

Program coordinator: Zsolt Matyusz, Ph.D.

Institute of Operations and Decisions Sciences Department of Supply Chain Management



### MSc in Advanced Supply Chain Management Navigating Tomorrow's Supply Chain: Your Path to Success

"Sorry, we've gone from production hell to delivery logistics hell..." Elon Musk, CEO of Tesla



# Agenda



Facts about supply chains



Aim of the program



Overview of the master's program



Community events



Who we are



Student representatives



## Facts about supply chains



Market Growth

The value of the supply chain management industry hits \$21.95 billion in 2023, and is projected to reach \$30.91 billion by 2026.



Sustainability Surge

The supply chain accounts for more than 90% of most consumer goods companies' environmental impact



**Disruption Causes** 

SC disruptions are mainly caused by *talent/skill shortages*, human illness, and transportation network issues.

57% of 2,000 supply chain executives responding to a recent <u>survey</u> stated that hiring and retaining qualified workers is this year's greatest challenge, along with 56% struggling with ongoing specific talent shortages. – Harvard Business Review



The aim of the program is to train experts who are able to manage the corporate logistics system and supply chains and networks spanning across companies.

Possessing the necessary theoretical knowledge and knowledge of modern practical solutions, they are capable of planning, analyzing and developing logistics processes within and between companies, as well as managing them effectively.



Get deep insights into supply chain operations

Cooperate and work in teams

Be fact-driven but also creative



Strategy, yes. But when you go to war, you need to have both toilet paper and bullets at the right place at the right time. In other words, you must win through superior logistics." Tom Peters



### Who we are



### A few partners from our network...





### Overview of the master's program

(please see the Appendix for a detailed description of the courses)

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
Elective course	3	Smart Manufacturing and Operations	6	Thesis Seminar Basics	3	Thesis Seminar Advanced	6	
	15		15		15		15	





Entry requirements (in Hungarian): <u>Honnan hova tábla 2024</u>

Minimum amount of credits: 20 (of which at least 3 has to be logistics-related)

You can qualify automatically from these BSc programs: Business and Management (both Hungarian and English), Business Informatics, Commerce and Marketing, International Business, Data Science in Business

You need to have minimum 3 credits from logistics-related courses in these BSc programs: Applied Economics, Human Resources, International Relations, Finance and Accounting, Political Sciences, Sociology

We also recognize logistics-related work experience and other non-formal knowledge (see Study and Examination Regulations 55.§ (3)).



### Positions open to our graduates



#### Firm types

**SCM is independent of sectors** - production and trading companies, shared service centers, logistics service provider firms



*Functional areas*: production, logistics / distribution, supply or purchasing, strategic management, planning

#### Positions

- Logistics network supervisor
- Supply / demand planner
- ✓ Customer development specialist (B2B context)
- Supply chain business partner
- ✓ Network analyst, planner
- ✓ many more....





### **Community events**

#### Usually one bigger event per semester, such as ...



RTP

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Trip with company visit



Bowling or Pool Championship



Treasure hunt



Picnic



### **Student representatives**



Two students per class

They are selected by their fellow students



**During semester:** keeping contact with the department and the program director about questions that are important or relevant for the students; relaying the information to and from the students

After the exam period: joint meeting with the program director. The student reps collect feedback from the class about the semester (both positive and negative things) and have a discussion



### Thank you for your attention!

# Should you have any questions, do not hesitate to contact me ! <sup>(2)</sup>

### Zsolt MATYUSZ, Ph.D Program coordinator

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<u>https://www.uni-corvinus.hu/post/landing-page/msc-advanced-supply-</u> <u>chain-management/?lang=en</u>



### APPENDIX: COURSE DESCRIPTIONS PURCHASING AND SUPPLY MANAGEMENT

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
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	15		15		15		15	

The course aims to provide an introduction to the strategic objectives and tools of purchasing and supply management. Building on what has already been learned about procurement, the course will cover the concepts of category management and risk, the development of procurement strategy, market analysis and supplier management tools. By completing the course, students will understand how sourcing works in modern companies and why a strategic approach is important in this area.



#### APPENDIX: COURSE DESCRIPTIONS OPERATIONS STRATEGY AND RESEARCH

FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6
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	15		15		15		15

The course aims to provide a deeper understanding of operations strategy and examines operations networks and units that were created as an outcome of operations strategy. The course outlines the content of operations strategy and process of its formation, and explore the most important associated elements, like capacity management, facility location, process selection or facility layouts in detail. Possible resulting networks are analyzed, while looking at the roles of units and their relationship within a network. The course also presents tools and methods that can help in network modeling and evaluation. A further important aspect within these networks, namely knowledge capital will be examined along with best practices that allow efficient knowledge sharing.



#### APPENDIX: COURSE DESCRIPTIONS LAW OF LOGISTICS

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
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The course provides an opportunity to gain a deeper understanding of the types of contracts primarily used in logistics services and customer-supplier relations, and to practice the enforcement of performance by legal means. In addition to the liability and compensation issues arising in the course of tendering and performance, it is also essential to learn the basics of competition law relevant in everyday business life in this field. The lectures will be complemented by seminars and laboratory sessions, which will provide an opportunity to solve legal problems and discuss them in group work.



### APPENDIX: COURSE DESCRIPTIONS LOGISTICS AND DISTRIBUTION MANAGEMENT

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
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The course introduces students to the strategic issues of downstream logistics processes. The distribution logistics processes are responsible for the delivery of the finished product to the customer, and are therefore discussed from the perspective of how distribution logistics contributes to customer value creation. Once the long-term, strategic issues have been addressed, we will turn to the operation of the distribution system. Two of its processes are studied in more detail: transportation and warehousing. The aim is to train responsible and critical thinkers who are aware that the quality of their work also affects the ability of their colleagues to perform their tasks effectively.



### APPENDIX: COURSE DESCRIPTIONS SMART MANUFACTURING AND OPERATIONS

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
Elective course	3	Smart Manufacturing and Operations	6	Thesis Seminar Basics	3	Thesis Seminar Advanced	6	
	15		15		15		15	

The course aims to provide a deeper understanding of smart operations processes, including both manufacturing and service settings. It builds on existing knowledge of lean management and quality management by adding the important digital and human aspects. The course explores the effect of digitalization on lean management and quality management, examines state-of-the art technological solutions in contemporary operations management, and discusses how a lean system can be designed and introduced into an organization. For the human aspect, the course also investigates how workforce skills need to change because of digitalization and what kind of consequences it means to lean leadership and HR.



#### APPENDIX: COURSE DESCRIPTIONS SUPPLY CHAIN PLANNING

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
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The focus of the course 'Supply Chain Planning' is the analysis of functioning of resource planning systems in the context of enterprise planning processes. During the course students will be familiar with tactical and operational level production decisions (aggregate planning, scheduling, queuing), and also concepts and characteristics of inventory and demand forecasting problem solving, recognises inventory problems. The course highlights the S&OP process and its key concepts and the relationship between the different levels of planning. The aim of the course is to develop modelling skills and to provide new concepts and problem-solving tools applicable to the design and planning of supply chains. In order to ensure the goal, an important part of the seminar is solving different exercises, performing calculations. Student activity during and outside classes, and independent thinking plays a significant role in learning the different topics.



### APPENDIX: COURSE DESCRIPTIONS SUPPLY CHAIN CONTROLLING AND FINANCE

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
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	15		15		15		15	

The course provides an overall introduction to management accounting and controlling in supply chains. It provides overview management of financial considerations in a supply chain. The course will help students to acquire the skill of cost management and carefully selecting KPIs (Key Performance Indicators) of single entities in supply chains and for the entire supply chain. The course also deals with multiperspective performance management approaches and motivating employees.



### APPENDIX: COURSE DESCRIPTIONS SUPPLY NETWORK DESIGN FOR THE 22ND CENTURY

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
Elective course	3	Smart Manufacturing and Operations	6	Thesis Seminar Basics	3	Thesis Seminar Advanced	6	
	15		15		15		15	

The aim of the course is threefold: (1) demonstrating the relevance of sustainability and circularity within a supply networks, with special emphasis on stakeholders and customer value creation. (2) introducing the possible actions and solutions which can be applied within supply chains to further the sustainability performance of the whole network. (3) describing the different performance management tools and measurement systems within sustainable supply chains.

Supported by the theoretical bases, students will work with case studies and practical examples in order to gain up-to-date knowledge and skills needed for implementing sustainability to supply chains. The course prepares students for carrying out sustainability related projects for supply chain transformation, in order to <sup>20</sup>



### APPENDIX: COURSE DESCRIPTIONS SUPPLY CHAIN STRATEGY

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
Elective course	3	Smart Manufacturing and Operations	6	Thesis Seminar Basics	3	Thesis Seminar Advanced	6	
	15		15		15		15	

The aim of the course is to integrate the knowledge previously acquired in the Supply chain management master program from the perspective of strategically managing international supply chains and to build on this existing knowledge to further develop students' systems thinking and their ability to map, analyse and develop improvement proposals for supply chains.

Specifically, concepts and management solutions that can support the effective functioning of supply chains in our VUCA word will be discussed in detail. The design of resilient supply chains based on supply chain risk analysis will be highlighted. In addition to risk mapping and evaluating, the development of appropriate contingency plans, the course will address the problem of supply chain complexity and discuss the resulting management challenges.



#### APPENDIX: COURSE DESCRIPTIONS THESIS SEMINAR BASICS

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
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Elective course	3	Smart Manufacturing and Operations	6	Thesis Seminar Basics	3	Thesis Seminar Advanced	6	
8	15		15		15		15	

Preparation of the thesis and improving on the necessary skills and knowledge required to this task.



#### APPENDIX: COURSE DESCRIPTIONS THESIS SEMINAR ADVANCED

	FIRST SEMESTER				SECOND SEMESTER			
	CREDIT		CREDIT		CREDIT		CREDIT	
Purchasing & Supply Management	6	Law of Logistics	3	Supply Chain Planning	6	Supply Network Design for the 22nd Century	3	
Operations Strategy & Research	6	Logistics and Distribution Management	6	Supply Chain Controlling and Finance	6	Supply Chain Strategy	6	
Elective course	3	Smart Manufacturing and Operations	6	Thesis Seminar Basics	3	Thesis Seminar Advanced	6	
	15		15		15		15	

Preparation of the thesis and improving on the necessary skills and knowledge required to this task.