Order number: 11

Attachment No. 3		**Subject program of the second cycle of studies**			
1.	Title of the teaching subject	Entrepreneurship and innovation in the food industry			
2.	Code	FE2M24			
3.	Study program	Food Engineering-Innovation, Sustainability and Technologies			
4.	Organizer of the study program (unit, i.e. institute, department, department)	TMF			
5.	Degree (first, second, third cycle)	Second			
6.	Academic year / semester	Year	1	semester	2
7	Course load expressed in ECTS credits	6			
8.	Teacher (in the case of multiple teachers designated responsible teacher*)	Dr. Jana Klopchevska, associate professor*, TMF Economic institute?			
9.	Language of instruction	English			
10.	Necessary prerequisites for listening and passing the subject	There is none			
11.	Objectives of the subject program (competencies) and learning outcomes:	Analyzes and application of food engineering techniques in the development of innovative products. Developing scalable and sustainable food businesses using entrepreneurial strategies. Integrating technological innovation, and automation, in food production and processing. Assessments of global food trends and consumer demands to identify business opportunities. Regulatory and ethical challenges in the food industry. Leading multidisciplinary teams to launch innovative food products.			
12.	Detailed course content by chapter and unit with learning outcomes for each chapter	This advanced course focuses on the intersection of entrepreneurship, innovation and food engineering. Students will develop a deep understanding of the entrepreneurial process, from idea to market launch, while applying food engineering principles to innovate new products and services in the food industry. The course will emphasize sustainability, global market trends, and technology integration in food systems. 1. Advanced trends and challenges in the food industry In-depth analysis of global food industry trends: sustainability, health, convenience and alternative proteins. The role of technology in shaping the future of the food industry. Emerging consumer demands: personalized nutrition, clean label products and plant-based innovations. Case studies of global food companies that have leveraged innovation. 2. Entrepreneurship in the global food industry Entrepreneurial Frameworks and Methodologies: Lean Startup, Agile Development in Food Ventures. Identifying high potential market segments in the global food industry. Developing a Minimum Viable Product (MVP) in Food:			

		Prototype Testing and Iteration Based on Market Feedback. How to build a strong value proposition for food startups. 3. Regulatory and ethical considerations Navigating complex food regulations: FDA, EFSA, Codex Alimentarius. Regulatory approval processes for new ingredients and technologies. Ethical issues in food innovation: genetic modification, animal welfare and sustainability. Management of intellectual property: patents, trademarks and trade secrets in food innovation. 4. Financial planning and investment for food ventures Advanced Financial Planning for Food Startups: Strategies for Investing, Scaling and Controlling Costs. Funding mechanisms: venture capital, angel investors, crowdfunding and government grants. Risk management and financial forecasting in the food industry. 5. Marketing, Branding and Scaling Innovation in the Food Industry Building a compelling food brand. Advanced marketing strategies for food products, including influencer marketing, social media and direct-to-consumer models. Market entry strategies for international expansion. Packaging Design as a Branding Tool: Visual Identity, Sustainability and Consumer Engagement. 6. Project The student will develop a comprehensive business plan for a new food product. This project will integrate food engineering principles, sustainability strategies and entrepreneurial frameworks. Product concept, market analysis, prototype development, financial plan, go-to-market strategy and investment pitch. A final presentation to a panel of industry experts including investors, food engineers and entrepreneurs.		
13	Interrelationship of subjects			
14.	Detailed description of teaching and working methods for the subject	Participation and discussions in class (10%) Case study analysis and presentations (20%) Food Product Innovation and Prototyping Report (20%) Business plan, product development and investment pitch (50%)		
15.	Total available fund on time	60 hours		
16.	Forms of teaching activities	16.1.	Lectures - theoretical teaching. hours	20 hours
		16.2.	Exercises (laboratory, classroom), seminars, teamwork: lessons	
		16.3.	Practice: classes	10 hours

17.	Other forms of activities	17.1.	Project assignments: lessons	10 hours
		17.2.	Independent assignments: lessons	10 hours
		17.3.	Home study - assignments	10 hours
18	Conditions of signature			
19	Method of assessment			
	19.1.	Tests: points		
	19.2.	Seminar work/project, written and oral presentation: points		80 points
	19.3.	Final exam: points		20 points
20	Evaluation criteria (points/grade)		up to 50 points	5 (five) (F)
			51 x to 60 points	6 (six) (E)
			61 x to 70 points	7 (seven) (D)
			from 71 to 80 points	8 (eight) (C)
			from 81 to 90 points	9 (nine) (B)
			from 91 to 100 points	10 (ten) (A)
21.	A method of monitoring the quality of teaching		Surveys and self-evaluation	

22. Literature

22.1. Required reading

Ord. number	Author	Title	Publisher	Year
1.		"Food Innovation and Entrepreneurship: Harnessing the Power of Entrepreneurial Thinking in Food Businesses".	Jonathan Deutsch & Jeffrey Cousminer	2019
2.		Industry reports from organizations like the FAO.	Mintel, Euromonitor, and McKinsey & Co.	2023
3.		Research articles from Food Engineering Review.	Journal of Food Science, and Trends in Food Science & Technology	2023

22.2. Additional literature

Ord. number	Author	Title	Publisher	Year
1.		Online courses and webinars from platforms like Coursera, edX, and professional organizations.	EIT Food and Food-X Accelerator	2023
2.				