
ISM-COURSE HANDBOOK

M.SC. INTERNATIONAL LOGISTICS & SUPPLY CHAIN MANAGEMENT

VERSIONS WITH 4 SEMESTERS (120 ECTS-CREDITS): VALID FOR STUDENTS STARTING FROM
WINTER SEMESTER 2026/27

VERSIONS WITH 3 SEMESTERS (90 ECTS-CREDITS): VALID FOR STUDENTS STARTING FROM
WINTER SEMESTER 2026/27

(VERSION OF MAY 2026)

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STUDY PLAN (120 ECTS)

1. Semester Wintersemester	ECTS	2. Semester Sommersemester	ECTS	3. Semester Wintersemester	ECTS	4. Semester Wintersemester / Sommersemester	ECTS
Transportation Modes & Business Models	6	Advanced Operations Management	6	Study Abroad	24	Master's Thesis	30
Land & Sea Transport	2	Process Optimization	2	Electives - depending on ISM partner university and individual specialization	24	Master's Thesis	30
Aviation Transport	2	Quality Management	2				
Field Studies: Infrastructure Management	2	Global E-Commerce Supply Chains	2				
International Operations Management	6	Monitoring & Risk Management in Logistics & SCM	6				
Integrated Supply Chain Design	2	Cost Management & Control	2				
Sourcing & Procurement	2	Performance Drivers & Measurement	2				
Logistics & Production Management	2	Operations Risk Management	2				
Global Environment of Logistics & SCM	6	Business Analytics in Logistics & SCM	6				
Digital & Sustainable Supply Chains	2	Quantitative Methods & Operations Research	2				
Ecology & Economics	2	Data Science & Business Intelligence	2				
International Transport & Logistics Law	2	Process Mining	2				
Organizational Development in Logistics & SCM	6	Project Work in Logistics & SCM	6				
Resilient Strategy Development	2	Research Methods & Scientific Working	1				
HR & Talent Management	2	Project Management & Consulting Instruments	1				
Innovation & Business Transformation	2	Consulting Project	4				
Leadership Skills	6	Internship	12				
Corporate Governance & Business Ethics	2	Practical experience phase I	6	Practical experience phase II	6		
Negotiation, Communication & Executive Presentations	2						
Cross Cultural Leadership	2						
Gesamt	30	Gesamt	30	Gesamt	30	Gesamt	30

**) Subject to modifications*

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STUDY PLAN (90 ECTS)

1. Semester Wintersemester	ECTS	2. Semester Sommersemester	ECTS	3. Semester Wintersemester / Sommersemester	ECTS
Transportation Modes & Business Models	6	Advanced Operations Management	6	Master's Thesis	30
Land & Sea Transport	2	Process Optimization	2	Master's Thesis	30
Aviation Transport	2	Quality Management	2		
Field Studies: Infrastructure Management	2	Global E-Commerce Supply Chains	2		
International Operations Management	6	Monitoring & Risk Management in Logistics & SCM	6		
Integrated Supply Chain Design	2	Cost Management & Control	2		
Sourcing & Procurement	2	Performance Drivers & Measurement	2		
Logistics & Production Management	2	Operations Risk Management	2		
Global Environment of Logistics & SCM	6	Business Analytics in Logistics & SCM	6		
Digital & Sustainable Supply Chains	2	Quantitative Methods & Operations Research	2		
Ecology & Economics	2	Data Science & Business Intelligence	2		
International Transport & Logistics Law	2	Process Mining	2		
Organizational Development in Logistics & SCM	6	Project Work in Logistics & SCM	6		
Resilient Strategy Development	2	Research Methods & Scientific Working	1		
HR & Talent Management	2	Project Management & Consulting Instruments	1		
Innovation & Business Transformation	2	Consulting Project	4		
Leadership Skills	6	Internship	6		
Corporate Governance & Business Ethics	2	Practical experience phase I	6		
Negotiation, Communication & Executive Presentations	2				
Cross Cultural Leadership	2				
Gesamt	30	Gesamt	30	Gesamt	30

**) Subject to modifications*

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MODULES

Advanced Operations Management

Module code ILS5		Semester 2		Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English		Intake Summer semester		Hours per week (SWS) 6	
1	Lectures of the Module			Hours of presence	Hours of self-study	Total workload (h)	SWS
	Process Optimization			18	42	60	2
	Quality Management			18	42	60	2
	Global E-Commerce Supply Chains			18	42	60	2
2	Content This module is based on the module “International Operations Management” from the first semester. It deepens the operations management knowledge by focusing on the details of process and quality management. Students will gain insight into the key operations processes, their management and optimization, and they will understand the relevance and implementation of profound quality management. This module also broadens the knowledge by adding the e-commerce supply chains as a special form with rapidly increasing importance. Process Optimization This course focuses on the definition, design, management, and implementation of logistics and SCM processes. Thereby, process management concepts for logistics are presented and discussed (e.g. SCOR model). By using a general logistics process model, prevailing logistics functions and interfaces are described. The course covers: ▪ Key processes in logistics and in the supply chain ▪ Process chains and drivers ▪ Process flows and description ▪ Enterprise Resource Planning (ERP) ▪ Assessment and simulation of logistics processes Quality Management Quality management is another important corporate cross-divisional process. This course covers the focus and interfaces between the supply chain and quality management processes. Relevant quality management concepts will be taught, discussed, and applied.						

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	Furthermore, the linkage between quality and logistics is explained – focusing on understanding the logistics process as a performance measurement process. The course covers: ▪ Quality assurance and assessment criteria ▪ Quality gates ▪ Compliance/audit management ▪ Statistical process control ▪ Failure mode and effects analysis (FMEA) ▪ Hazard analysis & critical control points ▪ Supply chain quality improvement program ▪ Quality management methods: DMAIC, PDCA cycle ▪ Methods for process quality improvement: ISO, quality function deployment, Kaizen, Zero Defect Program, Six Sigma, quality circle, total quality management and business process reengineering ▪ Quality costs Global E-Commerce Supply Chains This course is primarily focused on how to establish, implement, and maintain network management in the context of e-commerce. Questions, such as “Which ‘mover & shaker’ or network operator will have the highest influence on global networks in 5 years from now?”, “Are global e-commerce networks complex?”, “Is brick & mortar retail doomed to lose against e-commerce?”, “How to manage a global network for e-commerce?”, are discussed in class. This course covers: ▪ Network Management: framework, basic elements and functionalities ▪ State of the global e-commerce market and midterm outlook ▪ E-commerce strategies and providers ▪ Possible implications and requirements for future global networks ▪ ‘Movers & shakers’ for managing global e-commerce networks ▪ Key network options – from pick-up to destination country ▪ Attractiveness drivers and cross-border network models ▪ The last mile: the urban consumer today and their preferences ▪ Key network elements and functionalities ▪ Network design options for global e-commerce within and outside of the ‘postal world’
3	Learning outcomes ▪ The following competencies will be trained in the context of this module: ▪ Students deepen their understanding of supply and value chain management. ▪ Students are capable of defining and designing logistics and SCM processes by themselves. ▪ They are able to assess process performance with the help of indicators and process models.

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	▪ They know the interfaces between logistics/SCM and other cross-divisional corporate processes (quality, finance, marketing, IT, etc.). ▪ They are capable of transferring logistics performance to quality management purposes. ▪ Students realize the relevance of a corporate process model for proper ERP design. ▪ They are aware of the impact that adequate quality management has on corporate success and can apply different quality management methods. ▪ They have deep knowledge of e-commerce. ▪ They have profound knowledge of network entities like destinations, hubs, spokes, and frequencies. ▪ Students have built up robust knowledge that enables them to participate in operations management discussions in daily corporate life and advance their individual view. ▪ Using real-life cases in class assures that students are sensitized for their future business context and able to analyze and structure business situations autonomously. ▪ By working jointly on realistic problem sets, students have further strengthened their teamwork competences and their applied analytical skills.
4	Teaching and learning methods ▪ Lectures ▪ Discussions ▪ Group work ▪ Case studies/exercises/simulations
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: "International Operations Management"
6	Combinations with other study areas Applicability within the study course: "Monitoring & Risk Management in Logistics & SCM", "Business Analytics in Logistics & SCM" and "Project Work in Logistics & SCM". Applicability for other study courses: none
7	Type and duration of exam Term paper (7,000 words)
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90 ECTS)
9	Special -
10	Literature

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<u>Required reading:</u> Bowersox, D; Closs, D., Cooper, M. B. (2020): Supply Chain Logistics Management, 5th ed. New York: McGraw-Hill Education. Chapman. S.; Arnold, J. R. T.; Gatewood, A.; Clive. L. (2016): Introduction to Materials Management. 8th ed. Harlow: Pearson Education Limited. Heizer, J.; Render, B.; Munson, C. (2021): Principles of Operations Management: Sustainability and Supply Chain Management. Global 11th ed. Harlow: Pearson Education Limited. Lysons, K. Farrington, B. (2020): Procurement and Supply Chain Management. 10th ed. Harlow: Pearson Education Limited. Stock, J. R.; Manrodt, K. B. (2020): Supply Chain Management. New York: McGraw-Hill Education. <u>Supplementary literature:</u> Jacobs, F. R.; Chase, R. (2019): Operations and Supply Chain Management. 16th global ed. Maidenhead: Mc Graw Hill Education. Mangan, J.; Lalwani, C. L. (2016): Global Logistics and Supply Chain Management. 3rd ed. Hoboken: John Wiley & Sons. Nahmias, S.; Lennon Olsen, T. (2015): Production and Operations Analysis: Strategy - Quality - Analytics - Application. 7th ed. Long Grove: Waveland Press. Slack, N.; Brandon-Jones, A. (2019): Operations Management. 9th ed. Harlow: Pearson Education Limited.
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Business Analytics in Logistics & SCM

Module code ILS7		Semester 2		Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English		Intake Summer semester		Hours per week (SWS) 6	
1	Lectures of the module			Hours of presence	Hours of self-study	Total workload (h)	SWS
	Quantitative Methods & Operations Research			18	42	60	2
	Data Science & Business Intelligence			18	42	60	2
	Process Mining			18	42	60	2
2	Content This module covers relevant quantitative and analytical methods that are relevant for students' future careers as operations managers. One focus of this module is business and data analytics in times of Big Data and Industry 4.0. Students get an overview of the most commonly used algorithms for network optimization and route planning. Furthermore, they will get the latest knowhow of supply chain analytics and data warehousing and learn how to use available operations data for process analysis and enhancement. Quantitative Methods & Operations Research - Fundamental concepts in modeling and decision analysis - Optimization and linear programming exploring various problems such as determining product mix, routing and logistics, and financial planning - Modeling and solving linear programming exploring problems such as make vs. buy, investment analysis, transportation, and production and inventory - Sensitivity analysis and the simplex method regression analysis, understanding how changes to assumptions impact decisions - Introduction to simulation using Risk Solver Platform to understand and model decision making under uncertainty - Decision analysis Data Science & Business Intelligence - Importance of data and information flows for competitive advantage in the enterprise - Principles and techniques of supplying and analyzing data (e.g. data warehouse, NoSQL) as well as machine learning - Digital knowledge management techniques (e.g. neural networks, generic algorithms) - Current examples from business practice and application examples for data-driven evaluations and business decisions - Industrial trends in IT-based management and evaluation of data sets						

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	- Research trends and scientific discourse on data management Process Mining - Importance of processes and process data for competitive advantage in the enterprise and the shift of the process mindset - Theoretical foundations of process mining - Principles and techniques of process mining (e.g. discovery, conformance and enhancement) - Process mining applications - Case studies, best practices and application examples - Industrial trends in intelligent business process execution (e.g. automation, machine learning)
3	Learning outcomes The following competencies will be trained in the context of this module: - Students learn how important data and information is for managing value chains. - They are able to carry out multidimensional data analyses, analyze time series with mathematical methods, and apply Microsoft Excel as a decision-supportive tool. - They are able to choose the appropriate instrument for optimizing logistic problems under constraints like risk and insecurity. - They know the relevance and the approach of business modeling and are able to apply different types of algorithms and evaluate their restrictions. - Students understand the value of raw data and business analytics. - They know the interconnection between logistics and data warehousing, know the benefits of big data analytics and are able to design simple BI-solutions. - They can design digital data science methods and tools conceptually for complex operations-related business questions. - They are able to use process-oriented data science skills and reconstruct processes from event log data. - Students will be able to work with others in a focused fashion and defend their assessments and opinions with arguments. - Students will be able to present complex issues to a larger audience in a clear, concise manner. - Students will be able to act independently and responsibly, and further develop their capacity for action. In particular, they will be able to use the knowledge they have acquired for more intensive self-reflection with regard to work methods and time management.
4	Teaching and learning methods - Lectures - Discussions - Case studies/simulations - Group work

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5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: “Monitoring & Risk Management in Logistics & SCM”, “Project Work in Logistics & SCM” and “Master Thesis” Applicability for other study courses: none
7	Type and duration of exam Written exam (120 minutes)
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90ECTS)
9	Special -
10	Literature <u>Required reading:</u> Ragsdale, C. T. (2017): Spreadsheet Modeling and Decision Analysis: A Practical Introduction to Business Analytics. 8 th ed. Boston: Cengage Learning. Reinkemeyer, L. (2020): Process Mining in Action. Principles, Use Cases and Outlook. Springer. Sharda, R.; Delen, D.; Turban, E.; King, D. (2014): Business Intelligence: A Managerial Perspective on Analytics. Pearson. Additional recent scientific journal articles will be covered in class. <u>Supplementary literature:</u> Margaret, B.; Eshwar, B. (2015): Database Systems with Case Studies. PHI. O’Neil, C.; Schutt, R. (2013): Doing Data Science: Straight Talk from the Frontline. O’Reilly. van der Aalst, W.M.P. (2016): Process Mining – Data Science in Action. 2 nd edition. Springer: Heidelberg.

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Global Environment of Logistics & SCM

Module code ILS3		Semester 1	Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English	Intake Winter semester		Hours per week (SWS) 6	
1	Lectures of the Module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Digital & Sustainable Supply Chains		18	42	60	2
	Ecology & Economics		18	42	60	2
	International Transport & Logistics Law		18	42	60	2
2	Content This module covers relevant factors that have a direct impact on business in the logistics and supply chain environment: current and future trends, economics as well as regulations. The contents of this module are, therefore, oriented towards the latest developments in the technological and organizational operations environment, global regulations, macroeconomic settings as well as international ecological standards. Digital & Sustainable Supply Chains This course critically discusses the current trends in logistics and supply chain management. One focus is digitization as a disruptive movement: digital transformation and digital supply chain management. In this context, topics such as Industry 4.0, smart factory, artificial intelligence, automation, robotics, virtual reality and their disruptive potential will be analyzed in depth. Simultaneously, aspects of sustainable supply chains are discussed: smart city, smart logistics, smart mobility, smart packaging. The course covers: ▪ Digitization, digital transformation and digital supply chain management ▪ Digital technologies and internet of things (IOT) ▪ Digital ecosystem ▪ Digital technologies as enablers: new business models ▪ Process model for digital transformation ▪ History and definition of sustainability and corporate social responsibility ▪ Sustainable supply chain management: transport, warehousing, product design, production, reverse logistics, recycling Ecology & Economics This course provides an overview of relevant economic concepts for logistics and supply chain management, such as market equilibria, monopolistic market structures, asymmetric information, free rider problem, etc. Also, the concept of international trade with its					

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	relationships, gains and losses, restrictions, and resulting changes in welfare as well as current trade conflicts are discussed in depth. The second part of this course focuses on the ecological aspect of sustainability. Consequences of increasing transport activities on the global climate, different types of emissions and their impact on the environment, regulation and business are discussed in detail. Students will be enabled to critically reflect on these economic and ecological issues and learn how to handle sustainable approaches in daily logistics and SCM practice. The course covers: ▪ Population growth, affluence and the environment ▪ The concept of sustainable development ▪ Ethics, economics and the environment ▪ Welfare economics and the environment ▪ Trade and the environment ▪ The effect of free trade ▪ The GATT and the environment ▪ GHG emissions, climate change and logistics ▪ Green logistics and decarbonization International Transport & Logistics Law This course provides basic knowledge and expertise on international law and regulations that directly affect transport, logistics and external supply chain activities. It gives an overview of the legal issues arising in international legal transactions. Moreover, it focuses on adequate methodologies to approach them, in particular the drafting of frame agreements. This includes explanations of reasonable clauses in contracts. Transport policy as well as lobbying activities – e. g. associations – are also discussed with reference to practical examples and international cases. The course covers: ▪ Basics of international law (Brussels/Rome regulations) ▪ Sources of transport and logistics law (CMR, MC, CIM, Commercial Code) ▪ Topics of regulation ▪ Different types of agreements (e.g. forwarding contract, warehousing, service, purchase contract) ▪ Terms & conditions ▪ Incoterms ▪ Outsourcing ▪ Clauses of agreements.
3	Learning outcomes The following competencies will be trained in the context of this module: ▪ Students are aware of current trends in logistics and supply chain management and their potential impact on practice.

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	▪ They understand the influence of logistics on the ecological environment and are able to calculate the influences. ▪ They know about the external costs of logistics as well as energy consumption of supply chain management. ▪ They know about state of the art solutions to approach ecological issues and are able to develop green strategies and concepts. ▪ Students are able to understand and structure the fundamentals of transport law. ▪ They are capable of understanding contracts and assessing the influence of transport law in daily SCM practice. ▪ They are aware of the importance and impact of lobbying and specific methods. ▪ Students realize that supply chain managers have to keep the ecological impact in mind – management from a sustainable perspective. ▪ They realize that operations frameworks, standards and regulations might differ internationally with major impact on international trade. ▪ They are able to understand and to anticipate the balance of power in networks. ▪ Students are able to think along the triple bottom line and act with an interdisciplinary mindset by realizing the different requirements of the supply chain partners. ▪ They can critically reflect on existing systems and work on improved solutions.
4	Teaching and learning methods ▪ Lectures ▪ Discussions ▪ Group work ▪ Case studies
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: “Transportation Modes & Business Models”, “International Operations Management”, “Advanced Operations Management”, “Monitoring & Risk Management in Logistics & SCM” and “Project work in Logistics & SCM”. Applicability for other study courses: none
7	Type and duration of exam Written exam (120 minutes)
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90ECTS)
9	Special

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10	Literature <u>Required reading:</u> Evans, M. (2018): International Law. 5th ed. Oxford: Oxford Univ. Press. Grant, D. B. / Trautrim, A. / Wong, C. Y. (2017): Sustainable Logistics and Supply Chain Management. Principles and Practices for Sustainable Operations and Management. 2nd ed. London: Kogan Page. McKinnon, A. (2018): Decarbonizing Logistics: Distributing Goods in a Low Carbon World. London: Kogan Page. Stark, J. (2020): Digital Transformation of Industry – Continuing Change. Geneva: Springer. <u>Supplementary literature:</u> Dixon, M. (2013): Textbook on International Law. 7th ed. Oxford: Oxford Univ. Press. Evans, M. (2019): Blackstone's International Law Documents. 14th ed. Oxford: Oxford Univ. Press. Fullerton, D., Stavins, R. (1998): How do economists see the environment. Nature 395: 433-434. McKinnon, A. / Browne, M. / Whiteing, A. / Piecyk, M. (2015): Green Logistics: Improving the Environmental Sustainability of Logistics. London: Kogan Page. Perman, R. / Ma, Y. / Common, M. / Maddison, D. / McGilvray, J. (2011): Natural Resource and Environmental Economics, 4th ed. Harlow: Pearson Education Limited. Shaw, M. N. (2014): International Law. 7th ed. Cambridge: Cambridge Univ. Press.

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International Operations Management

Module code ILS2		Semester 1	Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English	Intake Winter semester		Hours per week (SWS) 6	
1	Lectures of the module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Integrated Supply Chain Design		18	42	60	2
	Sourcing & Procurement		18	42	60	2
	Logistics & Production Management		18	42	60	2
2	Content This module provides a profound understanding of international operations with its integrated processes, international players, and relevant analytical methods and tools. Operations management is tripartite in this context: students will gain insight into global sourcing and procurement practices; they will discuss corporate logistics processes and related fields; and they will learn how to integrate all operations activities in the context of a customer-centric supply chain management. The theoretical-methodical concepts, which are discussed in class, will be applied directly and complemented by in-class case studies. Integrated Supply Chain Design This course covers the analysis, design and critical discussion of different supply chain concepts and organizations. In addition to classic approaches, the focus lies upon customer-centric approaches that consider the end customer as key for the design of the corporate supply chain or even supply network. The identification and integration of the relevant supply chain actors, the corresponding process design and the handling of the emerging complexity – especially within global supply networks are major parts of the course. The course covers: ▪ Classic supply chain approaches and models ▪ Operations process analysis, design, and management ▪ The concept of customer-centric supply chains and their management within different industries ▪ Lean management approaches ▪ Supply chain complexity: current trends and their impact on supply chain designs. Sourcing & Procurement Students learn about the emerging role of sourcing and procurement and discuss its value contribution within an international corporate setting. The course provides a short introduction to operational procurement tasks and then focuses upon strategic sourcing aspects. During the entire course, all theoretical knowledge will be directly applied to an accompanying in class case study.					

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	The course covers: ▪ Roles and responsibilities of the sourcing department ▪ Supply collaboration and networks ▪ Quantitative-methodical analyses as basis for the development of global commodity strategies ▪ Strategic supplier selection and portfolio management ▪ Operationalizing and monitoring commodity strategies ▪ Supply savings and performance measurement. Logistics & Production Management This course focuses on the principles of logistics management. Students will learn about classic logistics concepts, inventory management practices, and warehousing techniques and bring those in relation to different production layouts. They will also discuss industry-specific logistics solutions and the current and future mobility trends with their impact on the corporate triple bottom line. The course covers: ▪ Logistics strategy & total cost concept ▪ Inventory management: inventory planning, forecasting demand ▪ Warehouse management: storing principles, order picking, location planning ▪ Industrial logistics: design for logistics, just-in-time logistics ▪ Retail logistics: retail distribution and ECR, multi-level distribution systems, cross-docking, urban logistics ▪ Logistics services: logistics outsourcing, logistics service concepts ▪ Analysis of different production layouts.
3	Learning outcomes The following competencies will be trained in the context of this module: ▪ Students understand the importance of considering operations management as an internally and externally integrated production, supply, and logistics network and as significant part of the corporate value creation. ▪ They are aware of the relevance and bottom line impact potential of operations and understand the development, which these formerly traditional functions have been undergoing. ▪ Students can follow the perspective of operations management in business discussions and understand its required role, especially in the context of industry 4.0. ▪ They know and can apply operations methods and tools and are hence able to lead operations-related discussions and support strategic and operating decision-making. ▪ Students understand the components of a sustainable and successful supply chain process (incl. sourcing, production and logistics) and are well-equipped for applying their obtained knowledge directly in practice – being aware of future trends and developments. ▪ Students have further increased their strategic understanding and trained to apply operations methods and tools effectively in real situations by means of case study work.

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	▪ Students have built up robust knowledge that enables them to participate in operations management discussions in daily corporate life and to advance their individual view solidly. ▪ Using real-life cases in class assures that students are sensitized for their future business context and able to analyze and structure business situations autonomously. ▪ By working jointly on realistic problem sets, students have further strengthened their teamwork competences and their applied analytical skills.
4	Teaching and learning methods ▪ Lectures ▪ Discussions ▪ Group Work ▪ Case studies
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: "Transportation Modes & Business Models", "Global Environment of Logistics & SCM", "Organizational Development in Logistics & SCM", "Advanced Operations Management", "Monitoring & Risk Management in Logistics & SCM", "Business Analytics in Logistics & SCM", "Project Work in Logistics & SCM". Applicability for other study courses: none
7	Type and duration of the exam Term paper (7,000 words)
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90 ECTS)
9	Special -
10	Literature <u>Required reading:</u> Bowersox, D.; Closs, D., Cooper, M. B. (2020): Supply Chain Logistics Management, 5 th ed. New York: McGraw-Hill Education. Chapman. S.; Arnold, J. R. T.; Gatewood, A.; Clive. L. (2016): Introduction to Materials Management. 8 th ed. Harlow: Pearson Education Limited. Christopher, M. (2016): Logistics and Supply Chain Management. 5 th ed. Harlow: Pearson Education Limited.

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	Gattorna, J. (2015): Dynamic Supply Chains: How to design, build and manage people-centric value networks. Harlow: Pearson Education Limited. Heizer, J.; Render, B.; Munson, C. (2021): Principles of Operations Management: Sustainability and Supply Chain Management. Global 11th ed. Harlow: Pearson Education Limited. Lysons, K. Farrington, B. (2020): Procurement and Supply Chain Management. 10th ed. Harlow: Pearson Education Limited. Stock, J. R.; Manrodt, K. B. (2020): Supply Chain Management. New York: McGraw-Hill Education. <u>Supplementary literature:</u> Mangan, J.; Lalwani, C. L. (2020): Global Logistics and Supply Chain Management. 4th ed. Hoboken: John Wiley & Sons. Mena, C.; van Hoek, R., Christopher, M. (2021): Leading Procurement Strategy. Driving Value through the Supply Chain. 3rd ed. London: Kogan Page. Nahmias, S.; Lennon Olsen, T. (2015): Production and Operations Analysis: Strategy - Quality - Analytics - Application. 7th ed. Long Grove: Waveland Press. Slack, N.; Brandon-Jones, A.; Johnston, R. (2019): Operations Management. 9th ed. Harlow: Pearson Education Limited. van Weele, A. J. (2018): Purchasing and Supply Chain Management. 7th ed. Boston: Cengage Learning.
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Internship

Module code PR		Semester Flexible	Duration 12 weeks (120 ECTS program) or 6 weeks (90 ECTS program)		ECTS credits 12 (120 ECTS program) or 6 (90 ECTS program)	
Course type Compulsory		Language Depending on the company	Intake Each semester, in the semester break		Hours per week (SWS) 0	
1	Lectures of the module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Practical experience phases (120 ECTS program)		0	360	360	0
	Practical experience phases (90 ECTS program)		0	180	180	0
2	Content Internships provide students with direct insights into daily business life regarding operational, technical, or social challenges. They experience different working environments and can directly apply theoretical knowledge and experience that they have acquired in their studies. The internship focuses on typical areas in logistics and supply chain management (e.g. purchasing, supply chain, quality, project management) or on related cross-divisional processes in manufacturing, retail or service industry that help to improve and optimize operations processes (e.g. business development, strategy, accounting, quality management, data analytics or information technology). The internship is moreover a great chance for students to enrich their own network and to generate relevant topics for their master thesis.					
3	Learning outcomes The following competencies will be trained in the context of this module: ▪ Students have a deeper understanding of processes, activities, organizations, and structures in the field of logistics and SCM. ▪ They can apply the theories, models and techniques previously learned to the practice of logistics and supply chain management and evaluate their advantages and drawbacks. ▪ They can anticipate the consequences of their actions. ▪ They reflect on the impact of their actions and behavior in work processes. ▪ Students can participate in professional relationships with people of different backgrounds and from different hierarchical levels. ▪ They are able to recognize, reflect and represent their role in the organizational structure of the company. ▪ They can critically reflect ethical aspects of their work in the company. ▪ They can question their communication, relationship and self-management skills.					

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	- Students are able to solve practical problems using structured planning and working techniques. - They can deal with conflict and stressful situations in the professional world.
4	Teaching and learning methods “Learning by doing” during the internship - if necessary, individual consultation on application optimization / job coaching / job search strategies
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: In addition to intensive preparation by the student with regard to contents and objectives of an internship, the conditions in the internship company are also important to assess. The student needs clear arrangements with the company about tasks, goals, workplaces and his/her supervisor in advance. These are also mandatory components of the final report.
6	Combinations with other study areas Applicability within the study course: The experiences resulting from the practical module can give impulses for the topic of the final thesis. Applicability for other study courses: none
7	Type and duration of exam Report
8	Weight of the mark in the final grade 0%
9	Special Autonomy, self-reliance, and initiative of the student are encouraged and demanded.
10	Literature Public job boards (e.g. job portals) and ISM internal offerings (e.g. Career Center’s pages on ISM’s intranet, ISM internship database, ISM job portal, event alerts, alumni network, etc.)

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Leadership Skills

Modulecode LS		Semester 1	Duration 1 semester		ECTS-Credits 6	
Course type Compulsory		Teaching Language English	Intake Winter semester		Hours per week (SWS) 6	
1	Lectures of the module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Corporate Governance & Business Ethics		18	42	60	2
	Negotiation, Communication & Executive Presentations		18	42	60	2
	Cross Cultural Leadership		18	42	60	2
2	Content The module "Leadership Skills" develops the frameworks, explores the tools, and the methods and skills a manager needs to lead a company in an international environment. The courses serves the development of intercultural skills, the training of communication, presentation and negotiation skills as well as the teaching of ethical-normative assistance for decision making in the context of corporate governance system. Corporate Governance & Business Ethics This course deals with the conditions, theories, standards and applications of ethical and sustainable business behavior. Corporate governance will be reconstructed as a central pillar of the notion of corporate social responsibility (CSR), with a special focus on standards and principles for ethics-based, sustainable business strategies. Analysis and implementation of ethical business decisions as well as the benefits and challenges of moral action in the national and international context are main focuses. On a theoretical economic base, a business ethics concept is developed, critically examined and the application spectrum illustrated. Participants will learn to apply different ethical theories and concepts through case studies and interactive seminar sessions. Emphasis is laid on humanistic principles of good leadership. The main focus is on moral challenges and how to overcome them in order to be a good corporate citizen in the national and global context. Governance problems will be analyzed based on various theoretical backgrounds, including the theory of incomplete contracts and business networks as well as the stakeholder approach. Possible information, monitoring and decision rights for stakeholders will be considered in order to achieve sustainable value creation and fair value distribution. Negotiation, Communication & Executive Presentations This course conveys the wide range of interpersonal communication within as well as outside the company. Concepts, models and strategies for team, management and crisis communications are presented, the relationship between goal-oriented, cross-cultural and					

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	ethical interaction premises and their integration techniques are discussed, techniques for consensual persuasion results are shown. The training of communication skills as well as the training for the realization of set targets takes place through negotiations, role-plays in negotiations as well as by small talk and networking for business communication processes. The course concludes with the structure, the techniques and the practice of presentations, including the different possibilities to use them in meetings and strategies to adapt them to an intercultural context, by modifying the words, images and gestures. Cross Cultural Leadership This course addresses the central models, concepts and theories for successful behavior in leadership and teamwork situations. It covers organizational psychological insights into leadership styles and role behavior, motivation and team effectiveness, the use of power and responsibility in decision-making processes, difficulties in change communication and conflict management as well as corporate hierarchies, framework and success factors. The course focuses on cultural awareness as well as scientific approaches and techniques in the field of intercultural communication and management for a diplomatic and confident manner, for example in bargaining situations in different cultures of the world. Ideas and concepts of cross-cultural management, research on culture and identity concepts (e.g. Hall, Hofstede), and the role of culture in the corporate environment will be presented and the techniques and strategies of verbal, non-verbal and para-verbal communication in intercultural contexts will be trained. Finally, the culture shock and other personal reactions to intercultural encounters will be discussed as well as the manager's toolkit of intercultural skills.
3	Learning outcomes On successful completion of the module, students: ▪ possess knowledge of basic ethical concepts as they apply to business. ▪ are aware of the expectations and perceptions from a company's business community and social environment. ▪ have knowledge of modern leadership and decision-making styles and their state-of-the-art application. ▪ have insights into intercultural management theory. ▪ are able to analyze intercultural business situations. ▪ are able to make prudent business decisions in the face of uncertainty that consider ethical social, regulatory and legal requirements. ▪ are able to assess the advantages of the adoption of social responsibility to identify appropriate decision corridors. ▪ lead decision-making processes and are able to deal with conflicts. ▪ present convincingly in intercultural contexts. ▪ reflect and compare different points of view in groups and organizations. ▪ work constructively and cooperate in a group. ▪ present their positions, discuss them critically and defend them. ▪ convince others and justify their own decisions in a team when needed.

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	▪ learn from experience regarding negotiation situations and thus to think and act critically. ▪ help to shape their social environment.
4	Teaching and learning methods ▪ Lectures ▪ Discussions ▪ Group work ▪ Case studies ▪ Exercises
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: The module imparts interdisciplinary skills, that will be applied repeatedly in the course of studies, e.g. within case studies, group discussions or other tasks that demand intercultural competences, communication skills as well as a well-developed sense for ethically relevant issues. Applicability for other study courses: M.Sc. International Management, M.Sc. International Logistics & Supply Chain Management, M.Sc. Real Estate Management, M.A. Digital Marketing, M.Sc. Psychology & Management, M.A. Entrepreneurship, M.Sc. Business Intelligence & Data Science, M.A. Strategic Marketing Management, M.Sc. Finance und MBA General Management.
7	Type and duration of exam Paper presentation
8	Weight of the mark in the final grade 5.56%
9	Special Showing and discussion of video clips
10	Literature Corporate Governance & Business Ethics <u>Compulsory reading:</u> Crane, A.; Matten, D.; Glozer, S.; Spence, L. (2019): Business Ethics. Managing Corporate Citizenship and sustainability in the Age of Globalization, 5 th ed. Oxford: Oxford University <u>Supplementary literature:</u>

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Bleisch , B.; Huppenbauer , M., Baumberger , C. (2021): Ethische Entscheidungsfindung . Ein Handbuch für die Praxis, 3. vollst . Überarb Und actual. Aufl Nomos: Baden Baden CFA (2019): Ethics in practice. Ethics in Investment Management Casebook, 2 nd ed. https://www.cfainstitute.org/org/--/media/documents/ethics in practice/ethics in practice casebook 2nd edition web.pdf CFA Institute (2022): Code of Ethics and Standards of Professional Conduct, https://www.cfainstitute.org/en/ethics standards/ethics/code of ethics standards of conduct guidance Europäische Kommission, Generaldirektion Justiz und Verbraucher (2020): Study on directors' duties and sustainable corporate governance : final report, Publications Office, 2020, https://data.europa.eu/doi/10.2838/472901 Fabisch , N. (2018): Compliance und Corporate Social Responsibility. In: Behringer, S . Hrsg .): Compliance kompakt . Best Practice im Compliance Management, 4. neu bearbeitete Aufl ., Berlin: Erich Schmidt Verlag, S. 341 361. Fischer, K. (2017): Corporate Sustainability Governance. Nachhaltigkeitsbezogene Steuerung von Unternehmen in einer globalisierten Welt. Wiesbaden: Springer Gabler Hilb, M. (2016): Integrierte Corporate Governance. Ein neues Konzept zur wirksamen Führung und Aufsicht von Unternehmen Kirwan , C.; McBride, H.; O'Riordan , C. (2018): Cases in Corporate Governance and Business Ethics, Institute of Chartered Accountants in Ireland Mallin , C., A. (2019): Corporate Governance , 6 th ed. Oxford: Oxford University. OECD (2021) 2021): OECD Corporate Governance Factbook 2021, www.oecd.org/corporate/corporate governance factbook.htm Negotiation, Communication & Executive Presentations <u>Compulsory reading:</u> Lewicki, R. J./Saunders, D. M./Barry, B. (2014): Negotiation. 7th ed., New York: McGraw-Hill. <u>Supplementary literature:</u> Cialdini, R. B. (2007): Influence – The Psychology of Persuasion. New York: Collins. Fisher, R./Ury, W. (2012): Getting to Yes. Negotiating an Agreement without Giving In. 3rd ed., London: Random House. Luecke, R. (2005): Negotiation. Your Mentor and Guide to Doing Business Effectively. 7th ed., Boston: Harvard Business School Press. Lax, D. A./Sebenius, J. K. (2011): The Manager as Negotiator – Bargaining for Cooperation Competitive Gain. Reprint, New York: Free Press. Cross Cultural Leadership <u>Compulsory reading:</u>

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	Barmeyer, C./Franklin, P. (2016). Intercultural Management: A Case-Based Approach to Achieving Complementarity and Synergy. New York: Palgrave Mcmillan. <u>Supplementary literature:</u> Carté, P./Fox, C. (2008): Bridging the Culture Gap. A Practical Guide to International Business Communication. 2nd ed., London: Kogan Page. Jacob, N. (2003): Intercultural Management. London: Kogan Page. Schein, E. H. (2010): Organizational culture and leadership. 4th ed., San Francisco: Jossey-Bass. Trompenaars, F./Woolliams, P. (2003): Business Across Cultures. Chichester: Capstone.
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Master's Thesis

Modul code		Semester 4 (120 ECTS program), 3 (90 ECTS program)	Duration 1 Semester		Intake Each semester	
Language: English		Type and duration of exam: Thesis and disputation - Length of the thesis: 25,000-30,000 words - The editing time: Master's Thesis = 18 weeks; - Disputation: Presentation and scientific discussion	Weight of the mark in the final grade 27.78 % with 4 semesters (120 ECTS-Credits) 35.71% with 3 semesters (90 ECTS-Credits)		ECTS credits 30	
1	Lectures of the module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Master's Thesis		1	899	900	0
2	Content The Master's thesis is a written final assignment addressing a complex issue within the respective field of study. It is intended to demonstrate that the candidate is capable of independently completing a practice-oriented task from their field within a specified period of time, applying both subject-specific knowledge and interdisciplinary connections using scientific and professional methods. In doing so, the subject-specific and methodological competencies acquired during the Master's program should be applied in a targeted manner. The ideal procedure for the preparation of the Master's thesis is as follows: - Identification and refinement of the topic - Definition of the research question, title, (rough) structure, scheduling and research design - Identification and analysis of relevant theoretical contexts and independent literature research on state of the art knowledge as well as related work - Logical structuring of the thesis - Methodological handling of the question (of quantitative and/or qualitative nature) - Documentation of the study and its results according to the instructions (e.g. formal requirements of the ISM or DGPs or APA guidelines) - Regular coordination with the first examiner - Disputation (oral examination)					
3	Learning outcomes Upon successful completion of this module, students will be able to: demonstrate a broad, detailed, and critical understanding of the current state of research in the field relevant to the thesis topic, based on systematic literature review.					

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	▪ develop and clearly structure complex research questions and translate them into an appropriate research design. ▪ select and apply appropriate theories, concepts, and research methods to address the research question. ▪ collect, analyze, and interpret data in a systematic and methodologically sound manner. ▪ integrate findings into the existing body of research and, where appropriate, derive practical implications for business practice. ▪ structure and manage complex research and practice-oriented projects largely independently. ▪ develop well-founded and innovative solutions to business-related problems based on scientific approaches. ▪ communicate complex ideas and research results clearly, logically, and convincingly in written and oral form. ▪ present and defend research results in a disputation and engage in academic discussion with both specialists and non-specialists.
4	Teaching and learning methods Independently written paper. Disputation. ▪ Individual and regular advice provided by the first examiner.
5	Prerequisites for participation Formal requirements: see examination regulations

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Monitoring & Risk Management in Logistics & SCM

Module code ILS6		Semester 2	Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English	Intake Summer semester		Hours per week (SWS) 6	
1	Lectures of the module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Cost Management & Control		18	42	60	2
	Performance Drivers & Measurement		18	42	60	2
	Operations Risk Management		18	42	60	2
2	Content Logistics and supply chain management are often critical success factors or differentiators on the market. For these reasons, it is essential to understand their costs, investments, complexities and risks. In this module, the students learn about the relevant managerial accounting techniques to manage and control cost for an efficient operations management. They also learn how to design a meaningful performance measurement concept with relevant KPIs based on their knowledge from the course “Resilient Strategy Development”. Additionally, they discuss supply chain vulnerabilities and how to manage those in a proactive manner. Cost Management & Control Procurement and supply chain managers are still often measured primarily by means of savings achievement and an increased degree of efficiency. Therefore, cost transparency is a major management requirement. Students learn how to use relevant information for planning, monitoring, and decision making in an operations management context. The main focus of this course is cost and profit analyses. Furthermore, organizational and policy issues of control systems, such as cost types, cost centers, and cost units, will be examined. The course covers: ▪ Cost-accounting principles ▪ Traditional costing and manufacturing budgeting ▪ Contemporary costing methods (e.g. Activity Based Costing, Target Costing, Total Cost of Ownership) ▪ Supply chain costing ▪ Short-term planning and decision making. Performance Drivers & Measurement Supply chain integration and collaboration are major trends and requirements for building up corporate competitiveness. Simultaneously, sustainability needs to be key. This can only be achieved if the supply chain manager has an integrated view and full transparency					

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	on the driving forces from the customer, supply, production process and finance side. How this can be accomplished and how the supply chain strategy can be effectively realized is the core of this lecture. The course covers: ▪ Strategic controlling in logistics & supply chain management ▪ Definition of performance and success ▪ Income Statement & Balance Sheet ▪ Cash and Working Capital Management ▪ Valuation methods (cost of capital, return on investment, discounted cash flow, economic value added) ▪ Financial and non-financial ratio analyses for logistics & supply chain management ▪ Performance measurement concepts (e.g. Supply Chain Balanced Scorecard). Operations Risk Management Risk management is dynamic, new risks are identified on a continuous basis and risk management techniques adapt to these new challenges. The lecture provides an overview of various risks a multinational company faces, including operational risk and cyber risk, and develops risk management frameworks and strategies. The course covers: ▪ Categories of corporate risks ▪ Corporate risk management in the context of logistics & supply chain management ▪ Risk management framework with its processes & instruments ▪ Risk identification, assessment, measurement ▪ Risk mitigation
3	Learning outcomes The following competencies will be trained in the context of this module: ▪ Students understand principles of cost accounting, fixed costs, variable costs, and cost center structures and can apply value based management instruments. ▪ They are able to classify, analyze and optimize operations costs. ▪ They can apply decision-based cost accounting and benchmarking as well as conduct cost (structure) analyses and cost deviation analyses. ▪ They are able to adopt autonomously activity-based costing for transportation, logistics and supply chain management. ▪ They know how to apply state-of-the-art controlling and performance measurement methods and instruments. ▪ They can operationalize operations strategies by means of adequate objectives and KPIs and know how to monitor them. ▪ They can identify and assess risks in the operations management context and know how to manage them by means of concrete strategies and methods. ▪ Students can solve challenging practical problems and lead task-related discussions.

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	▪ They are equipped with relevant technical knowledge to lead and follow corporate finance related discussions. ▪ They have the ability to lead decision-making processes in supply chain finance and to deal with conflicts.
4	Teaching and learning methods ▪ Lectures ▪ Discussions ▪ Group work ▪ Exercises
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: "Project Work in Logistics & SCM", "Advanced Operations Management", "Business Analytics in Logistics & SCM". Applicability for other study courses: none
7	Type and duration of exam Written exam (120 minutes)
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90ECTS)
9	Special -
10	Literature <u>Required Reading:</u> Cokins, G.; Pohlen, T.; Klammer, T. (2021): Supply Chain Costing and Performance Measurement, 2 nd ed. Hoboken: John Wiley & Sons. Hillson, D. (2020): Risk Management Handbook: A Practical Guide to Managing the Multiple Dimensions of Risk. London: Kogan Page. Templar, S. (2019): Supply Chain Management Accounting. London: Kogan Page. Zsidisin, G.; Henke, M. (eds.) (2019): Revisiting Supply Chain Risk. Cham: Springer. <u>Supplementary Reading:</u> Drury, C. (2018): Management and Cost Accounting. 10 th ed. Boston: Cengage Learning.

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	Hopkin, P. (2018): Fundamentals of Risk Management: Understanding, Evaluating and Implementing Effective Risk Management. 5th ed. London: Kogan Page. Noreen, E.; Brewer, P. C.; Garrison, R. H. (2019): Managerial Accounting for Managers. 5th intern. ed. New York: McGraw-Hill Education.
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Organizational Development in Logistics & SCM

Module code ILS4		Semester 1	Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English	Intake Winter semester		Hours per week (SWS) 6	
1	Lectures of the Module		Hours of presence	Hours of self-study	Total workload (h)	SWS
	Resilient Strategy Development		18	42	60	2
	HR & Talent Management		18	42	60	2
	Innovation & Business Transformation		18	42	60	2
2	Content In our VUCA-environment, logistics companies and corporate operations functions play a critical role for a company to remain competitive – i.e. resilient supply chains are decisive for corporate success. Thus, supply chain and logistics managers are confronted with change management issues on a daily basis, they need to be able to attract and maintain promising talents and overall need to be aware of a market-adequate strategic positioning. The aim is to qualify students to reflect management concepts and strategies, and transfer and apply them to logistics and supply chain management. Resilient Strategy Development Strategic management is a reflexive operation within any organization and function using continuous analyses and considering diverse methods and processes. Its future-orientation forces strategic management to acknowledge the fundamental unknowability of the future. Strategy needs to be ‘reconstructed’ – being culturally and contextually bound. The course provides detailed coverage of the practical implications of strategy tools in real-world logistics and SCM and a coherent overview of the established ‘classics’ of strategic management, while taking an innovative approach to contemporary issues such as globalization, sustainability, transparency, digitization. The course covers: ▪ The impact and relevance of supply chain trends ▪ Supply chain vulnerabilities ▪ The challenge of (re)balancing supply chains ▪ Strategies of the value chain and their management ▪ The strategic management toolbox ▪ Strategy planning and implementation ▪ Strategic analysis of logistics companies and SC organizations.					

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	HR & Talent Management This course focuses on the strategic and organizational requirements for HR management in the international logistics and supply chain management environment. In addition to classic HR strategies, controlling, and organizational models, evolving concepts will be discussed: the role of HR as part of digital transformation, the potential of new technologies for HR management, the impact of GDPR, the design of agile HR structures and digital HR processes. The relevance of global socio-economic changes (e.g. megatrends like changing value systems or changing demographics, VUCA) will be analyzed as well as how human resources can be managed sustainably and successfully in the light of different cultural backgrounds and global operations processes. The course covers: ▪ Management functions, structure and organization ▪ Management competencies and leadership styles ▪ Deriving HR strategy from corporate strategy using models and case studies ▪ Impact of digitization on human resources and their management ▪ Models for employee motivation and performance management – especially in highly dynamic and complex international operations environments ▪ Impact of General Data Protection Regulation (GDPR) on HR management ▪ Specifics of HRM in the logistics service business. Innovation & Business Transformation Transformation and change is part of daily business: innovating on different levels, global trends, supply chain disruptions, etc. force value chains to face continuous change. So called ‘learning organizations’ represent structures that can withstand these system-irritating dynamics. How can supply chain managers face change successfully and understand transformation as a driver for growth for their supply network and value chain? In order to sustain international competitiveness, the idea of motivating SCM employees to think and act entrepreneurially, adding to the corporate USP in an agile way, is discussed in depth. In this course, different causes of change and their impact on the players along the corporate value chain will be analyzed. The course covers: ▪ Introduction to different types of innovation and the innovation process ▪ Impact of operations managers in the innovation process ▪ Discussion of different – classic and innovative – organization forms, e.g. evolutionary organizations ▪ Implementing change in the operations environment ▪ Portfolio of change instruments and methods ▪ Promising implementation of change by certain systematics.
3	Learning outcomes ▪ The following competencies will be trained in the context of this module:

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	▪ Students understand the connection between corporate and SCM strategy and know how to develop and implement the latter. ▪ They know current forms of logistics cooperations and alliances and are aware of strategic market drivers. ▪ They are able to set up a strategy development process and develop a functional operations-related strategy or the corporate strategy of a logistics company. ▪ Students have a solid understanding of the most important theories and concepts of strategic HR management and are able to apply them. ▪ They are aware of the importance of human capital, corporate culture, and the (new) work environment. ▪ They know and understand current organization forms and can critically discuss benefits and challenges as well as evaluate their adequacy for specific cases. ▪ Students are able to define and analyze different types of innovation. ▪ Students can analyze and assess the impact of current and future trends on the operations environment, are aware of their opportunities and challenges and how to manage necessary transformative action. ▪ They are able to analyze organizational challenges using current literature and scientific insights and to elaborate adequate solutions autonomously. ▪ Students have increased their degree of readiness to comprehend SCM challenges from a holistic, systemic perspective. ▪ They see transformation in general positively – as an opportunity and manageable challenge. ▪ Students are able to represent their opinion on (digital) transformation, its impact on SCM structures, and the role of supply and value chain management in this context. ▪ They are able to work constructively in teams on complex organizational tasks.
4	Teaching and learning methods ▪ Lectures ▪ Group work ▪ Case studies/exercises
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: “International Operations Management”, “Global Environment of Logistics & SCM”, “Leadership Skills”, “Monitoring & Risk Management in Logistics & SCM”, “Project Work in Logistics & SCM”. Applicability for other study courses: none
7	Type and duration of exam Term paper (7,000 words)

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8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90ECTS)
9	Special -
10	Literature <u>Required reading:</u> Chopra, S.; Meindl, P. (2018): Supply Chain Management. Strategy, Planning and Operations. 7th ed. Upper Saddle River, NJ: Pearson. Daft, R.; Murphy, J.; Willmott, H. (2020): Organization Theory and Design, 4 th ed. Cengage Learning. Harrison, A.; Skipworth, H.; Hoek, R.; Aitken, J. (2019): Logistics Management and Strategy. Competing Through the Supply Chain. 6 th ed. Harlow: Pearson Education Limited. Laloux, F. (2018): Reinventing Organizations, A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness. Millis: Nelson Parker. Mathis et al. (2016). Human Resources Management. Boston: Cengage Learning. Mello, J. (2018). Strategic HRM. Nashville: South Western Educational Publishing. Philips, J. & Gully, S. (2018). Human Resource Management. Chicago: Chicago Business Press. Robbins, S.; Judge, T. (2016): Organizational Behavior. 17 th international ed. Harlow: Pearson. Tidd, J.; Bessant, J. (2020): Managing innovation. Integrating technological market and organizational change. 7 th ed. Hoboken: John Wiley & Sons. <u>Supplementary literature:</u> Bailey, C.; Mankin, D.; Kelliher, C.; Garavan, T. (2018): Strategic Human Resource Management. 2 nd ed. Oxford: University Press. Boxall, P.; Purcell, J. (2015): Strategy and Human Resource Management. 4 th ed. Basingstoke: Palgrave Macmillan. Kane, G.; Phillips, A.N., Copulsky, J. (2019): The Technology Fallacy: How People Are the Real Key to Digital Transformation. Cambridge: MIT Press. Kew, J.; Stredwick, J. (2016): Human Resource Management in a Business Context. 3 rd ed. New York: McGraw Hill Education. Kolbjørnsrud, V. J. (2018): Collaborative organizational forms: on communities, crowds, and new hybrids. In: Journal of Organization Design, 7(11).

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	Kramar, R. (2014): Beyond strategic human resource management: is sustainable human resource management the next approach? In: The International Journal of Human Resource Management. 25 (8), 1069 1089. Malik, A. (Ed.) (2018): Strategic Human Resource Management and Employment Relations. An International Perspective. Springer Verlag. Sánchez, M.A.; Zuntini, J. I. (2018): Organizational readiness for the digital transformation: a case study research, in: Revista Gestão & Tecnologia. 18(2), 70-99. Stone, S. (2018): Digitally Deaf: Why Organizations Struggle with Digital Transformation. Berlin: Springer.
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Project Work in Logistics & SCM

Module code ILS8	Semester 2	Duration 1 semester		ECTS credits 6	
Course type Compulsory	Teaching language English	Intake Summer semester		Hours per week (SWS) 4	
1	Lectures of the module	Hours of presence	Hours of self-study	Total workload (h)	SWS
	Research Methods & Scientific Working	9	21	30	1
	Project Management & Consulting Instruments	9	21	30	1
	Consulting Project	18	102	120	2
2	Content In this module, students gather (first hand) professional/management experience by working on real-world business problems and challenges that are common for business consultants. In the theoretical part, they are equipped with all relevant analytical methods and tools – concerning scientific research as well as consulting projects. In the project part, students work in teams on a real problem set from a corporate business partner – using different analytical and empirical methodologies for quantitative and qualitative data collection and evaluation – and receive direct feedback from the lecturer as well as the Corporate business partner in the course of several presentation rounds. Research Methods & Scientific Working This course equips students with relevant knowledge for approaching and conducting a scientific research project in a robust and sound way. This includes researching literature, quoting & citing sources with various citation styles, derivation and phrasing of research questions and hypotheses, as well as the presentation of qualitative and quantitative research findings. The core of this course is how to identify relevant problem sets, deduct adequate research questions and create a meaningful path of argumentation. This will be practiced by the students by writing and presenting their own research proposal. Project Management & Consulting Instruments This course provides students with an overview of the necessary set of tools and methods to manage and coordinate projects. It offers students a platform to share their own experiences. The principles of working in a consulting environment will also be addressed in this course. Students learn to transfer the methods of project management to the consulting business and balance the trilemma between quality, cost, and time constraints – always having customers' requirements in mind.				

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	Consulting Project The students' task is to apply the methods they studied in "Research Methods and Scientific Working" during their work on a real consulting project in the logistics or supply chain environment and to develop a customer-oriented solution. At the beginning of the semester, the students will meet their business partner and learn about the problem set that needs to be solved by the end of the semester and its solution to be presented to the business partner. They need to employ different forms of field research (qualitative and quantitative) and use methods and tools in a real-world business context to solve the business challenge. They learn how to approach, structure, and solve new and unknown challenges. During the consulting project, students apply the methodological knowledge they have gained from various lectures and practical experience. They train social and personal skills in depth and develop an understanding for the consultant role. They know how to work and take responsibility in teams, set targets, structure and carry out a consulting project. In addition, they train their problem solving competence by applying analytical methods and theories in real life.
3	Learning outcomes The following competencies will be trained in the context of this module: ▪ Students are able to write a scientifically sound research proposal. ▪ Students know relevant project management methods and are able to apply them. ▪ They are aware of the challenges in consulting especially concerning customer orientation and international team settings. ▪ They have deep knowledge on hypotheses building, target setting, strategy development, implementation, monitoring, and presentation of consulting projects. ▪ Students can analyze complex business problem sets and develop customer-oriented solutions. ▪ They can apply theoretical concepts, methods, and tools in a realistic consulting setting. ▪ They are capable of assessing, monitoring, and reporting the project progress and introduce corrective action if required. ▪ Students gain realistic insights into the business life of a consultant. ▪ Students have an understanding of the requirements of an ethically and scientifically sound research paper. ▪ Students can prepare professional presentations and deliver them in front of the customer. ▪ They actively contribute to the decision-making processes within the consulting team and learn how to handle international group dynamics. ▪ They become aware of the challenges leading/working in an international, cross-functional team. ▪ Students are able to reflect their individual as well as their group performance critically. ▪ They learn how to interact with customers responsibly.

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4	Teaching and learning methods ▪ Lectures ▪ Discussions ▪ Group work ▪ In class presentations
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: "International Operations Management", "Global Environment of Logistics & SCM", "Organizational Development in Logistics & SCM".
6	Combinations with other study areas Applicability within the study course: Master Thesis Applicability for other study courses: none
7	Type and duration of exam ▪ Paper presentation (3,000 words) for the courses "Research Methods & Scientific Working" and "Project Management & Consulting Instruments" ▪ Presentation for "Consulting Project"
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90ECTS)
9	Special Presentations for the cooperating company which provides the problem set
10	Literature <u>Required reading:</u> Bailey, S. (2020): Academic Writing for International Students of Business. 3 rd ed. London/New York: Routledge. Biech, E. (2019): The new business of consulting. The basics and beyond. Hoboken: Wiley. Project Management Institute (2021): A guide to the Project Management Body of knowledge (PMBOK Guide). 7 th ed. Newtown Square: Project Management Institute. Saunders, M.; Lewis, P.; Thronhill, A. (2019): Research Methods for Business Students. 8 th ed. Harlow: Pearson. <u>Supplementary literature:</u> Carey, S. (2011): A Beginner's Guide to Scientific Method. 4 th ed. Boston: Cengage Learning. Hattori, S. (2015): The McKinsey Edge: Success Principles from the World's Most Powerful Consulting Firm. New York: McGraw Hill.

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	Kavanaugh, J. (2018): Consulting Essentials: The Art and Science of People, Facts, and Frameworks. Austin: Lioncrest Publishing. Kerzner H. (2017): Project management: A systems approach to planning, scheduling and controlling. 12th ed. Hoboken: Wiley. Project Management Institute (2017): Agile Practice Guide. Newtown Square: Project Management Institute.
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Study Abroad

Module code AU		Semester 3		Duration 1 semester		ECTS credits 24	
Course type Compulsory (only 120 ECTS program)		Teaching language Depending on the country		Intake Winter semester		Hours per week (SWS) Depending on the host university	
1	Lectures of the module			Hours of presence	Hours of self-study	Total workload (h)	
	Study abroad			Depending on the host university		720	
2	Content Intercultural, social, and personal competences are critical success factors in the world of international business. Thus, the semester abroad is a major prerequisite for a successful career as a manager or consultant working in an international logistics and/or SCM environment. For one semester, ISM students will enroll as exchange students at one of the ISM partner universities. This semester abroad will broaden students’ perspectives on international management matters and new cultures as well as further strengthen their personalities. The content of the study abroad phase will be coordinated and agreed upon between the partner university and ISM – documented by means of an individual learning agreement. The individually selected course program abroad has to be related to the field of international logistics and supply chain management. The courses abroad should: ▪ help students strengthen their specialization (e.g. maritime logistics or aviation), ▪ offer students a different view on logistics and supply chain management (e.g. regional specifics), and/or ▪ broaden their general international management perspective for a comprehensive understanding of logistics and supply chain management in the corporate setting (e.g. courses on corporate strategy, finance, accounting, HR, marketing/sales, quality or process management, data analytics or information technology). Students can obtain a current overview of the selectable degree-specific courses from the International Office’s MOVEON database.						
3	Learning outcomes The following competencies will be trained in the semester abroad: ▪ Students will be able to transfer their skills and abilities from the first and second semester to an international logistics & SCM context. ▪ They will broaden/deepen their knowledge in the field of logistics & SCM and additionally learn about regional, economic, technical and cultural specifics in the respective host country.						

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	▪ Students will be able to deal with complex relationships, assess them systematically while also considering intercultural and transnational aspects, and develop new solutions, which may be cross-national if necessary. ▪ They will be able to consolidate and integrate knowledge from various related fields. ▪ Students are able to collaborate within an international group in a goal-oriented and constructive manner, and, in doing so, help shape their social environment. ▪ They can reflect on varying standpoints while taking into account cultural differences in groups and organizations, compare and discuss them to increase mutual understanding. ▪ Students can work autonomously; they possess well-developed self-organizational skills and confidence based on their study abroad experience.
4	Teaching and learning methods Depends on the teaching and learning methods of the respective partner university.
5	Entry requirements See examination regulations
6	Combinations with other study areas Applicability within the study course: none Applicability for other study courses: none
7	Type and duration of exam According to the exam regulations of the respective partner university.
8	Weight of the mark in the final grade 22.22% with 4 semesters (120 ECTS)
9	Special Depends on the teaching methods of the respective partner university.
10	Literature According to the course outline of the respective partner university.

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Transportation Modes & Business Models

Module code ILS1		Semester 1		Duration 1 semester		ECTS credits 6	
Course type Compulsory		Teaching language English		Intake Winter semester		Hours per week (SWS) 6	
1	Lectures of the Module			Hours of presence	Hours of self-study	Total workload (h)	SWS
	Land & Sea Transport			18	42	60	2
	Aviation Transport			18	42	60	2
	Field Studies: Infrastructure Management			18	42	60	2
2	Content This module is an introduction into the transport market and the most important elements of an international transport chain. Firstly, it focuses on the external means of transport as well as on the handling stations (hub and spokes). Students get an overview of different carriers and infrastructure elements of land, sea and air transport. Furthermore, the management and the business models of the different transport modes and handling elements are analyzed. Additionally, the specific requirements, benefits and trends of these elements are presented. Special emphasis lies on the different ways of efficiently connecting the transport modes. Secondly, the module focuses on experiencing in practice the above discussed concepts as well as internal logistics and SCM elements that are used in manufacturing and warehousing. Students gain insights in relevant transportation and warehousing techniques and their domains in the course of different excursions. Land & Sea Transport This course provides students with a comprehensive overview of the international land and sea transport market and its players. The course covers: ▪ Rail transport: characterization of trains, freight transport categories, requirements and business models ▪ Road transport: characterization of trucks and trailers, freight transport categories (e.g. LTL, FTL, CEP), requirements and business models (e.g. tour planning) ▪ Inland water vessels: characterization of inland water vessels, freight transport categories (e.g. Hinterland), requirements and business models ▪ Maritime vessels: characterization of maritime vessels, freight transport categories, requirements and business models ▪ Combined transport: intermodal transport categories, requirements and business models						

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	▪ Warehousing: characterization of shelves and warehouses, warehousing categories (i.e. cross-docking), requirements and business models (i.e. distribution center, consignment warehouse) ▪ Interfaces to information systems (i.e. RFID, barcode, warehouse management systems) and interconnectivity in logistic chains ▪ Internal transport: characterization of floor-borne vehicles, industrial trucks and conveyor systems, cargo transport categories, interfaces to information systems (i.e. ERP or Industry 4.0) and interconnectivity in logistic chains Aviation Transport This course provides students with a comprehensive overview of the international aviation transport market and its players. The course covers: ▪ Aviation market players, travel ecosystems, customer requirements ▪ Airline cost structure and profitability ▪ Airline strategy and marketing ▪ The airline business model ▪ Network management ▪ Revenue and pricing management ▪ Strategic airline alliances ▪ Air cargo industry Field Studies: Infrastructure Management The aim of this course is to let students experience and reflect on the actual daily business in logistics and supply chain management. Through the excursions, which are undertaken in this course, the students gain exclusive and deep insights into the daily work of e.g. logistics service providers, (air)port operators, railroad networks, SCM structures of OEMs, distribution centers, etc. Students learn about infrastructure management from different perspectives: infrastructure as business model, projects, assets, processes, organization, etc. Directly interacting with the experts, they reflect on the relevance, challenges, opportunities and potential of managing infrastructure in an efficient and effective manner.
3	Learning outcomes The following competencies will be trained in the context of this module: ▪ Students understand transport economics and the challenges for logistics and supply chain management. ▪ They have a profound knowledge of all internal and external means of transportation, their interlinkages and application in terms of processes, functions, costs and value in international transport chains. ▪ Students are able to assess and evaluate transport chains and their issues. ▪ They are able to analyze and elaborate management concepts for transportation. ▪ They know and can use management processes for transportation as well as establish the organization of transport chains in supply chain networks. ▪ Students have the skills to understand the challenges and hurdles in transportation. ▪ They know how to discuss the presented theory in the classroom with practitioners by means of constructive questioning and critical reflection. ▪ They can execute strategies for argumentation in professional discussions.

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	Students are able to establish their own business solutions.
4	Teaching and learning methods - Lectures - Group Work - Case studies - Excursions
5	Prerequisites for participation Formal requirements: none Recommended prior knowledge: none
6	Combinations with other study areas Applicability within the study course: "International Operations Management", "Global Environment of Logistics & SCM", "Advanced Operations Management" and "Project Work in Logistics & SCM". Applicability for other study courses: none
7	Type and duration of exam Written exam (120 minutes)
8	Weight of the mark in the final grade 5.56% with 4 semesters (120 ECTS) 7.14% with 3 semesters (90ECTS)
9	Special Excursions
10	Literature <u>Required reading:</u> Budd, L.; Ison, S. (2020): Air Transport Management – An International Perspective. 2 nd ed. London: Routledge. Neise, R. (ed.) (2018): Container Logistics: The Role of the Container in the Supply Chain. London: Kogan Page. <u>Supplementary literature:</u> Billig, B.; Cook, G. (2017): Airline Operations and Management. London: Routledge. Monios, J.; Bergqvist, R. (2019): Intermodal Freight Transport and Logistics. Boca Raton: CRC Press.