

Program Description

Master in Operations and Supply Chain Management

TASCM – Autumn 26

Decision taken by	Department board
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This template for programme descriptions was adopted by the Research and Education Board, HV 2022/508, 21 September 2022, editorial change 25 October 2022.

Programme description is a supplement to the programme syllabus which is the legally binding document.

Basic data

Department	Department of Engineering Science
Division	Division of Industrial Automation
Name of Programme, Swedish	Master i logistik och verksamhetsledning
Name of Programme, English	Master in Operations and Supply Chain Management
HE credits (number of credits)	120
Level (1st Cycle, 2nd Cycle)	2nd Cycle
Entry requirements, Swedish	Kandidatexamen alternativt en till omfattningen motsvarande högskoleingenjörsexamen inom företagsekonomi, informatik, systemvetenskap, industriell ekonomi, maskinteknik, elektroteknik, datateknik eller motsvarande. Engelska 6 eller Engelska nivå 2.
Entry requirements, English	Bachelor of Science in business administration, informatics, system science, computer science, industrial engineering and management, mechanical engineering, electrical engineering, or equivalent. English equivalent to English course 6 or English level 2 in the Swedish upper secondary school.
Main field of study, Swedish	Industriell ekonomi
Main field of study, English	Industrial Engineering and Management
Degree, Swedish	Teknologie masterexamen med inriktning mot logistik och verksamhetsledning
Degree, English	Degree of Master of Science (120 credits) with specialization in Operations and Supply Chain Management
Rate of study (full-time, part-time)	Full-time
Type of instruction (on campus, distance teaching)	Campus
Language of instruction (Sw, Eng)	English

General programme information

The Master in Operations and Supply Chain Management provides a holistic view that is applicable for students with diverse backgrounds. It gives you unique insights into the opportunities and challenges of information technology in the field, as well as an understanding of supply chain management and operations management. This programme prepares you for a leadership role where you help form a bridge between industrial operations and other aspects of companies and organisations, leveraging technologies to positively impact business and support greater sustainability.

University West is Sweden's leading university in work-integrated learning (WIL). We were tasked with the development of WIL by the Swedish government 17+ years ago and continue to lead the field today. This approach focuses on problem-based learning for industry and gives you access to real projects from partner companies and research centres.

Your courses and teachers are connected to the active research of Production Technology West (PTW), internationally recognised for work in production systems and processes in the manufacturing industry.

We built your programme in close collaboration with corporate partners – and your programme can also include an optional internship. The skills you'll develop make you very valuable to employers. The programme also offers a pathway to doctoral studies with a Work-Integrated Learning approach or a focus within the area of Production Systems.

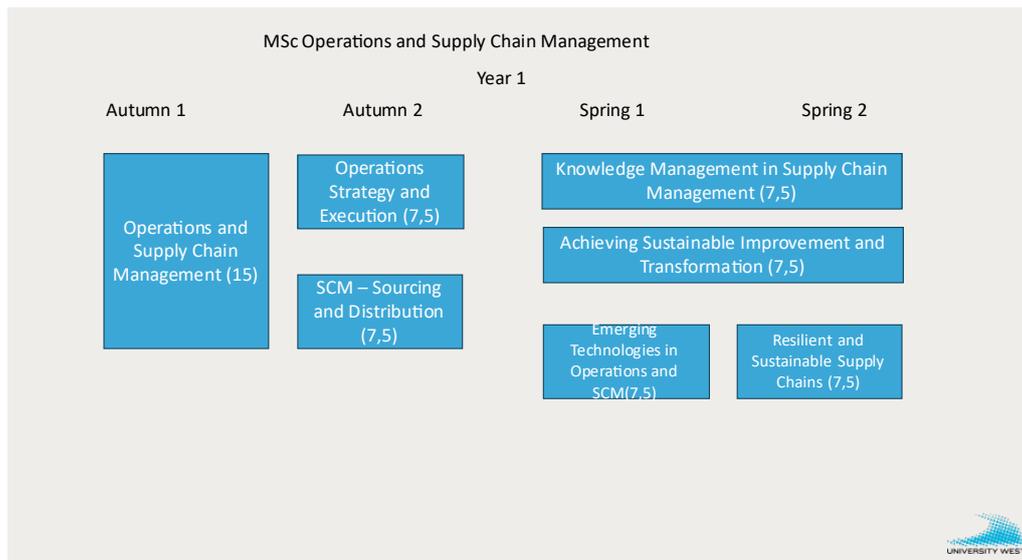
Programme contents, structure, and progression

This programme prepares you for a leadership role where you help form a bridge between industrial operations and other aspects of companies and organisations. You'll learn how to leverage information technology as a powerful tool, as well as develop a strong understanding of the business and organisational aspects of management, design, planning and development of industrial operations and supply chains. Learn best practices using LEAN principles in Sweden, well established in manufacturing and building systems that tie together IT tools, knowledge and management.

Increasingly complex systems require collaboration, a broad knowledge base, communication, innovation and effective problem-solving. Gain important technical and contextual knowledge from multiple perspectives, including from within the

company and across the entire supply chain. You'll build a holistic view of supply chain management, whether your background is in business administration, industrial economics, engineering and more.

Programme overview



Electives offered by the school include International Business (7,5 ECTS) and Lean, Agile and Six Sigma – Project Work (15 ECTS).

Upon completion of this master's programme, you will receive a Master in Operations and Supply Chain Management (MSc, 120 credits).

The research basis for the programme

The programme draws on the strong research area of production technology, where the focus area of operations and supply chain management resides. Connections are made to ongoing research and a varied group of researchers within the area. Notably ongoing research is brought into the programme for relevant courses, for example in the topics of supply chain resilience, knowledge management or quality management. The courses are made to have a clear connection to the overall programme idea but also to build on the specialist competence available at the school. Students will have to familiarize themselves with the research frontier for many topics, through the use of academic articles and other sources. Connections to WIL are seen as important for the programme considering that many managerial issues arise as part of operations management.

The labour market, collaboration, and work-integrated learning¹

After completing the programme, you'll be prepared to create value and increase resilience within your company and across the wider supply chain – even when disruptive events strike, such as pandemics, political unrest and more.

Key industry data points (Source: Zippia.com):

The global supply chain market is valued at \$15.85 billion, and it is expected to experience a CAGR of 11.2% from 2020 to 2027 (increasing from \$15.85 billion to \$37.41 billion in eight years)

¹ Work-integrated learning is a pedagogical practice in which students' learning takes place through the integration of theoretical and practical knowledge and experience, derived from an educational context within the framework of both higher education as a work environment and civil society.

The Transportation Management System is expected to have a CAGR of 11.7% from 2021 to 2028 (increasing from \$120.70 billion to \$261.89 billion in seven years)

The Global Logistics Automation Market has the highest CAGR of any supply chain market, at a predicted rate of 12.4% (increasing from \$50.9 billion to \$82.3 billion in six years)

As a result, graduates of this programme can anticipate having their choice of jobs across many industries and in many countries – from a career in industry to advanced research in academia, both in Sweden and abroad.

On graduation, you will be highly competitive for positions within the private sector or for further PhD studies:

- Logistics manager
- Logistics and production coordinator
- Strategic buyer
- Production planner
- Project manager
- Lean coordinator
- Organisational/business developer

Sustainable development

Sustainability is a central issue in the programme given the very considerable impact of supply chains on sustainability issues, and the potential for improvement through a holistic view of the supply chain. The triple-bottom line and the issue of tradeoffs between different goals can be related to many topics within the programme such as transportation, location of production or product life-cycles. Indeed, topics such as humanitarian logistics and resilience are fundamentally related to different aspects of sustainability. By considering the impact of actions in one part of the supply chain on both other parts and other actors, students start to see the inherent challenges and possible solutions to complex sustainability problems.

Internationalisation

Students from around the globe come together to create a unique and international environment. Your programme is fully taught in English, and you will study together

with students from Sweden as well as international students from countries in Asia, Europe, Africa and North and South America.

Most of your instructors also have international experience in both research and education. This will enhance your cultural experience and English-language proficiency.

The programme has been built with a mobility window in the Autumn term of the second year during which students are free to pick programme-relevant courses at partner universities. To ensure a smooth return, a methods course is run in a hybrid format during this window to prepare students for the 30 ECTS thesis in the last term.