

Transilvania University of Braşov, Romania

Study program: Industrial Business Management and Entrepreneurship

Faculty: Technological Engineering and Industrial Management

Study period: 2 years (master)

1st Year, 1st Semester

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Strategies in investment management	IT.M.1.01.I	5	2	1		1

Course description (Syllabus): Enterprise / Firm - the main form of organizing a business. Private business - forms of organizing. The financial performance valuation of the enterprise. Content and structure of the company's financial results. Analysis of the financial results of the enterprise. Strategic financing of the enterprise. Operational financing on the short term of the enterprise. International financing of investment projects. The interest rate. The cost of international financing. Risks of international financing. Strategic management of the organization. Strategic management models. Strategic control.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Academic Integrity and Ethics	IT.M.1.02.I	2	1	1		

Course description (Syllabus): The concepts of AIE. Deontology. Academic deontology. Academic responsibility. Intellectual property. Copyright and Related (neighbouring) rights. Industrial Property. Patents. Registered Trademarks. Lack of academic integrity and ethics. Academic dishonesty. Academic fraud, facilitating fraud in academic assessment. Forms of plagiarism. Identifying plagiarism. Citation rules. Ethics in research and writing reports and dissertations.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Financial Management	IT.M.1.03.I	5	2	1		1

Course description (Syllabus): Financial analysis based on the balance sheet. Analysis of the company's results based on the profit and loss account. Dynamic analysis of enterprise results. Short-term financing of the company. Medium and long-term financing of the company. Investment financing. Financial planning. Profit distribution. Investments in the money market. Investments in the capital market.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Sales management	IT.M.1.04.I	4	2		1	

Course description (Syllabus): Sales, final link of distribution. Sales personnel. Client relationship management (CRM). Sales forecasting and sales budget. Sales manager functions. Sales ethics. Ethics regarding sales manager – sales representative relationship. Ethics regarding sales representative – client relationship.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Design of the Lean Enterprise	IT.M.1.05.I	4	2	1		

Course description (Syllabus): Fundamentals of Lean Production and Business Systems. The Seven Wastes of Lean Organization. Value Stream Mapping. Strategic Planning; Hoshin Kanri and Kaizen Workshops. The Main Methods of Lean Organization: Kanban, Cellular Manufacturing, SMED and TPM. Lean key performance indicators (KPIs). Lean Office.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Practical activities for Research and Design 1	IT.M.1.06.I	10				12

Course description (Syllabus): Identify and present the activities of an organization: Description of the field of activity; Identification of products / services; Drafting organizational scheme; Description of the level of information technology activities of the organization. Description of a representative product / service: Product / Service Characterization; Description of market conditions for the product / service; Overview of the manufacturing processes of the product / service delivery activities; Demand estimation (forecast) for the product / service analyzed.

1st Year, 2nd Semester

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Management of robust design	IT.M.2.01.I	5	2	1		1

Course description (Syllabus): Design of robust systems. Introduction to arrays of experiments. Quality loss function. Signal-to-Noise ratio. Taguchi's methods of robust design. ANOVA dispersion analysis. Taguchi's product plans. Simultaneous multi-criterial analysis. Analysis of robust systems performance.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Practical activities for research and design 2	IT.M.2.02.I	10				12

Course description (Syllabus): Research on designing a product / service / process / business: Identifying design needs; Analysis and description of the product / process; Choose and define the methodology and design resources; Designing the chosen solution. Product / process implementation: Establishing Activity Chart (Gantt); Establish the resources needed for implementation; Highlighting the novelties / benefits of the product / design process.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Entrepreneurship and Managerial Innovation	IT.M.2.31.O	5	2			2

Course description (Syllabus): Entrepreneurship in the 21st century. The entrepreneur - the central element of the business. Idea- economic opportunity- business plan. Small and medium enterprises in the economy. Elements of entrepreneurial management and managerial innovation. Sources of business financing. Evidence of entrepreneurial activity.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Advanced Entrepreneurship	IT.M.2.32.O	5	2			2

Course description (Syllabus): Entrepreneurial activity. Elements of business financing. Business development management. Ethical behaviour in business. The end of the business from an entrepreneurial perspective. Corporate entrepreneurship – intrapreneurship. Evidence of entrepreneurial activity.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Sustainable Industrial Design	IT.M.2.41.O	5	2		1	1

Course description (Syllabus): Introduction to sustainable design. Whole Systems and Lifecycle Thinking, Lifecycle Assessment. Extending product lifetimes. Improving Product Lifetime, Durability, Disassembly and Recycling, Repair and Upgrade. Green materials. Physical Properties of Materials, Green Materials Selection, Environmental Properties of Materials. Reducing energy loss. Energy Efficient Design. Lightweighting. Reinforcing Strategies, Lines of Force and Stresses. Circular design strategies. Design for 4R (Repair, Refurbishment, Remanufacturing and Recycling). Biomimicry. Additive manufacturing.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Product Development and Prototyping	IT.M.2.42.O	5	2		1	1

Course description (Syllabus): PLM and the current context in product design and development. Two-dimensional modeling. Solid Modeling. Operations performed on the volume of solids, on the edges and faces of solid bodies. Synchronous modeling. Modeling assemblies. Simulations and analyses using the virtual prototype-digital validation. Product documentation and drawings. Digital manufacturing. Technological operations. Design for X. The use of additive technology in industrial production.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Company recovery	IT.M.2.51.O	5	2	1		1

Course description (Syllabus): The company and the environment. Market diagnosis (Demand/Supply/Competition analysis). Strategic and managerial diagnosis of the company's activity: Analysis of the objectives and their achievement; Analysis of the management. Diagnosis of company resources: Analysis of the technical resources; Analysis of the human resources; Analysis of the financial resources. The financial diagnosis of the company: Analysis of economic growth/ profitability/financial risk. The failure of a company and the probable causes. Company recovery strategies and models, implementation, effects. Optimal decisions in company management.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Global Strategic Management	IT.M.2.52.O	5	2	1		1

Course description (Syllabus): The strategic management process. The process of internationalization of companies: specific, mechanisms, motivations. Business strategies and the process of developing strategies. Ansoff matrix and BCG matrix. Generic business strategies with an emphasis on cost leader strategy. Generic business strategies, with an emphasis on differentiation strategy. Generic business strategies, with emphasis on focus strategy. Corporate strategies, with an emphasis on diversification strategies. Strategic entrepreneurial management and innovation strategies. Knowledge and intellectual capital management, as part of global strategic management. The vision, mission and organizational leadership as part of strategic management. Current and Future Trends in Globalization.

2nd Year, 1st Semester

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Advanced Industrial Business Management	IT.M.3.01.I	5	2	1		1

Course description (Syllabus): Product portfolios. The BCG matrix- a real- option reconfiguration. Management of PLC (Product life cycle). New product development processes. Screening processes. Product testing. Advanced industrial business practices. Price-discrimination/segmentation models in the context of bounded rationality and opportunism. PLM (Product lifecycle management) strategies. Manufacturing process management (MPM), Product data management (PDM) concepts. The integration of digital business models and strategies. E- procurement Digital marketing. Advanced concepts in technologic innovation process. The organizational cognition spiral and other innovation management techniques. Advanced technology transfers. Spin-offs.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Risk management in industrial business	IT.M.3.02.I	5	2		1	1

Course description (Syllabus): Business risk concepts and types. Main business risk-types. Risk – as economic concept. Losses caused by risk in business. General classification principles of business risks. Risk types in different economic activity fields. Synthesizing risk management methods (risk management), stages and procedures of this process. Mathematical methods and instruments used by the identifying and estimating process of risks. Economic risk analysis: financial, strategic and operational risks. Risk modeling in decision theory. Decision making under conditions of risk and uncertainty. Risk simulation models. Development of risk answering strategies. Business risk reducing methods.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Practical activities for research and design 3	IT.M.3.03.I	10				12

Course description (Syllabus): Research on the current state in the dissertation thesis topic: 1. Identification of significant works specific to the dissertation thesis theme; 2. Identification of research directions and trends in the field; 3. Synthesis of significant works; 4. Identification of possible applications to be addressed in the dissertation thesis.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Communication and negotiation in business	IT.M.3.41.0	5	2		1	1

Course description (Syllabus): Communication: structure and process. Questions as instruments in communication. Non-verbal communication. Communication in the business environment. Fundamental negotiation skills. Personality traits of a good negotiator. Negotiation styles. The personal negotiation style. Choosing a negotiation strategy and rules for establishing the targets of negotiation. Negotiation techniques. Individuals/problems. Interests/positions. Mutually advantageous decisional variants. Impartial evaluation criteria. Opposition management. Argumentation techniques. Communicating and negotiating with clients. Building client loyalty and retention. Client portfolio. Communicating and negotiating with customers.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Organizational communication	IT.M.3.42.0	5	2		1	1

Course description (Syllabus): Communication: structure and process. Models. Presentation types and techniques in organizations. Rhetoric, argumentation, training methods. Techniques of organizational communication by NLP (neuro-linguistic programming). Perceptions in organizational communication. Interpersonal communication in organizations. Organizational hierarchy. Vertical and horizontal communication. Small group and team organization. Leadership in organizations. Written communication within organizations.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
International economic relations	IT.M.3.51.0	5	2	2		

Course description (Syllabus): The international flows of an open economy. International economic relations - specific and framework of manifestation. Cooperation - a modern form of international economic relations. Forms of competitive alliances. Forms of industrial cooperation. International trade transactions. International negotiation and contracting. International monetary relations. International financial relations. Powers center. Emerging economies. Economic integration. The European Common Space. Trends in the development of international economic relations.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Products and Services for a Global Market	IT.M.3.52.O	5	2	2		

Course description (Syllabus): Global market - specific strategies. Patterns of globalizing market operations. Competitive global market strategies. Global market and opportunity assessment. Sources of financing the activity. Global business strategy planning. Forms of competitive alliances. Forms of industrial cooperation. Corporate planning. Global markets and entrepreneurs. Techniques of making market selection decisions. New-product development processes for global market. Managing global distribution channels. Developing a global distribution strategy. The structure of the global distribution system.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Digital data acquisition and processing systems	IT.M.4.01.I	5	2		2	

Course description (Syllabus): Planning the experiments. Sensors and transducers. Boolean logic and logic circuits. Digital samples and signals. Methods of signals analysis. Experimental data processing.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Practical activity and scientific research for dissertation	IT.M.4.02.I	10				8

Course description (Syllabus): The master students will have to complete the dissertation work in accordance with the work plan agreed with the thesis advisor.

2nd Year, 2nd Semester

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Practical activities for research and design 4	IT.M.4.03.I	10				12

Course description (Syllabus): The discipline aims to develop independent research skills, application of theory in new situations, creative application of research / development techniques for products / technologies / services and to develop ready to be published or professionally applicable studies and reports.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Informatics for managers	IT.M.4.41.O	5	2		2	

Course description (Syllabus): Design of management informatics application. Develop managerial informatics applications using Microsoft Office. Develop managerial informatics applications using Google tools. Develop WEB managerial informatics applications. Develop risk managerial informatics applications. Records management.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Project management	IT.M.4.42.O	5	2		2	

Course description (Syllabus): Project scope: defining requirements. Roles and responsibilities: defining and assigning role in a team. Planning project. Budgeting and cost management. Risk in project management: estimate, correlate and reduce.