Valid from 2024.HS

# Module description: Supply Chains – Value Chains

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| **Module Code** | w.MA.XX.SCVC.23HS |
| **ECTS Credits** | 3 |
| **Language of Instruction/Examination** | English |
| **Module Description** | In today's complex and uncertain environment, every organization wants its extended value chain to be more sustainable from an economic, environmental, and social perspective. The circular economy is seen as a practicable strategy to improve supply chain resiliency, resource efficiency, process design, cost saving, and competitiveness. This module begins with the basics of the supply chain and how it has evolved to the present day. It then covers the configuration of a circular supply chain by examining its characteristic drivers and barriers and highlights how it is involved in value creation, delivery, and maintenance. Special consideration is given to the key functions, processes, and enablers in setting up a circular supply chain. Finally, the module looks at the implementation of a circular supply chain and its interaction with business model innovation. |
| **Organizational Unit** | IMI Ltg. |
| **Module Coordinator** | Marc Schmid |
| **Deputy Module Coordinator** | Maike Scherrer |
| **Program and Specialization** | • Circular Economy Management |
| **Legal Framework** | Academic Regulations MSc in Circular Economy Management dated 02.06.2022, Appendix to the Academic Regulations for the degree program in Circular Economy Management, first adopted on 23.09.2022 |
| **Module Category** | **Module Type**<br>Compulsory |
| **Prerequisite Knowledge** | Global supply chain management.<br>Organizational and operational management.<br>Fundamentals of international business. |
| **Contribution to Program Learning Objectives (by the concerned Module)** | • Professional Competence<br>• Methodological Competence<br>• Social Competence<br>• Self-Competence |
| **Contribution to Program Learning Objectives** | **Professional Competence**<br>• Knowing and Understanding Content of Theoretical and Practical Relevance<br>• Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance<br>• Evaluate Content of Theoretical and Practical Relevance<br>**Methodological Competence**<br>• Problem-Solving & Critical Thinking<br>• Scientific Methodology<br>• Work Methods, Techniques, and Procedures<br>• Information Literacy<br>• Creativity & Innovation<br>**Social Competence**<br>• Written Communication<br>• Oral Communication<br>• Teamwork & Conflict Management<br>• Intercultural Insight & Ability to Change Perspective<br>**Self-Competence**<br>• Self-Management & Self-Reflection<br>• Ethical & Social Responsibility<br>• Learning & Change |

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**Module Learning Objectives**

Students...
- understand the current supply chains, their economic justification, and their environmental and material impact.
- can identify drivers and barriers in the implementation of a circular supply chain.
- can explain the role of key functions and processes in the operationalization of value retention options.
- can explain the role of key enablers required for closing the loops.
- can identify the changes required in a supply chain to support circular business models.
- can evaluate how an organisation can transform circular economy principles into a supply chain strategy.

**Module Content**

- Fundamentals of a supply chain - from distribution logistics to circular supply chain management.
- Fundamentals of a supply chain - the business dimension of a supply chain.
- Fundamentals of a supply chain - the technical dimension of a supply chain.
- Configuration of a circular supply chain- new value and supply chains in a circular economy.
- Configuration of a circular supply chain - circular supply chain operations: upstream.
- Configuration of a circular supply chain - circular supply chain operations: midstream.
- Configuration of a circular supply chain - circular supply chain operations: downstream.
- Circular supply chain enablers - digital technologies.
- Circular supply chain enablers -performance measures.
- Circular supply chain enablers - collaboration.
- Implementation of a circular supply chain - business model and supply chain: Remanufacturing.
- Implementation of a circular supply chain - business model and supply chain: Product-service systems.
- Implementation of a circular supply chain -case study: Presentation 1.
- Implementation of a circular supply chain - case study: Presentation 2.

**Links to other modules**

This module is linked to the following modules:

**Digital Learning Resources**

- Teaching Videos
- Teaching Materials
- Practice and Application Exercises (with Key)
- Case Studies (with Key)

**Methods of Instruction**

- Lecture
- Case Studies
- Explorative Learning
- Interactive Instruction
- Problem-Oriented Teaching

Social Settings Used:
- Group Work
- Individual Work

**Type of Instruction**

| | Classroom Instruction | Guided Self-Study | Autonomous Self-Study |
|---|---|---|---|
| Lecture | 24 h | 24 h | |
| Excercise | - | - | |
| Project Work | 4 h | 22 h | |
| Seminar | - | - | |
| **Total** | **28 h** | **46 h** | **16 h** |

**Performance Assessment**

| End-of-module exam | Form | Length (min.) | Weighting |
|---|---|---|---|
| Written exam | closed book | 60 | 70 |
| **Permitted Resources** | No calculator | With dictionary | |

| Others | Assessment | Length (min.) | Weighting |
|---|---|---|---|
| Talk/oral presentation | Grade | 20 | 30 |

**Classroom Attendance Requirement**

80%

This module has an 80% attendance requirement (owing to the chosen teaching concept).

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| **Compulsory Reading** | |
| **Recommended Reading** | • Christopher, M. (2023). Logistics & supply chain management. 6th Edition. Harlow: Pearson. ISBN 9781292416182.<br>• Weetman, C. (2020). A Circular Economy Handbook: How to Build a More Resilient, Competitive and Sustainable Business 2nd Edition. London: Kogan Page. ISBN 9781789665314.<br>• Weenk, E. (2019). Mastering the Supply Chain: Principles, Practice and Real-Life Applications. London: Kogan Page. ISBN 9780749484484.<br>• Cohen, S. & Roussel, J. (2013). Strategic Supply Chain Management: The Five Disciplines for Top Performance, 2nd Edition. New York: McGraw-Hill. ISBN 9780071813082. |
| **Comments** | |