



UNIVERSITETI / UNIVERSITY
"ISA BOLETINI"
MITROVICË

Course Curriculum Model (Syllabus)		
Faculty:	FACULTY OF MECHANICAL AND COMPUTER ENGINEERING	
Department:	Mechanical Engineering and Economic Engineering	
Study Program	MSc in Manufacturing Technology and Management	
Level:	Master	
Code of the course:	105MTM	
Course:	Technology and Innovation Management	
Course Status:	Elective	Mandatory/Elective
Semester:	I	Winter/Summer
Number of hours per week:	2+1	
ECTS:	5	
Time / location:	Monday, 9 ⁰⁰ -10 ³⁰ , K5	
Academic Year / Semester	2026/2027	
Language of Instruction:	Albanian (with flexibility in English)	
Lecturer:	Dr.sc. Kaltrina Kajtazi - Pacolli	
Assistant:		
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	Telephone:	
Course Description	The course “Technology and Innovation Management” introduces students to theories, concepts, and practices related to the management of technology and innovation in modern organizations. It covers the role of innovation in competitiveness, strategic technology management, R&D management, knowledge management, digital transformation, and sustainable innovation. The course combines theoretical approaches with case studies and real-life examples from industry.	
Course Purpose / Course Goals	The aim of this course is to provide students with knowledge and skills for effective management of technology and innovation processes, enabling them to contribute to organizational growth, competitiveness, and sustainability.	
Course Objectives	- To understand the role of technology and innovation in organizational competitiveness. - To analyze models of innovation and technology management. - To develop skills in managing R&D and knowledge transfer. - To explore the relationship between digitalization, Industry 4.0, and innovation. - To integrate sustainability and social responsibility into innovation management.	

Intended Learning Outcomes (ILOs)	Knowledge
	● K1: Explains theories and frameworks of technology and innovation management. ● K2: Understands the role of innovation in organizational strategies and performance. ● K3: Identifies drivers of digital and sustainable innovation.
	Skills
	● S1: Applies models of innovation to organizational contexts. ● S2: Designs strategies for R&D and technology adoption. ● S3: Uses tools for innovation project management.
	Competences
	● C1: Plans and manages technological change and innovation processes. ● C2: Evaluates risks and opportunities of innovation projects. ● C3: Collaborates in multidisciplinary teams to develop innovative solutions.

	Weeks	Lecture
Program	<i>First week</i>	Introduction to technology and innovation management
	<i>Second week</i>	Innovation theories and models
	<i>Third week</i>	Technology strategy and competitive advantage
	<i>Fourth week</i>	Research and Development (R&D) management
	<i>Fifth week</i>	Knowledge management and technology transfer
	<i>Sixth week</i>	Digital innovation and Industry 4.0
	<i>Seventh week</i>	Midterm Test (1st assessment)
	<i>Eighth week</i>	Open innovation and collaboration networks
	<i>Ninth week</i>	Intellectual property management
	<i>Tenth week</i>	Innovation in services and business models
	<i>Eleventh week</i>	Sustainable innovation and green technologies
	<i>Twelfth week</i>	Leadership and organizational culture for innovation
	<i>Thirteenth week</i>	Case studies: global innovation practices
	<i>Fourteenth week</i>	Student Presentations
	<i>Fifteenth week</i>	Summary and final evaluation

Literature / Reading List:	
Literature	Main Literature: Tidd, J., & Bessant, J. (2021). <i>Managing innovation: Integrating technological, market and organizational change</i> (7th ed.). Wiley. Dodgson, M., Gann, D., & Phillips, N. (2020). <i>The Oxford handbook of innovation management</i>. Oxford University Press. Turulja, L., & Bajgorić, N. (2022). <i>Technology and innovation management in sustainable business</i>. Springer. Varadarajan, R. (2021). <i>Innovation and strategy</i>. Emerald Publishing. Additional literature: Schilling, M. A. (2020). <i>Strategic management of technological innovation</i> (6th ed.). McGraw-Hill Education. OECD. (2021). <i>Science, technology and innovation outlook 2021: Times of crisis and opportunity</i>. OECD Publishing. Journals: <i>Research Policy</i> (Elsevier). <i>Journal of Product Innovation Management</i> (Wiley). <i>Technovation</i> (Elsevier).

Teaching and Learning Methods	The course is delivered using a combination of traditional and modern teaching methods to ensure the acquisition of theoretical knowledge and the development of practical skills. The main methods include: • Structured lectures • Case study analysis • Project-Based Learning • Flipped classroom discussions • Group work and presentations • Guest speakers from industry			
	Contribution to student workload (which should correspond to student learning outcomes - 1 ECTS credit = 25 hours)			
	Activity	Hours	Days/weeks	Total
	Lectures	2	15	30
	Exercise sessions (with TA)	2	15	30
	Practical work	3	3	9
	Office hours	1	15	15
	Fieldwork	1	2	2
	Midterms, seminars	2	2	4
	Homework	3	2	6
	Self-study	4	3	12
	Final exam preparation	3	3	9
	Time spent in exams	2	2	4
	Projects, presentations, etc.	2	2	4
Total				125

Evaluation	Assessment Methods and Criteria:		
	Activity	Weight (%)	
	Midterm Exam	20%	
	Project Report & Defense	30%	
	Seminar Presentation	10%	
	Final Exam	40%	
	Total	100%	
	(according to the Statute and Regulation for studies of UMIB)		
	Final grade	Points (%)	Mark
		91 – 100	10
		81 - 90	9
		71 - 80	8
		61 - 70	7
		51 - 60	6
Academic policies	Criteria for regular attendance and rules of etiquette during the organization of the lesson are set.		
	Ethics in teaching:		
	Graphic works should be personal works of each student. There will be no tolerance for copying, "borrowing" from the Internet or any other material. The same or similar works will have negative evaluations in the final evaluation of the student.		
	Time:		
	In agreement with the students, the deadlines for submitting works will be determined. There will be no tolerance for delays in the submission of works. Failure to arrive at the time when the assignment is explained does not justify the student for not submitting the paper. The deadline will be given earlier. If you are going to travel abroad, then you need to submit the paperwork in advance. The student has the right to request a consultation with the professor whenever he / she deems it reasonable and necessary for the performance of his / her work.		
	Rules of conduct and academic policies:		
	● active participation of students in lectures o participation in discussion, comments and free expression of opinion, opinion and academic position (with arguments)		
	● mandatory independent work and use of additional sources of information (various scientific websites, scientific journals, conference proceedings, etc.)		
	● respecting lecture schedules without compromising academic freedom (silent cell phones) of respecting the word, thoughts and ideas of colleagues,		
	● it is not allowed to arrive late and leave without a valid reason from the lecture, test or exam o preparation and holding of relevant lectures, (obligation of the teacher).		