li>• Managing cash flow and burn rate</li> </ul>	<p><b>Competences:</b> The learner is able to:</p> <ul style="list-style-type: none"> <li>• Understanding Financial Models for Innovation</li> <li>• Knowledge of traditional financing options such as loans, venture capital (VC), angel investors, and bank financing;</li> <li>• Ability to prepare and deliver effective pitches, highlighting the financial potential, scalability, and market opportunity of an innovation;</li> <li>• Ability to recognize financial risks specific to innovation (e.g., market adoption, technology failure, competitive pressure) and develop strategies to mitigate them;</li> <li>• Ability to develop realistic budgets for R&amp;D, product development, and market expansion for innovative ventures;</li> <li>• Understanding the different stages of venture capital funding (seed, Series A, B, etc.) and how equity financing works for startups and innovative businesses;</li> <li>• Ability to evaluate the financial worth of intellectual property, including patents, trademarks, and copyrights, and their role in innovation.</li> <li>• Assess the potential financial outcomes of innovation projects using cost-benefit analysis, net present value (NPV), and internal rate of return (IRR).</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>

## Description of Unit 6

<p><b>Name of the Unit:</b> Intellectual Property and Legal Considerations</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p>	<p><b>Competences:</b></p>



<ul style="list-style-type: none"> <li><input type="checkbox"/> Protecting innovation through patents, trademarks, and copyrights</li> <li><input type="checkbox"/> Legal structure of startups (LLC, Corporation, Partnership, etc.)</li> <li><input type="checkbox"/> Contracts and partnerships in innovation-driven businesses</li> <li><input type="checkbox"/> Regulatory frameworks impacting innovative industries</li> </ul>	<p>The learner will be able to understand:</p> <ul style="list-style-type: none"> <li>•Intellectual Property Rights (IPR)</li> <li>•IP Law and Regulatory Frameworks</li> <li>•Patent Strategy and Process</li> <li>•Trademark and Brand Protection</li> <li>•Copyright and Digital IP</li> <li>•Trade Secrets and Confidential Information</li> <li>•IP Valuation and Commercialization</li> <li>•IP Infringement and Enforcement</li> <li>•International IP Protection</li> <li>•IP in Technology and Innovation</li> <li>• Ethical Considerations in IP Law</li> <li>•Contract Law and IP Transactions</li> <li>•Dispute Resolution and IP Litigation</li> <li>•Innovation and Open Innovation Models</li> <li>•IP Auditing and Management</li> <li>•Data Protection and Privacy Laws</li> <li>•IP and Innovation Policy.</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content.</p>

### Description of Unit 7

<p><b>Name of the Unit:</b> Marketing and Commercializing Innovation</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>•Go-to-market strategies for innovative products or services</li> <li>•Creating a value proposition and brand positioning</li> <li>•Customer acquisition strategies</li> <li>•Digital marketing for startups and leveraging social media.</li> </ul>	<p><b>Competences:</b> The learner is able</p> <ul style="list-style-type: none"> <li>•to conduct market research to identify unmet needs and opportunities for innovation.</li> <li>•to learn knowledge of the stages and factors that influence how innovations spread through a market, including early adopters, the chasm, and mainstream adoption.</li> <li>•to conduct both qualitative and quantitative research to gain deep insights into customer behaviors, preferences, and pain points.</li> <li>•to build and manage a brand around an innovation, creating a strong, recognizable identity that resonates with target customers.</li> <li>•to select appropriate market entry strategies (e.g., direct sales, partnerships, online</li> </ul>



	<p>platforms, distribution networks) based on the nature of the innovation and the target market.</p> <ul style="list-style-type: none"> <li>•To understand how to set prices for innovative products or services based on the perceived value to customers rather than production cost.</li> <li>•To select the most appropriate channels for distributing innovative products or services, whether through direct channels, retailers, or digital platforms.</li> <li>•To build and manage partnerships with key stakeholders, such as suppliers, distributors, influencers, or technology partners, to accelerate the commercialization of innovation.</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>

### Description of Unit 8

<p><b>Name of the Unit:</b> Scaling and Growing an Innovative Business</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Strategies for scaling a business</li> <li><input type="checkbox"/> Managing rapid growth and scaling challenges</li> <li><input type="checkbox"/> International expansion strategies for innovative companies</li> <li><input type="checkbox"/> Operational challenges in growing an innovative company</li> </ul>	<p><b>Competences:</b> The learner will be able to ...</p> <ul style="list-style-type: none"> <li>•to differentiate between linear growth (adding resources to increase revenue) and scaling (increasing revenue without a proportional increase in resources)</li> <li>•to understand various approaches to market expansion, including geographic expansion, new customer segments, and product line extensions.</li> <li>•to obtain skills in streamlining operations and automating processes to support scalable growth without overextending resources.</li> <li>• to create or refine a business model that can support high-volume operations with minimal increases in cost or complexity.</li> <li>•to create detailed financial projections and models to anticipate the financial needs of a scaling business, including cash flow management and capital expenditures.</li> <li>•To develop cost-effective, scalable</li> </ul>





	<p>customer acquisition strategies, including performance marketing, referrals, and viral growth mechanisms</p> <ul style="list-style-type: none"> <li>to identify the risks associated with scaling, including operational, financial, market, and technological risks, and to develop mitigation strategies</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>

### Description of Unit 9

<p><b>Name of the Unit:</b> Social Entrepreneurship and Innovation</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>Introduction to social entrepreneurship</li> <li>Sustainable innovation and impact-driven ventures</li> <li>Balancing profitability and social impact</li> <li>Case studies of social enterprises and innovation in non-profit sectors</li> </ul>	<p><b>Competences:</b> The learner will be able to obtain</p> <ul style="list-style-type: none"> <li>knowledge of the fundamental concepts of social entrepreneurship, including how it differs from traditional entrepreneurship in terms of mission, impact, and revenue generation.</li> <li>skills in identifying and assessing social issues at local, national, and global levels, such as poverty, education, healthcare, environment, and inequality.</li> <li>understand how to develop and apply innovative solutions (products, services, or processes) that create social value and address societal challenges.</li> <li>knowledge of various business models that create social and environmental impact while maintaining financial sustainability, such as the triple bottom line (people, planet, profit) and shared value creation.</li> <li>competence in selecting appropriate social impact metrics, such as Social Return on Investment (SROI), Theory of Change, and the Impact Management Project (IMP), to measure the effectiveness of social innovations</li> <li>knowledge of various funding sources available to social entrepreneurs, including grants, impact investors, crowdfunding, government funding, and social enterprise competitions.</li> <li>competence in leading social enterprises with a focus on mission-driven leadership, ethical decision-making, and fostering a purpose-driven organizational culture.</li> </ul>



	<ul style="list-style-type: none"> <li>•skills in forming strategic partnerships with governments, nonprofits, private corporations, and community organizations to amplify social impact and drive systemic change.</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>

### Description of Unit 10

<p><b>Name of the Unit:</b> Entrepreneurial Failure and Risk Management</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>•Understanding and managing risk in innovative ventures</li> <li>•Learning from failure and pivoting</li> <li>•Crisis management and business recovery</li> </ul>	<p><b>Competences:</b> The learner will be able to obtain:</p> <ul style="list-style-type: none"> <li>•knowledge of the various types of entrepreneurial failure, including financial, operational, market, and personal failure, and how these failures impact startups and established businesses.</li> <li>•competence in identifying different types of risks faced by entrepreneurs, including financial, operational, market, regulatory, technological, and reputational risks.</li> <li>•ability to develop and implement strategies for mitigating identified risks, including diversification, contingency planning, and resource allocation</li> <li>•understanding how to manage cash flow to ensure business sustainability, including forecasting, budgeting, and liquidity management</li> <li>•understanding how to manage cash flow to ensure business sustainability, including forecasting, budgeting, and liquidity management.</li> <li>•skills in developing a growth mindset that embraces failure as a valuable learning experience, promoting personal and business growth through resilience and adaptability.</li> </ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>



## Description of Unit 11

<p><b>Name of the Unit:</b> Future Trends in Entrepreneurship</p>	<p><b>Estimated duration for students:</b> 60 minutes</p>
<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Emerging technologies and their impact on entrepreneurship (AI, blockchain, IoT, etc.)</li> <li>• The future of work and entrepreneurship in the gig economy</li> <li>• Trends in venture capital and startup ecosystems</li> </ul>	<p><b>Competences:</b> The learner will be able to obtain</p> <ul style="list-style-type: none"> <li>• knowledge of the latest technological trends affecting entrepreneurship, including artificial intelligence (AI), blockchain, Internet of Things (IoT), and quantum computing, and their potential applications in new ventures.</li> <li>• ability to understand and anticipate social and demographic changes (e.g., aging populations, urbanization, the rise of Gen Z) and how they create new market opportunities and challenges for entrepreneurs.</li> <li>• understanding how disruptive technologies like AI, blockchain, machine learning, and 5G are transforming industries and creating opportunities for new entrepreneurial ventures.</li> <li>• knowledge of the growing gig economy, freelancing platforms, and the future of work, and how entrepreneurs can create ventures that support this evolving workforce.</li> <li>• understanding how globalization is shaping entrepreneurial ecosystems, creating new opportunities for cross-border ventures, global supply chains, and international market expansion.</li> <li>• competence in integrating sustainable practices into business models, focusing on the triple bottom line (people, planet, profit) to create long-term value for both business and society.</li> <li>• skills in using big data, predictive analytics, and business intelligence tools to identify trends, consumer behaviors, and market opportunities.</li> <li>• understanding the principles of lean startup methodology, including rapid prototyping, customer validation, and pivoting, to reduce time-to-market and avoid costly failures.</li> <li>• knowledge of alternative funding models, including crowdfunding platforms (e.g.,</li> </ul>



	<p>Kickstarter, Indiegogo) and peer-to-peer lending, and how entrepreneurs can leverage these to raise capital.</p> <ul style="list-style-type: none"><li>•knowledge of emerging ethical challenges entrepreneurs will face in areas like data privacy, AI ethics, sustainability, and social responsibility</li></ul>
<p><b>Plan</b> 3 video sequences, scripts and activities you are planning in this unit.</p>	<p><b>Assessment / Certificate of Performance</b> Self-assessment Quiz, case study, survey, reflection on the content</p>